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# Ideational Grammatical Metaphorical Features of EFL Textbooks

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IDEATIONAL GRAMMATICAL METAPHORICAL FEATURES OF EFL TEXTBOOKS

A Thesis submitted to  
the Graduate College of  
Marshall University  
In partial fulfillment of  
the requirement for the degree of  
Master of Arts in English  
by

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May 2016

APPROVAL OF THESIS

As chair representing the other members of this thesis committee, I affirm that the thesis, **“Ideational Grammatical Metaphorical Features of EFL Textbooks,”** meets the high academic standards for original scholarship and creative work established by the English MA-TESOL and the College of Liberal Arts. This work also conforms to the editorial standards of our discipline and the Graduate College of Marshall University. With my signature, I approve the manuscript for publication.

  
Dr. Hyo-Chang Hong, Department of English

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## **ABSTRACT**

Various genres of textbooks have been researched from the perspective of Systemic Functional Linguistics (SFL). Although the previous research has been concerned with textbooks covering subject areas in English speaking countries, it has not examined English as a Foreign Language (EFL) textbooks. By analyzing 14 EFL textbooks for junior high school and high school students from the perspective of the SFL grammatical metaphor, this study attempts to examine levels of lexico-grammatical complexity and its sequential features as used in the data. The findings show that semantic junctions whereby semantic elements are incongruently realized at the level of lexicogrammar do not always follow grade sequences of EFL textbooks. The establishment of overall ratio of grammatical metaphorical types in the EFL textbooks in this study further provides suggestive evidence that there may be a semantic gap between standardized EFL tests and the level of textbooks used at schools.

## CHAPTER 1

### LITERATURE REVIEW

#### Japanese English Education and TOEFL

Japan is generally acknowledged as one of the countries with the lowest scores in standardized tests of the English language (e.g. Educational Testing Service [ETS], 2015a; ETS, 2015b). The country is ranked 34th out of 44 countries where the TOEIC test is administered (ETS, 2015b), and 33rd out of 36 Asian countries on the TOEFL iBT test (ETS, 2015a).

The biggest current interest in Japanese English education is in the TOEFL iBT test as Japanese Headquarters for the Revitalization of Education proposed the approval of the TOEFL iBT test for college application (“Headquarters for the Revitalization of Education,” 2013) and that the Osaka Board of Education has officially adopted the TOEFL iBT into its foreign language education (The Osaka Board of Education, 2016). However, there are a number of issues that could be raised regarding such a policy. The extra preparation time and effort put into studying for the TOEFL iBT test could be an excessive burden on both students and teachers; and Japanese third-year high school students (ages 17-18), in particular, might further need to study for the TOEFL iBT as well as for the current university entrance examinations (“Osaka best big on TOEFL,” 2014). In the context of English education in Osaka, the Osaka Board of Education is accused of elitism and favoritism because instruction of the TOEFL iBT test has been done only at top-level schools, and there have arisen a number of difficulties that regular teachers face in coordinating the experimental curriculum and simultaneously cooperating with teachers qualified to teach the TOEFL iBT test, so called Super English Teachers (“Osaka best big on TOEFL,” 2014).

The testing organization of the TOEFL iBT (ETS, 2015a) explains:

The TOEFL iBT test assesses all four language skills (reading, listening, speaking, and writing) that are important for effective communication. The test emphasizes integrated skills and provides better information about test takers' ability to communicate in an academic setting and their readiness for academic coursework. (p. 3)

In this regard, Cho and Bridgeman (2012) admit the difficulty of finding conclusive evidence for the relation between the TOEFL iBT test score and academic achievement (p. 424). They claim that language is a crucial factor in learning, but due to the correlation between motivation, learning strategies, and quantitative skills in academic performance, language is only one of many factors, because even being native English speakers does not guarantee their academic success (p. 424).

### **Systemic Functional Linguistics**

**Language Development in Systemic Functional Linguistics.** Halliday (2007), founder of Systemic Functional Linguistics (henceforth SFL), says, "Learning language equals learning, since learning anything at all means turning it into language" (p. 353). According to Halliday (2004), the possession of language capability means the possession of semiotic power to transform experience into meaning and the transformation of experience leads to the internalization of language (p. 25).

Halliday (2004) mentions that "experience comes to be construed in very different ways, as children mature - as they move from home and family, via neighborhood and peer group, into primary school and then beyond" (p. 25). As babies begin to sit upright and crawl, their views of the world and relationship with the world constantly change: they construe them, and show contrastive signs in the protolanguage, which does not have grammar in it and meanings of protolanguage are expressed by vocal sounds such as *nananana* (Halliday & Matthiessen, 2014, pp. 24-26). As children come to have further mobility, such as standing up and walking on two legs, their infant protolanguage proceeds to language (Halliday, 2004, p. 26). After this first

development, from protolanguage to language, the language further develops from everyday spoken grammar to the grammar of literacy, and from the grammar of written language to the grammar of the subject disciplines (p. 27).

**Lexicogrammar.** Features of academic language have been one of the primary research topics in SFL, as the two different modes of speaking and writing make different contributions to the creation of text in SFL (Halliday & Matthiessen, 2014) and its fundamental aim is the critical understanding of text (Eggins, 2004, p. 1). In regard to the different contributions of the two modes of using language that affect different text types, Schleppegrell (2004) further maintains that “Students cannot just transfer the spoken language they have developed in their homes and communities to the school context” (p. 24). She explains that educational experience is essential for the development of learners’ linguistic ability to deal with the highly valued language use in school settings. School work does not simply involve students required to work on different learning tasks using the same grammar of their first language, but also require them to use a new kind of grammar for new situational contexts that students may not always be familiar with, and the move into middle school and secondary school increases students’ dependency on the capability to control a variety of linguistic resources (Schleppegrell, 2004). This contextual feature involving a new variety of linguistic resources in relation to the language of schooling derives from the understanding that the grammar of the language of the home is not always adequate in coping with the complex nature of the language of advanced academic disciplines (Fang & Schleppegrell, 2008, p. 4).

The linguistic explanations of lexico-grammatical differences in such various registers are linked to the features of post-infancy language. For example, Halliday (2004) argues that from the perspective of language as a stratified system, lexicogrammar can be viewed as a



system in which three simultaneous meta-meanings, or functions are in constant interaction with three generalized semantic features, each of which makes a separate yet related contribution to the realization of three meta-functional aspects of language: ideational, interpersonal, and textual metafunctions. Ideational metafunction represents experience as quanta of information and it is related to processes and attendant participant functions in a text (Martin & Rose, 2012, p. 20; Martin, Matthiessen, & Painter, 2010, p. 5). Ideational metafunction further separates into experiential, “representation of the processes themselves,” and logical, “the representation of the relations between one process and another” (Halliday & Matthiessen, 1999, p. 511).

Interpersonal metafunction represents text as a dialogue and covers interactive and personal aspects of language (Eggins, 2004, p. 30; Martin et al, 2010, p. 6). Textual metafunction shows organization of text as it is seen in sequence of discourse, discursive flow, cohesion, and continuity (Eggins, 2004, p. 12; Halliday & Matthiessen, 2014, pp. 31-32). The three metafunctions originate from socio-cultural environments to which human beings are exposed from early on in their social life, and indicate the additional level of semiosis, a lexicogrammar (Halliday, 2004, p. 26).

**Rank Scales.** According to Schleppegrell (2004), Systemic Functional Grammar (henceforth, SFG) recognizes a simultaneous realization of three generalized meanings in every English clause. Clause is situated at the highest rank in rank scale at the lexico-grammatical stratum in the systemic functional grammar (Bloor & Bloor, 2013; Eggins, 2004; Halliday & Matthiessen, 2014). A clause forms a clause complex by the combining with another clause, a clause itself consists of either a phrase or word group, a phrase and word group are an assembly of words, and words are constituted by morphemes (Halliday, 2004, pp. 8-9). As for the difference between clause and sentence, Halliday and Matthiessen (2014) says that sentence and

sub-sentence refer to units of orthography and the term clause is used for the reference to grammar for the topical uncertainty of writing about grammar (p. 8). While Thompson (2014) admits the sufficiency of clause for the replacement of the account, sentence, he also explains that the difficulty of imposition of the concept of sentence, of which grammatical acceptability depends on the accompaniment of a noun phrase and verb phrase, for the use of full stops in between grammatically dependent sentences in spoken language:

Ticket agencies then resold them for \$400. Thus capitalizing on the unique skill of this specialized workforce. (p. 23)

Egins (2004) says these rank scales in a systemic functional approach allow the analysis and description of units at the lexico-grammatical stratum (p. 126).

Table 1  
*The units of the lexico-grammatical rank scale* (Egins, 2004, p. 26)

Units of lexico-grammar	
highest rank (largest unit)	clause, clause complex phrase, group word
lowest rank (smallest unit)	morpheme

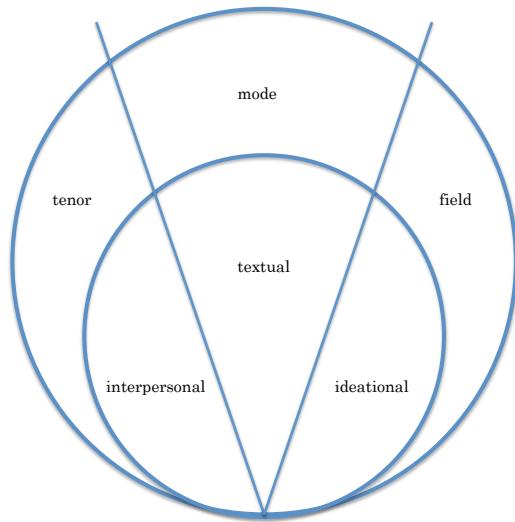
The functions of lexicogrammar enable a finite set of language expressions to realize infinite contents/meanings (Egins, 2004, p. 116). Lexicogrammar creates the words by combination of sounds, and combines the words for the creation of meanings (p.116). Due to these functions, the same set of words provides a variety of meanings through different structures (p.116). Besides, the structural differences can make a meaning difference in a sense that the sentence is a statement, or question, or command, and that the sentence concerns the present, or the past, or the habitual matters (p. 117).

**Register.** The reason for particular language choice from a number of linguistics patterns is described in the SFL studies of register. Schleppegrell (2004) remarks that a functional approach finds the certain types of usage in grammatical structures for various social engagement and social purposes in a way typically expected in situations. The simultaneous realization of ideational, interpersonal, and textual metafunctions contextualize the situation (field, tenor, and mode) of a certain text, and the different configuration of three elements realize different registers (Schleppegrell, 2004). Halliday and Matthiessen (2014) defines:

field – what’s going on in the situation: (i) the nature of the social and semiotic activity; and (ii) the domain of experience this activity related to (the ‘subject matter tenor’ or ‘topic’)

tenor – who is taking part in the situation: (i) the roles played by those taking part in the socio-semiotic activity – (1) institutional roles, (2) status roles (power, either equal or unequal), (3) contact roles (familiarity, ranging from strangers to intimates) and (4) sociometric roles (affect, either neutral or charged, positively or negatively); and (ii) the values that the interactants imbue the domain with (either neutral or loaded, positively or negatively)

mode – what role is being played by language and other semiotic systems in the situation: (i) the division of labour between semiotic activities and as constitutive of the situation to semiotic activities as facilitating); (ii) the division of the labour between linguistic activities and other semiotic activities; (iii) rhetorical mode: the orientation of the text towards field (e.g. informative, didactic, explanatory, explicatory) or tenor (e.g. persuasive, exhortatory, hortatory, polemic); (iv) turn: dialogic or monologic; (v) medium : written or spoken; (vi) channel: phonic or graphic. (pp. 33-34)



*Figure 1.* Metafunctions and register

**Nominalization and Grammatical Metaphor.** Eggins (2004) mentions the process of nominalization as the common feature of the degree of grammatical complexity and the lexical density which marks the separation between spoken and written language for the relation with mode (p. 94). Bloor and Bloor (2013) explains that “Nominalization allows a process, more obviously realized as a verb, to be realized as a noun and hence to become a participant in a further process.” As for the understanding the essence of academic register, Schleppegrell (2004) further argues nominalization is considered as the resource for the relation to grammatical metaphor in SFL. Christie and Derewianka (2008) also reported that “grammatical metaphor serves to organize text and compact information, creating high levels of lexical density (p. 116). According to Halliday (2004), “metaphor in the grammatical sense, the replacement of one grammatical class by another, of which the prototypical example is nominalization” (p. 32). The predominance of nominalization in grammatical metaphor is its shift into a nominal group (p. 39), and both can reset “the relationships between meanings and wordings, between the semantics and the lexico-grammar (Thompson, 2014, p. 233), but grammatical metaphor refers to the other

shifts other than the one into a nominal shift as it means realization of grammatical class at the level of lexicogrammatical level through a junction of meanings at the level of semantics. It should be noted that lexical metaphor rather shows a simple oppositional contrast (Halliday, 2004, p. 79). In the case of *fruit* / *result*, the expression, *the fruit(s) of their efforts*, is metaphorical while *the result(s) of their efforts* is an abstract expression (Halliday, 2004, p. 79).

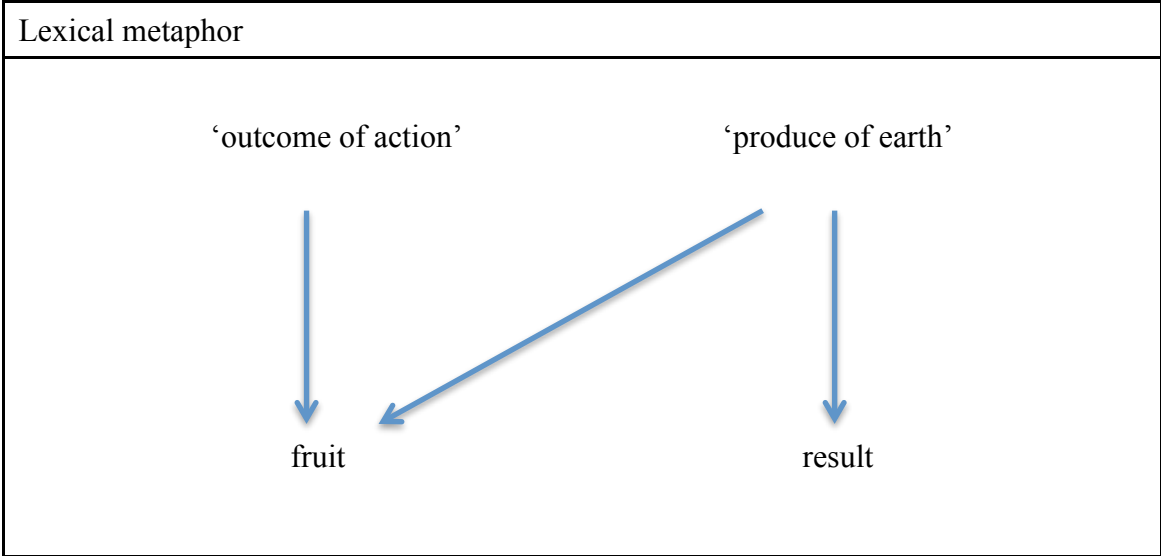


Figure 2. Lexical metaphor (Halliday, 2004, p. 106)

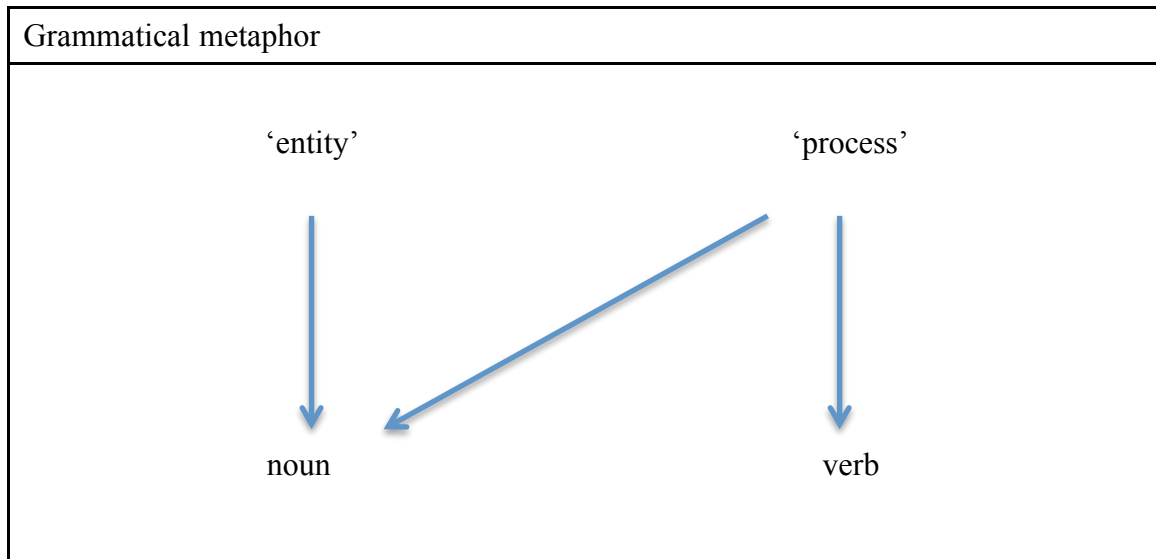


Figure 3. Grammatical metaphor (Halliday, 2004, p. 106)

Halliday (2004) shows six types of semantic elements: entity, quality, process, circumstance, minor process, and relator (p. 40). In the realization of ideational grammatical metaphor, these elements can be realized as a noun, adjective, verb, adverb, preposition, conjunctions, and those of groups and phrase at the level of lexicogrammar (Halliday, 2004). Nominalization, for example, is the realization of those elements in semantics as a noun or noun phrase; a noun in the grammatical class, *transformation*, shows the shift from a verb, *transform*, and the realization of a process as a semantic element, as if it is an entity at the grammatical level (Halliday, 2004). Halliday (2004) shows ideational grammatical metaphor, including nominalization, contains 13 types of shifts such as ones from a process at the semantic stratum to a quality expression as an adjective in the grammatical class (poverty is increasing = increasing poverty; was/used to = previous) and from a conjunction to a verb, which indicates a realization of a relator as if it is a process (then = follow; so; cause). As ideational metafunction consists of two components, experiential and logical metafunctions, ideational grammatical metaphor splits

into experiential grammatical metaphor and logical grammatical metaphor. Logical grammatical metafunction realizes the logical relation like causality as a noun or a verb, not straightforwardly as a conjunction (Derewianka, 1995, p. 77). In Table 3, logical grammatical metaphor is categorized as the type 4, 7, 9, and 10. Following the fundamental features of experiential function concerning the representation in the clause, experiential grammatical metaphor constitutes the other nine types.

Table 2  
*Congruent realization* (Halliday, 2004, p. 40)

<b>Congruent Realization (semantic element → grammatical class)</b>	
<b>Semantics</b>	<b>Lexicogrammar</b>
entity	noun (/nominal group)
quality	adjective (in nominal group)
process	verb (verb group)
circumstance (1)	adverb (adverbial group)
circumstance (2)	prepositional phrase
minor process	preposition
relator	conjunction

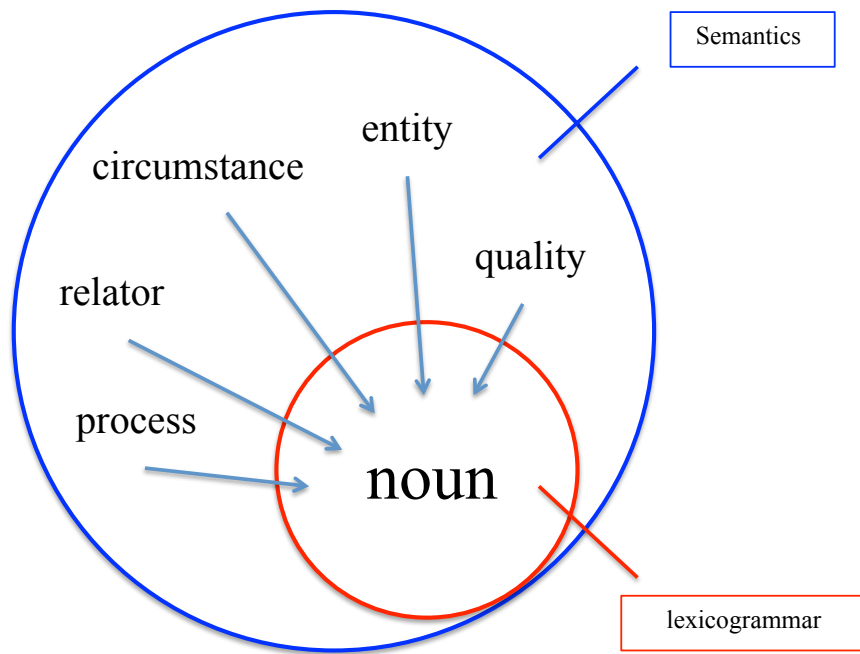


Figure 4. Realization of Element



Table 3

*Grammatical metaphorical types* (Halliday, 2004, pp. 41-42)

semantic element	grammatical class
grammatical function	example
Type 1. quality → entity	Adjective → noun
Epithet = Thing	unstable = instability
Type 2. process → entity	verb → noun
(i) Event = Thing (ii) Auxiliary = Thing: (tense) (phase) (modality)	transform = transformation  will/going to = prospect try to = attempt can/could = possibility, potential
Type 3. circumstance → entity	proposition → noun
Minor Process = Thing	with = accompaniment; to = destination
Type 4. relator → entity	conjunction → noun
Conjunctive = Thing	so=cause/proof; if=condition
Type 5. process → quality	verb → adjective
(i) Event = Epithet  (ii) Auxiliary = (tense) (phase) (modality)	[poverty] is increasing = increasing [poverty]  was/used to = previous begin to = initial must/will [always] = constant
Type 6. circumstance → quality	adverb/prepositional phase →adjective
(i) Manner = Epithet (ii) other = Epithet  (iii) other = Classifier	[decided] hastily = hasty [decision] [argued] for a long time = lengthy [argument] [cracked] on the surface

	→ surface [crack]
Type 7. relator → quality	conjunction → adjective
Conjunctive = Epithet	then = subsequent; so = resulting
Type 8. circumstantial → process	be / go + proposition → verb
Minor Process = Process	be about = concern; be instead of = replace
Type 9. relator → process	conjunction → verb
Conjunction = Minor Process	Then = follow; so = cause; and = complement
Type 10. relator → circumstance	Conjunction → preposition/-al group
Conjunctive = Minor Process	when = in times of/in ... times if = under conditions of/under ... conditions
Type 11. [zero] → entity	= the phenomenon of ...
Type 12. [zero] → process	= ... occurs/ensues
Type 13. entity → [expansion]	Noun → [various] (in env. 1, 2 above)
Head = Modifier	The government [decided] = the government's [decision], [a/the decision] of/by the government, [a] government(al) [decision] the government [couldn't decide/was indecisive] = the government's [indecision], [the indecision] of the government, government(al) indecision

As Halliday (1994; 1998) explains grammatical metaphor as “expression of concepts in an incongruent form” (as cited in Schleppegrell, 2004), grammatical metaphor is related to the degree of congruency in language expressions. Congruent expressions of ideational grammatical metaphor share the feature with the way language is used in ordinary, spontaneous, conversational contexts that children will possibly meet (Halliday & Matthiessen, 2014;

Schleppegrell, 2004). Entity at the semantic stratum is concisely realized as a noun at the lexico-grammatical stratum. Process at the semantic level is realized as a verb at the lexico-grammatical stratum. As Halliday (2004) shows in regard to the unpacking process of metaphorical expressions, grammatical metaphor can be a more congruent, less metaphorical version (p. 28). The highly metaphorical expression, “Failure to reconfirm will result in the cancellation of your reservation,” can be unpacked as “If you fail to reconfirm your reservation will be cancelled” (p. 28). The difficulty of unpacking is, however, in the increase of ambiguity according to the intensity of packing in texts (Halliday, 2004, p. 30). For example, the expression, “the effectiveness of our actions,” in the sentence, “The truest confirmation of the accuracy of our knowledge is the effectiveness of our actions,” could be understood in three ways: “(the facts) that our actions are effective,” “whether our actions are effective,” and “how effective our actions are” (Halliday, 2004, p. 30).

Halliday (2004) comments that schoolchildren face metaphor in a grammatical sense of which specialized disciplines shows technicality in the representation of knowledge and relation to some theory (p. 19). The influence of grammatical metaphor can be more significant for those applying English just as a language for specific fields despite of the degree and type of grammatical metaphor that they have experienced through the languages in the context of education (Halliday, 1993b, p. 90). Christie and Derewianka (2008) argue that:

Control over grammatical metaphor is central to success in secondary schooling. With the ability to control grammatical metaphor, it is possible to develop arguments, to show accumulated resources, and to compact and situate information and evidence for a smooth flow of the argument (p. 25).

Christie (2012) further notes that “the emergent control of grammatical metaphor, both in reading and writing, enables enhanced development in understanding the increasingly uncommonsense discourses of the different school subjects” (p. 28). Schleppegrell (2009) frames

that recognition of grammatical metaphor and the way grammatical metaphor packs information for constructive and referable arguments and presentation of knowledge and user's point of view could be an implication to understand the challenging part of academic language and necessary support in language learning and content learning for students with limited academic language resource at home (p. 16).

### **Textbook Research**

Hyland (2009) argues the indispensability of textbooks as an aid of professional role of teachers and as a way to convey concepts and analytical methods of a discipline (p. 112).

They play a major role in the learner's experience and understanding of a subject by providing a coherently ordered epistemological map of the disciplinary landscape and, though their textual practices, can help convey the values and ideologies of a particular academic culture. (Hyland, 2009 p. 112)

This is especially crucial for novices' improvement of their competence in new areas of knowledge and improvement of their understanding about the way new community demands a specific interpretation (p. 112).

Much research on Japanese English textbooks has been conducted from the perspective of Corpus Linguistics. Nakajyo, Nishigaki, Hasegawa, and Uchikawa (2008) report the change of vocabulary in terms of size, level, and range between the textbooks in 1998 and 2008. By the corpus analysis of vocabulary in Japanese English textbooks based on the research by Koike (2008), Tono (2008) indicates teaching written language is postponed until high school.

Chujo, Nishigaki, Yamaho, and Amano (2011) investigates the readability of the EFL textbooks used in Japan, China, South Korea, and Taiwan for the creation of textbook corpus. Negishi (2015) researches the transitions of Japanese English textbook difficulties by Lexile Measure and shows gradual transitions of difficulties except between the textbooks for third-year junior high school students and for first-year high school student. From a sociological

perspective, Wang (2014) reports the main stream of textbook research is critical analysis of contents knowledge in textbooks after the 90's for recognition of certain meaning and value in the textbooks (p. 247).

Miller (2011) argues that the main concerns of ESL textbook studies have been the thematic content or the activities for developing reading skills, and they lack the studies of language in such textbooks (p. 34). One of the concerns of SFL research on textbooks has been the linguistic clarification of the three metafunctions and genre (Martin & Rose, 2008), but the research has not fully covered EFL textbooks from any aspects. As the central role of grammatical metaphor for the other linguistic criteria of difficulties in texts, such as grammatical intricacy and lexical density, has been argued above, research on grammatical metaphor in the Japanese EFL textbooks will indicate the difficulty level of textbooks in general. This research attempts to grasp the quantitative and qualitative change of grammatical metaphor in the textbooks throughout academic grades. In addition, since this research adopts the three series of high school EFL textbooks published by the same textbook publisher, the difference and difficulty among the series can be clarified from the grammatical metaphorical perspective.

## CHAPTER 2

### DATA AND METHOD OF ANALYSYS

This research analyzed 14 English textbooks published by one of the biggest Japanese textbook publisher, *Tokyo Shoseki*. Three of them are for Japanese junior high school students. *New Horizon 1* is for junior high school first-year students between the ages of 12 and 13, *New Horizon 2* is for junior high school second-year students between the ages of 13 and 14, and *New Horizon 3* is for junior high school third-year students between the ages of 14 and 15. Nine of them are for high school students and categorized into three series: the *All Abroad!* series, the *Power On* series, and the *Prominence* series. The three textbooks of the *All Abroad!* series are *All Abroad! Communication English I*, *All Abroad! Communication English II*, and *All Abroad! Communication English III* (henceforth, *All Abroad! I* or *AAI*; *All Abroad! II* or *AAII*; *All Abroad III* or *AAIII*). The three textbooks of *Power On* series are *Power On Communication English I*, *Power On Communication English II*, and *Power On Communication English III* (henceforth, *Power On I* or *POI*; *Power On II* or *POII*; *Power On III* or *POIII*). The three textbooks of the *Prominence* series are *Prominence Communication English I*, *Prominence Communication English II*, and *Prominence Communication English III* (henceforth, *Prominence I* or *PI*; *Prominence II* or *PII*; *Prominence III* or *PIII*). These nine textbooks are for the main English language classes at Japanese high school, *Communication English I*, *Communication English II*, and *Communication English III*. Since students are expected to take the *English Communication* class from *English Communication I* to *English Communication III* according to the progress of grades during the three years of Japanese high school, the numbers in the textbook titles correspond to students' academic grades. the number in the textbook titles correspond to the number in class titles of *Communication English* and the students' grade of

textbook use. For example, *All Abroad! I* is used for high school first-year students between the ages of 15 and 16 in the *Communication English I* class, *All Abroad II* is used for high school second-year students between the ages of 16 and 17 in the *Communication English II* class, and *All Abroad! III* is used for high school third-year students between the ages of 17-18 in the *Communication English III* class. The last two books, *New Favorite I* and *New Favorite II*, are for the *English Expression* class at high school. The analysis of this study separates *New Favorite II* into two parts, the first part and the later part, for the grammatical metaphorical changes in the textbook and its possibility of use in second or third year of high school depending on the curriculum of each school. As there are other textbook publishers in Japan, the adoption of a textbook company is dependent on the regional Board of Education, and principals at each school decide on the type of textbooks. In the situation of adopting Tokyo Shoseki as a textbook company, students use the *New Horizon* series from the first year of junior high school to the third year of junior high school, and students use one of the high school textbook series during the three years in the *English Communication* class while they use the *New Favorite* series in the *English Expression* class.

Although the uses of the *New Horizon* series and the *New Favorite* series are obligatory in those classes, the three textbook series in high school have different features. The key features of the *All Abroad!* series are simplicity of textbook structure, process-oriented edit for improvement of learner's English abilities, and various types of activities to raise students' independent abilities to study, think, and output in English (Tokyo Shoseki, 2012a). The ones of the *Power On* series are proper amounts of texts, consideration of effective study by structural categorization of lessons, appealing contents and designs for improving English language ability of intermediate students (Tokyo Shoseki, 2012b). The ones of the *Prominence* series are two

types of texts (500 words and 1,000 words), consistency of difficulty, designs to improve English language proficiency of intermediate students, and consideration of students' preparation for university entrance examinations (Tokyo Shoseki, 2012c). From these features, it can be expected that the *All Abroad!* series is the easiest, the *Power On* series is the middle, and the *Prominence* series is the most difficult.

This research adopts 11 lessons from *New Horizon 1*, 7 lessons from *New Horizon 2*, and 6 lessons from *New Horizon 3*. It also adopts 11 lessons from *All Abroad! I*, 12 lessons from *All Abroad! II*, and 7 lessons from *All Abroad! III*. From the *Power On* series, 10 lessons from *Power On I*, 10 lessons from *Power On II*, and 7 lessons from *Power On III* are analyzed. From the *Prominence* series, 10 lessons from *Prominence I*, 8 lessons from *Prominence II*, and 7 lessons from *Prominence III* are used for analysis. From the *New Favorite* series, 25 lessons from *New Favorite I*, and 32 lessons are used for analysis. This research separates *New Favorite II* into two parts and considers the first part is composed of the first 4 chapters (16 lessons) and the later part is composed of the later 4 chapters (16 lessons). These textbooks include activity sections or additional reading sections other than these main Lessons, but these are not included in the analysis.

In this data analysis, all the texts in each textbook have been separated into clauses. All the grammatical metaphors are counted, and categorized into 12 types of grammatical metaphors. Following the discussion by Derewianka of the realization of an entity as an adjective (2003, p. 206), type 13 has been excluded for its secondary grammatical metaphorical feature realized only as a result of the other grammatical metaphorical changes. All the textbooks have been examined by comparing: (1) the number of clauses in textbooks, (2) the number of total grammatical metaphors in textbooks, (3) the frequency of grammatical metaphors per clause, (4) the



percentage of grammatical metaphorical types, (5) the number of grammatical metaphorical types used in textbooks, (6) the number of grammatical metaphors in all the chapters, and (7) the sequential frequency of grammatical metaphors used in all the chapters.

Example 1 below shows examples of data analysis of this study. The word, *sickness*, in clause complex #12 in Lesson 5 of *Prominence III* is categorized as type 1. As interpreted as an entity and a quality at the semantic stratum, this word could be realized as a noun (*sickness*) or an adjective (*sick*) at the lexico-grammatical stratum, yet is realized as a noun. The word, *rain*, in clause complex #1 in Lesson 6 of *Prominence III*, is categorized into type 2. It could be realized as a noun and a verb at the lexico-grammatical stratum due to its feature as an entity or as a process at the semantic stratum, but is realized as a noun. The word, *lack*, in the same clause as the word *access* is in, is realized as a noun instead of as a preposition for its circumstantial meaning of without. The word, *obligation*, in clause complex #45 in Lesson 12 of *Prominence III*, is a realization of a relator as a noun instead of as the congruent realization of it as a conjunction. “A terrible-smelling black smoke” in clause complex #1 in Lesson 6 of *Prominence III* possesses type 5. The word, *smelling*, is both process and quality at the semantic stratum, but it is realized as an adjective in the clause. For this semantic junctions, the noun group can be unpacked as “A black smoke smells terrible.” The word, *morning*, in clause complex #1 in Lesson 6 of *Prominence III* is categorized as type 6 for its realization as an adjective at the lexico-grammatical stratum despite of two meaning of an adjective and a circumstance at the semantic stratum. The clause, “As the morning rain stops in Accra,” can be unpacked as “As it stops raining in Accra in the morning.” Type 7 is found in clause complex #12 in Lesson 5 of *Prominence III*. Although it should be admitted that this type is similar to type 5 as these two types sometimes have overlapping meanings at the semantic stratum (Halliday, 2004, p. 80). The

word, *impoverished*, for example, is quality and relator at the semantic stratum and realized as an adjective in this clause instead of as a conjunction. The word, *have*, in clause complex #6 in Lesson 19 in *Prominence III* is categorized as type 8 for its meanings of a process and a circumstance at the semantic stratum, and realized as a verb instead of *be/go* and a preposition. The word, “*heats*,” in clause complex 1 in Lesson 6 of *Prominence III* is categorized as type 9. This word is realized as a verb at the lexico-grammatical stratum, but it is both a process and a relator at the semantic stratum. The clause, “and the sun heats the humid air,” can be unpacked as “and because of the sun, the humid air becomes hot.” The word, *despite*, in clause complex 22 in Lesson 14 of *Prominence III*, is type 10. This word is both a circumstance and a relator at the semantic stratum, but is realized as a preposition at the lexico-grammatical stratum instead of as a conjunction. The word, *fact*, is a noun at the lexico-grammatical stratum and categorized as type 11. The reason for non-description of this type at the semantic stratum can be explained by the disappearance of the word in congruent expression after unpacking. The prepositional phrase, “despite the fact that 52.5 percent of men wanted to do so,” can be unpacked as “although 52.5 percent of men wanted to do so.” Type 12 is similar to type 11 in terms of the non-description at the semantic stratum. The word, “*arose*” in clause complex 49 in Lesson 14 of *Prominence III* is a verb, but this word disappears or is replaced by other expressions, such as *happened* and *occurred* in the congruent expression.

Example 1

Example Data Analysis

*Prominence III*

Lesson 5: Recycling Hotel Soap to Save Lives

Clause Complex 12

#12    Sickness is related to the lack of access to basic sanitation and poor hygiene tends  
          1            9            3        2  
          to plague impoverished regions, and in fact, more than two million children die  
          9            7  
          from diarrheal diseases each year.  
          10

*Prominence II*

Lesson 6: Technology as Trash

Clause Complex 1

#1        As the morning rain stops in Accra, the capital city of Ghana,  
                  6        2  
          and the sun heats the humid air,  
                  9  
          a terrible-smelling black smoke begins to rise above the vast market.  
                  5

*Prominence III*

Lesson 12: The Art of Choosing

Clause Complex 45

#45        Our Obligation, then, is to find the choice that makes sense today, that fulfills our  
                  4                            2                            2                            9  
          needs given our immediate social situation.  
                                  6                            11

*Prominence III*

Lesson 14: Equality in the Workplace, Equality in the Home

Clause Complex 22

#22        According to a survey conducted by the Tokyo Metropolitan Government, only  
                  2  
          1.8% of men working at companies in Tokyo took childcare leave within one year  
          of their wives giving birth in fiscal 2011, despite the fact that 52.5 percent of men  
                                  10            11  
          wanted to do so.



## CHAPTER 3 RESULTS

### Number of Clauses

The total number of clauses recorded and analyzed in this study was 7,173: *New Horizon* series had 1,038 clauses; *All Abroad* series, 851 clauses; *Power On* series, 1,433 clauses; *Prominence* series, 3,096 clauses, and *New Favorite* series, 755 clauses. Figure 5 shows the number of clauses found in each textbook analyzed for this study.

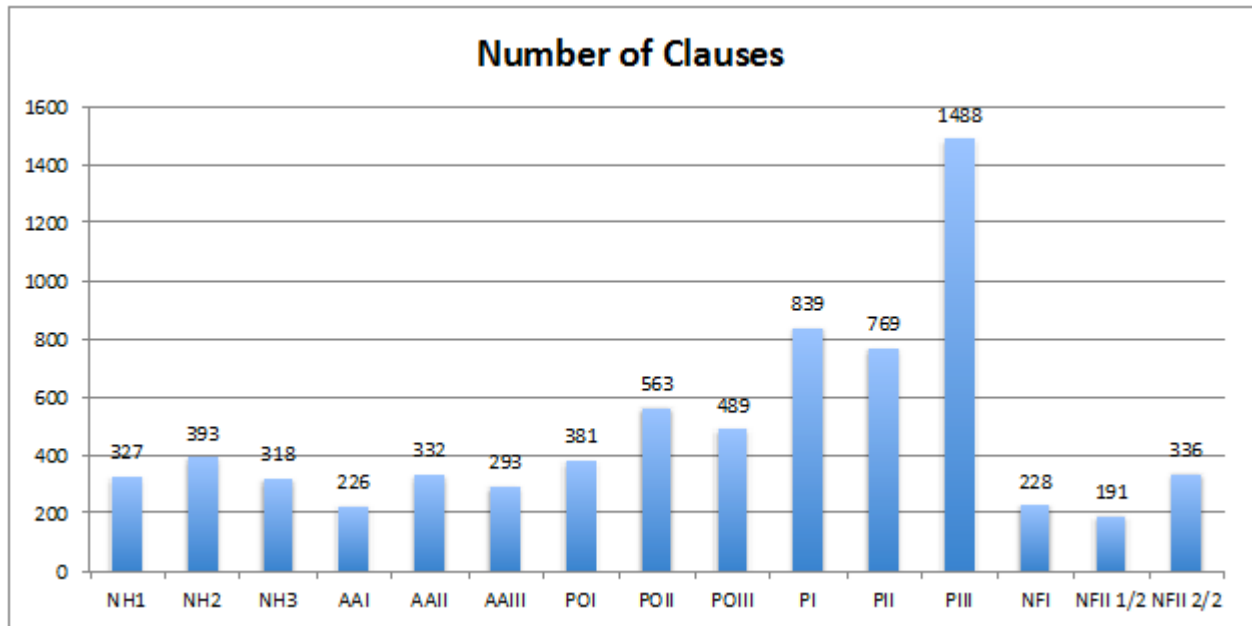


Figure 5. Number of clauses

*Prominence III* shows the highest number of clauses of all the textbooks (*PIII*: 1488 clauses), and *Prominence I* has the higher number of clauses than high school 3rd-year textbooks in the other two series (839, 293, and 489 total clauses in *PI*, *AAIII*, and *POIII*, respectively). In regard to the number of clauses in each textbook series, the total number of clauses during the three years of junior high school in the use of the *New Horizon* series is higher than the three-year use of the *All Abroad* series (1038 and 851 clauses in the *New Horizon* series and the *All Abroad*

series, respectably). However, since Japanese high school students also learn with the *New Favorite* series (755 clauses) in English Expression classes, the total number of clauses in the three years of high school is higher regardless of the selection of textbooks for English Communication classes. It is also noteworthy that some lower grade textbooks contain more clauses than the higher grade textbooks in the same series (*NH2*, 393 clauses; *NH3*, 318 clauses, *AAII*, 332 clauses; *AAIII*, 293 clauses; *POII*, 563; *POIII*, 489; *PI*, 839; and *PII*, 769 clauses).

### Number of Grammatical Metaphors

This study counted 4,279 grammatical metaphors in total: the *New Horizon* series, 144 GMs; the *All Abroad* series, 365 GMs; the *Power On* series, 850 GMs; the *Prominence* series, 2438 GMs; the *New Favorite* series, 497 GMs. Figure 6 shows the total number of grammatical metaphors found in each textbook in this study.

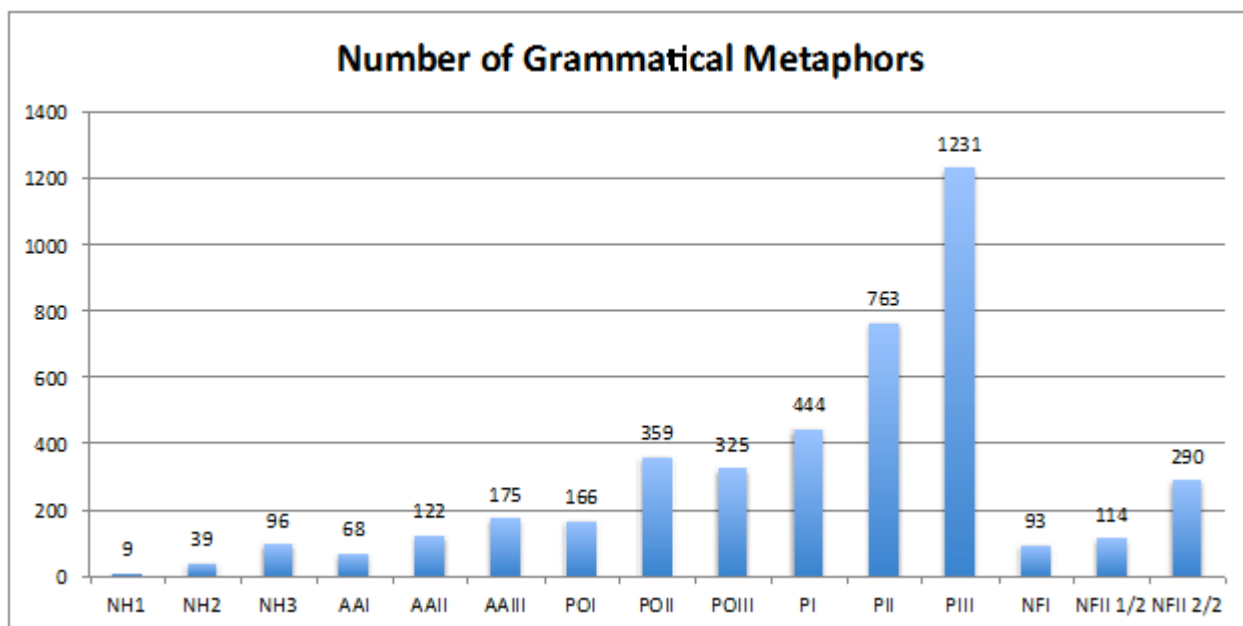


Figure 6. Number of Grammatical Metaphors

*Prominence III* has the highest number of grammatical metaphors of all the textbooks (1231 total GMs), and of the first year high school textbooks, *Prominence I* shows the highest number of the

use of GMS, including the 3rd-year textbooks in the other two series (444, 175, and 325 total grammatical metaphors in *PI*, *AIII*, and *POIII*: 325, respectively). *All Abroad I* uses 68 grammatical metaphors, which is lower than the 3rd-year junior high school textbook, *New Horizon 3* (96 grammatical metaphors used in this textbook). The number of grammatical metaphors in *Power On II* shows a slightly higher number than that of *Power On III* (359 and 325 in total grammatical metaphors in *POII*: 359 and *POIII*: 325). As for the number of grammatical metaphors in the textbooks, *All Abroad! II* (122 GMs), *All Abroad! III* (175 GMs), and *Power On I* (166 GMs) show a similar number of grammatical metaphors used. On average, *All Abroad! II*, *All Abroad! III*, and *Power On I* use 150 GMs (122, 175, and 166 grammatical metaphors, respectively), and *Power On II* (359 GMs), *Power On III* (325 GMs), *Prominence I* (444 GMs), and *New Favorite II* (404 GMs) show a similar number of grammatical metaphors used (around 400 grammatical metaphors used in each textbook).

### **Frequency of Grammatical Metaphors**

Figure 7 shows the frequency of grammatical metaphors in a clause in all the textbooks: the *New Horizon* series, 14%; the *All Abroad* series, 43%; the *Power On* series, 59%; the *Prominence* series, 79%; the *New Favorite* series, 66%.

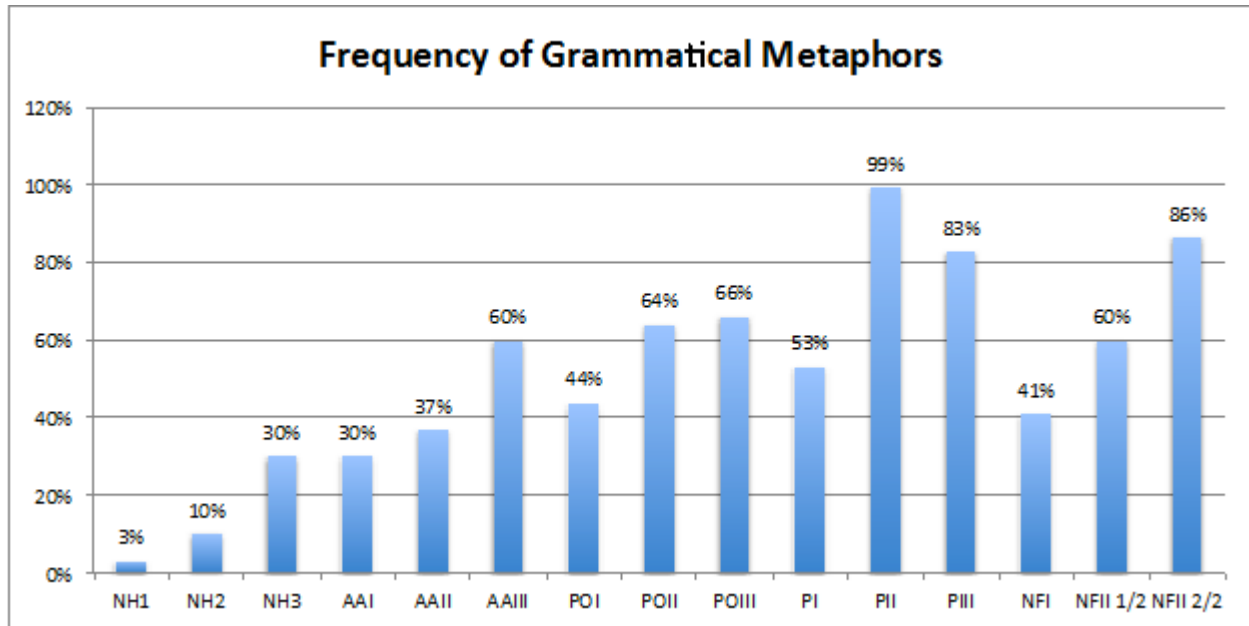


Figure 7. Frequency of Grammatical Metaphors

*Prominence II* shows the highest frequency of grammatical metaphors (99%). *Prominence III*, the third-year textbook of the *Prominence* series, and the second part of *New Favorite II* follow the grammatical metaphorical frequency of *Prominence II* (83% in NFII 2/2 and 86% in PIII). The third-year textbooks in the two series, the *All Abroad!* series and the *Power On* series, are similar in the frequencies of grammatical metaphors (60% in AAIII: 66% in POIII). While *Power On II* shows a similar frequency to this group of third-year textbooks (POII: 64%), *All Abroad! II* shows a rather lower frequency than these three textbooks (AAII: 37%). As the frequency of grammatical metaphors in the first part of *New Favorite II* is higher than the frequency of grammatical metaphors in *All Abroad! II* (60% in NFII ½ and 37% in AAII), students studying with *All Abroad! II* at the high school second grade in the main English language class, *Communication English*, may face difficulty reading *New Favorite II* in the English language class, *English Expression*. Students studying with *All Abroad! III* at the high school third grade



may also face the difficulty in use of the later part of *New Favorite II* (60% in *AAIII* and 86% in *NFII 1/2*). *All Abroad III* contains a similar number of grammatical metaphors with *All Abroad! II* and *Power On I*, but the frequency of grammatical metaphors in *All Abroad III* is higher than *All Abroad! II* and *Power On I*. Similarly, *Prominence I* has a similar number of grammatical metaphors with *Power On II* and *Power On III*, but the frequency of grammatical metaphors in *Prominence I* is slightly lower than the two upper grade textbooks in the different series (53%, 64%, and 66% in *PI*, *POII*, and *POIII*, respectively).

### Percentage of Grammatical Metaphorical Types

Figure 8 shows the percentage of grammatical metaphorical types throughout the 14 textbooks: Type 1: 8%; Type 2: 36%; Type 3: 1%; Type 4: 2%; Type 5: 10%; Type 6; 13%; Type 7: 0%; Type 8: 2%; Type 9: 19%; Type 10: 6%; Type 11: 1%; Type 12: 1%.

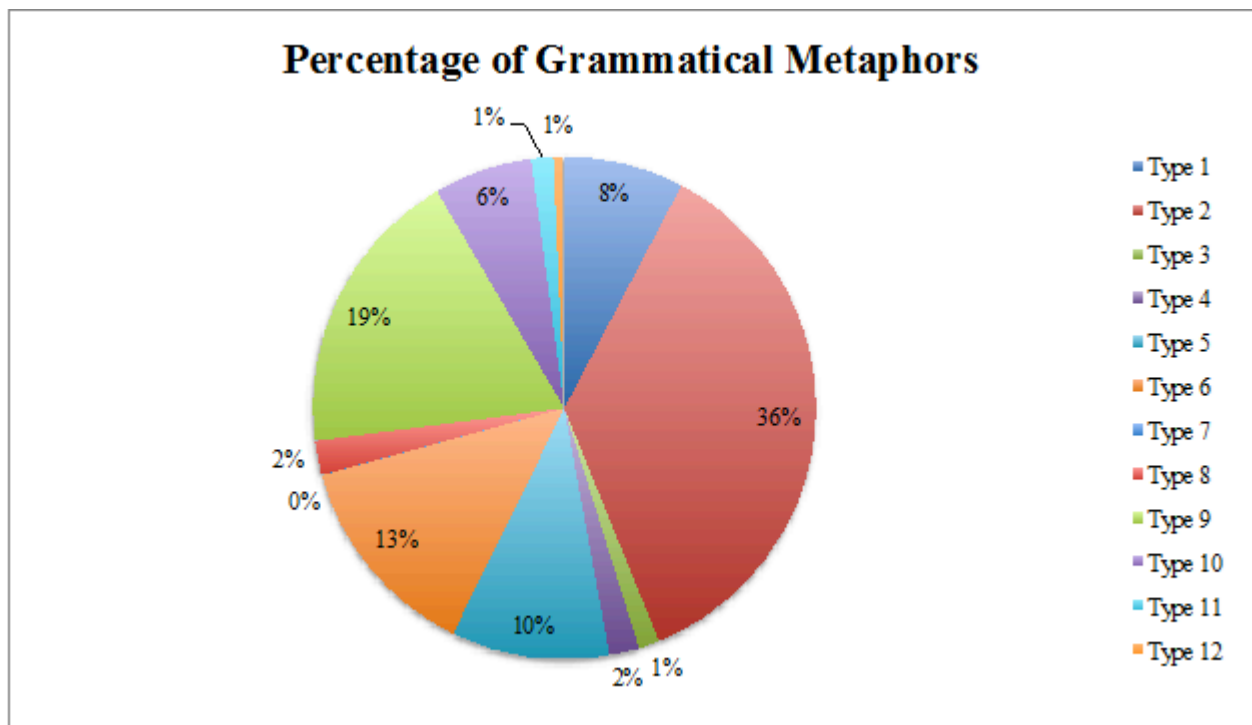


Figure 8. Percentage of grammatical metaphorical types

This figure shows that type 2 is the most popularly used in the textbooks, and type 9 is the next. Type 5 and 6 follow the two types, and type 1 and 10 are after the four types. As for the percentage, type 3, 4, 7, 8, 11, and 12 are not dominant in this study.

### Comparison of 12 Types in Textbook Series

Figure 9 shows the number of types and numbers of grammatical metaphors in the series of *New Horizon*. The number of grammatical metaphors written besides the title of textbook in the figure is the total number of grammatical metaphors in the textbook.

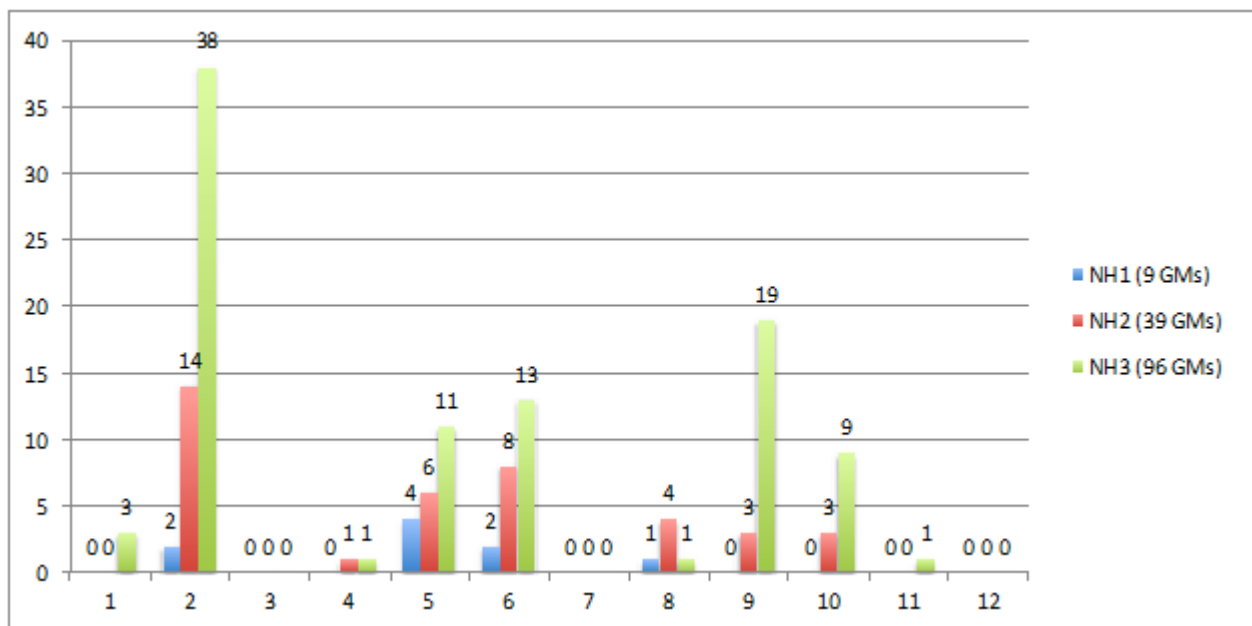


Figure 9. Number of grammatical metaphors in junior high school textbooks

The sudden increases of type 1, 2, 9, and 10 and the decrease of type 8 from the second-year textbook to the third-year textbook are remarkable in this comparison. In addition, although type 9 is in the second place in the percentages of grammatical metaphors, it is found that the numbers of types 5 and 6 is bigger than Type 9 in *New Horizon 1* and 2, and the number of type 9 is bigger than Types 5 and 6 in *New Horizon 3*.

Figure 10 shows the types and numbers of grammatical metaphors in the series of *All Abroad!*.

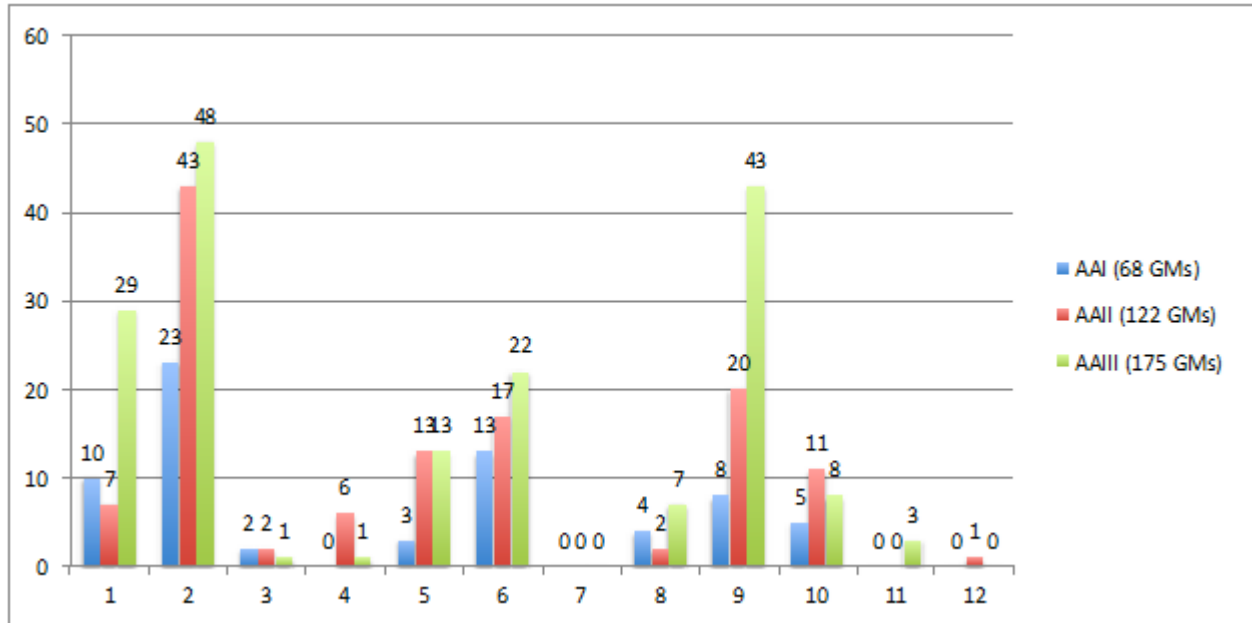


Figure 10. Number of grammatical metaphors in the *All Abroad!* series

The increase of type 1 and 9 are apparent between the second-textbook and the third-year textbook, and Type 5 increases between the first year and the second year textbooks and keeps the same number in the transition from the second-year textbook to the third-year textbook. Besides, although *All Abroad I* and *II* show similar frequencies of grammatical metaphors, they provide a different number of type 2, 4, 5, 9, and 10. The appearance of type 4 in the second year textbook may be peculiar cases of this series.

Figure 11 shows types and numbers of grammatical metaphors in the series of *Power On*.

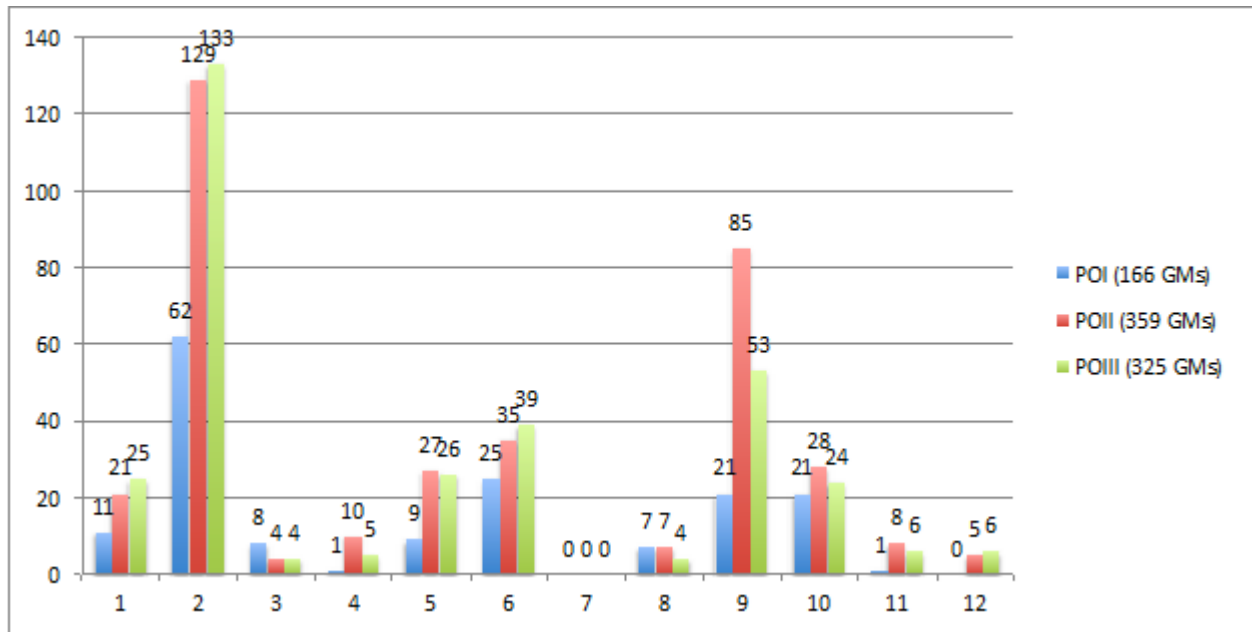


Figure 11. Number of grammatical metaphor in the *Power On* series

This series shows distance of grammatical metaphors between the first-textbook and the two textbooks for the following years. The second and third-year textbooks include almost the same numbers of type 1, 2, 5, 6, 11, and 12, but the first-year textbook uses a lower number of grammatical metaphors in these types. *Power On II* and *III* show similar frequencies of grammatical metaphors, but the difference can be seen in the number of type 9.

Figure 12 shows types and numbers of the grammatical metaphors in the series of *Prominence*.

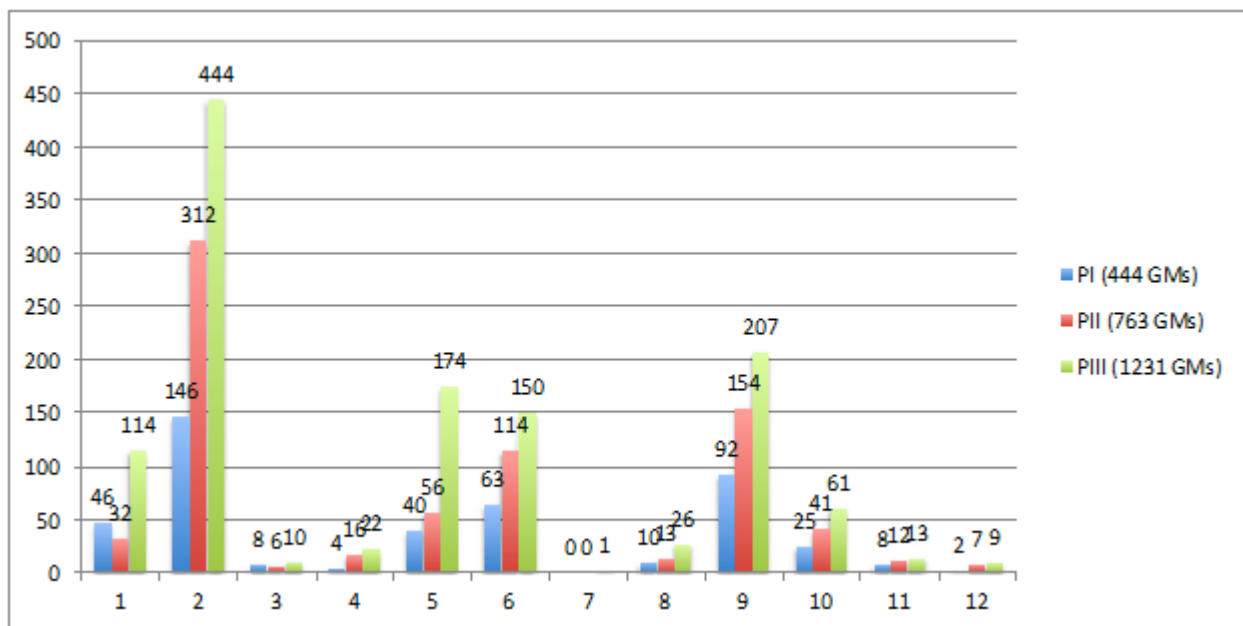


Figure 12. Number of grammatical metaphor in the *Prominence* series

This series shows a gradual increase in the number of grammatical metaphors except for type 3 and 11. *Prominence II* shows a higher frequency of grammatical metaphors than *Prominence III*, but from the quantitative perspective, *Prominence III* uses more grammatical metaphors in all the types than *Prominence II*. Type 1 and 5 are used three times more frequently between the second-year textbook and the third-year textbook, and type 8 is doubled as well. Besides, it is noteworthy that one case of type 7 in the *Prominence III* is the only findings of this type in this study.

Figure 13 shows the number of grammatical metaphors in each type in the series of *New Favorite*.

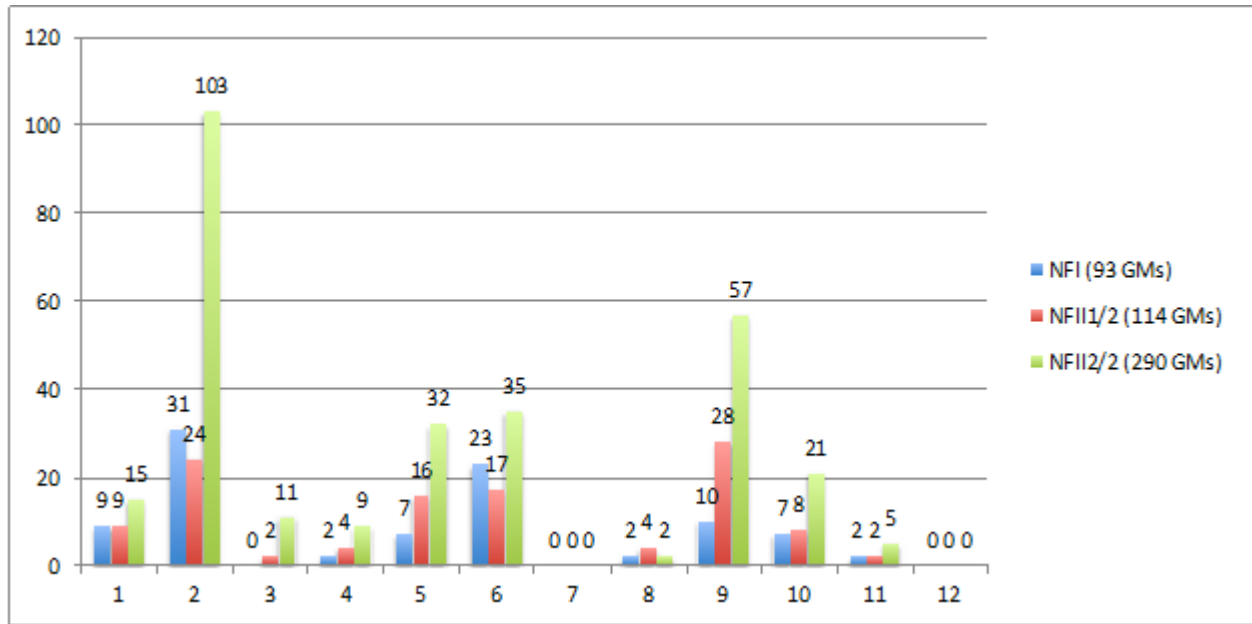


Figure 13. Number of grammatical metaphor in the *New Favorite* series

The remarkable difference in this series is found in types 2 and 3 between the first part of *New Favorite II* and the second part of *New Favorite II*. In addition, types 4, 5, 6, 9, 10, and 11 also increase between the first and second part in *New Favorite II*. When compared with *New Favorite I* and *II*, *New Favorite II* increases the number of types 2, 3, 4, 5, 9, and 10 more than *New Favorite I*.

### Comparison of 12 Grammatical Metaphor Types in Combinations

Figure 14, 15, and 16 show the comparisons of each type of grammatical metaphors found in high school textbooks in each grade.

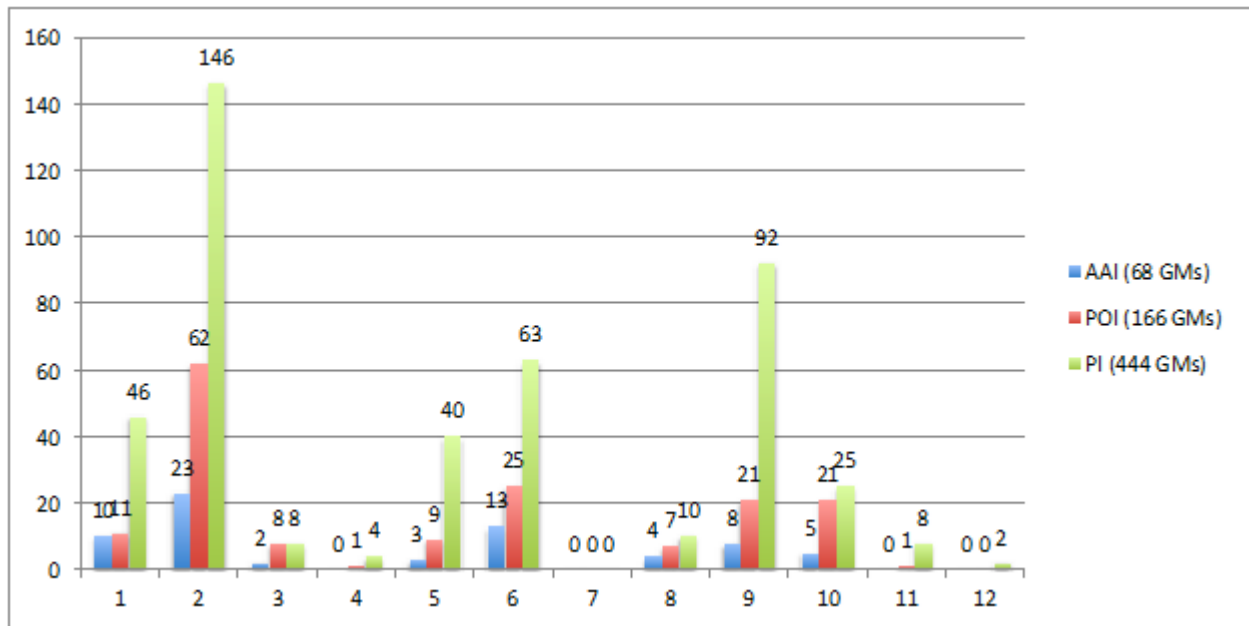


Figure 14. Comparison of first-year textbooks

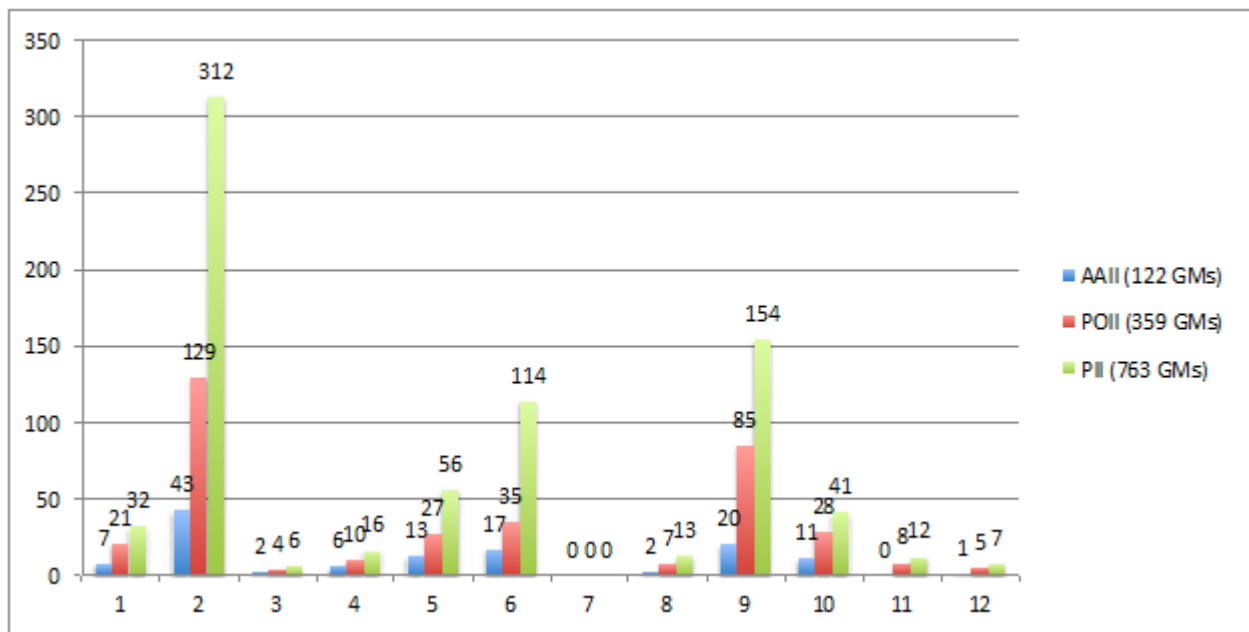


Figure 15. Comparison of second-year textbooks

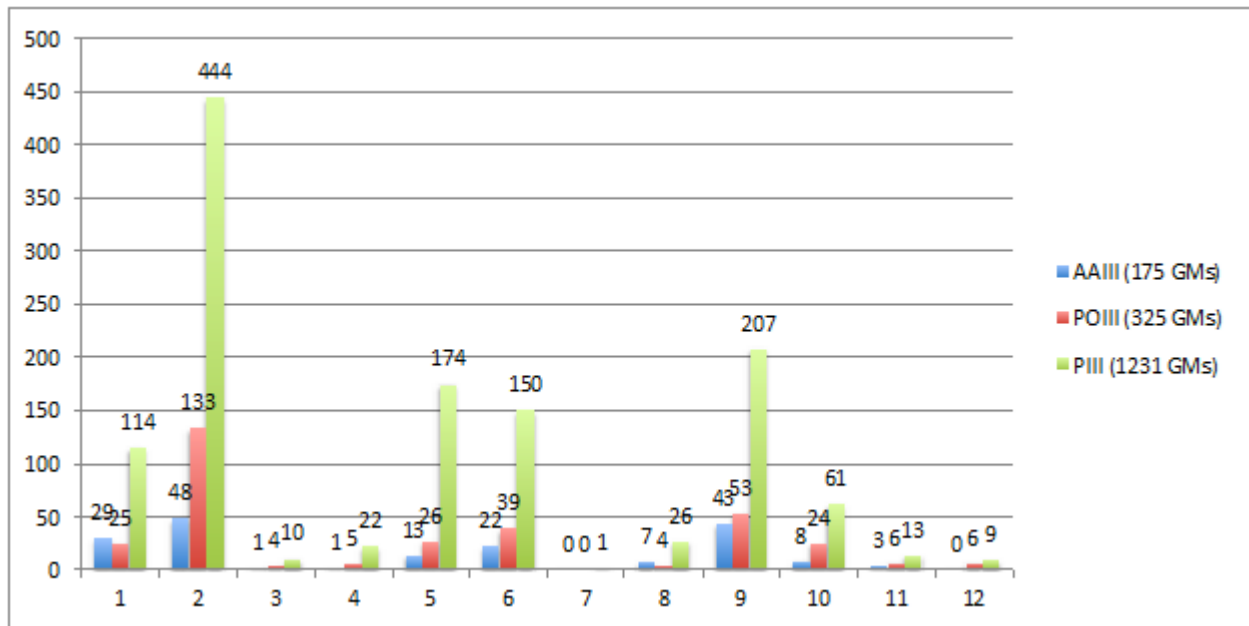


Figure 16. Comparison of third-year textbooks

Throughout the three years, the *Prominence* series shows a remarkable difference in the numbers in almost all of the types of grammatical metaphor from the other series. A comparison between *All Abroad! I* and *Power on I* shows that *Power on I* uses types 3, 9 and 10 more than three times. The difference between *Prominence I* and the other two first-year high school textbooks is apparent in type 1, 5, and 9. Despite more than two times the difference between the numbers of grammatical metaphors in *All Abroad! I* and *Power On I* (68 total GMs in *AAI* and 166 total GMs in *POI*), the numbers of Type 1 are almost the same. Between *All Abroad II* and *Power On II*, *Power On II* uses grammatical metaphors much more widely than *All Abroad II*, and the number of grammatical metaphors in almost all of the types increases. Type 8, 11 and 12 are not found except for few cases in *All Abroad II*, but the same types are found in *Power On II*. In comparison of the second-year high school textbooks, all the types of grammatical metaphors gradually increase from *All Abroad! II* to *Power On II* and from *Power On II* to *Prominence II*, but *Power On II* shows more than four times the number of grammatical metaphors in *All*



*Abroad! II* in type 4 and *Prominence II* shows two times the number of grammatical metaphors in *Power On II* in type 2, 5, 6, and 9. Between *All Abroad III* and *Power On III*, *Power On III* shows a higher number of grammatical metaphors than *All Abroad III* except in types 1 and 8 despite nearly two times the difference of the numbers of total grammatical metaphors between them (175 total GMs in *AAIII* and 325 total GMs in *POIII*). The difference between *All Abroad III* and *Power On III* is mostly contributed to the number of type 2. *Prominence III* shows more than four times a number of *All Abroad! II* in type 1, 4, 5, and 8.

Figure 17 shows the gap between the third-year junior high school textbooks and the three of the main first-year high school textbooks, *All Abroad I*, *Power On I*, and *Power On I*.

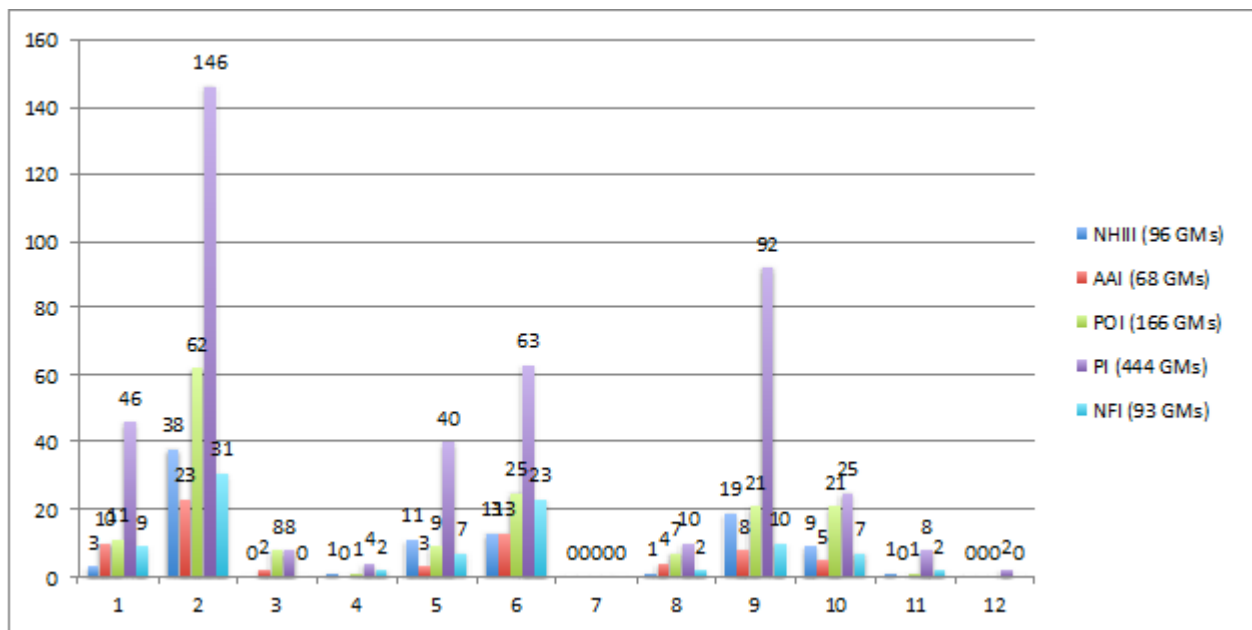


Figure 17. Comparison of number of grammatical metaphors in junior high school third-year textbook and high school first year-textbooks

From the perspective of grammatical metaphors, the selection of first-year high school textbook between *All Abroad I* and *Power On I* might be significant for the difference between types 2, 3, 5, 9, and 10. As is seen in Figure 18, *New Favorite I* shows type 6 as the most frequently used

grammatical metaphors, the textbook does not show remarkably different distribution patterns of grammatical metaphorical realizations in the other types of grammatical metaphors from the other textbooks for English Communication classes .

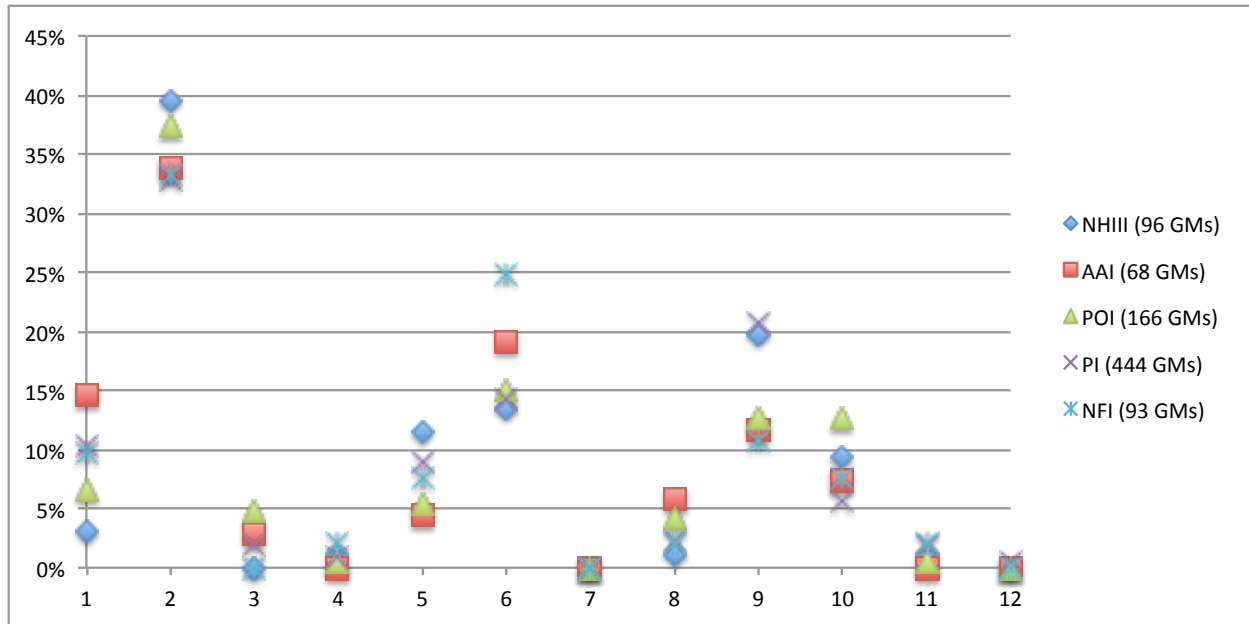


Figure 18. The distribution of grammatical metaphorical types in junior high school third-year textbook and high school first year-textbooks

Figure 19 compares the three high school textbooks showing similar frequencies of grammatical metaphors, *All Abroad! II* (122 GMs), *All Abroad! III* (175 GMs), and *Power On III* (166 GMs).

Figure 20 compares the three high school textbooks showing similar frequencies of grammatical metaphors, *Power On II* (359 GMs), *Power On III* (325 GMs), *Prominence I* (444 GMs), and *New Favorite II* (404 GMs).

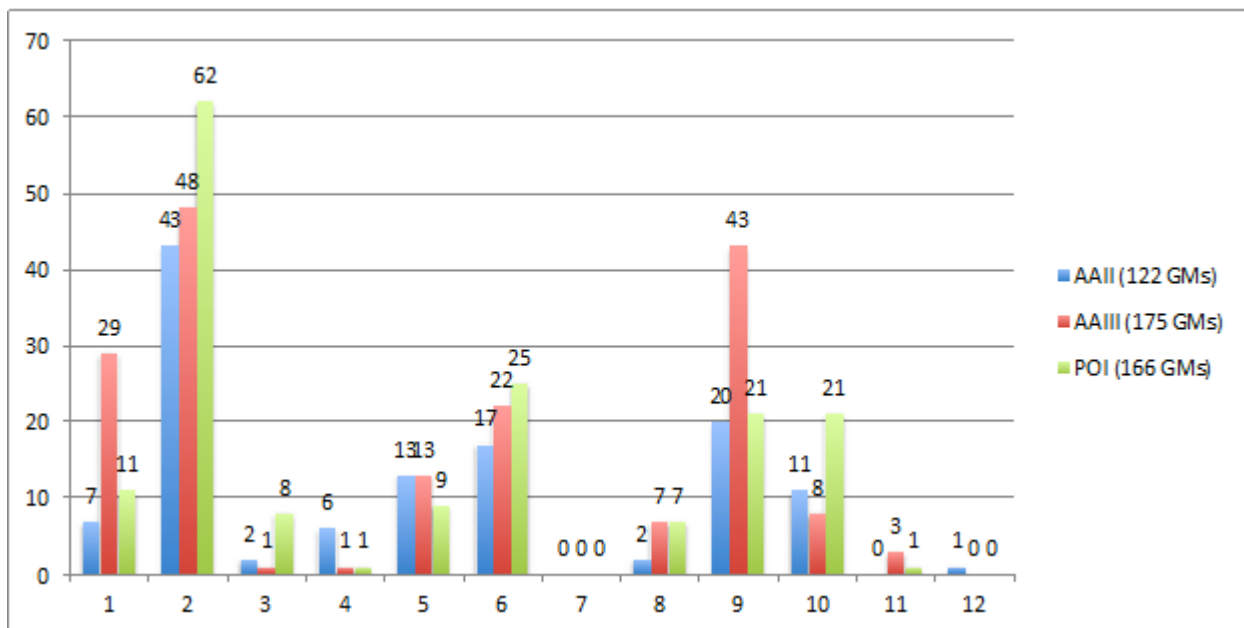


Figure 19. Similar frequency patterns of grammatical metaphors in three textbooks

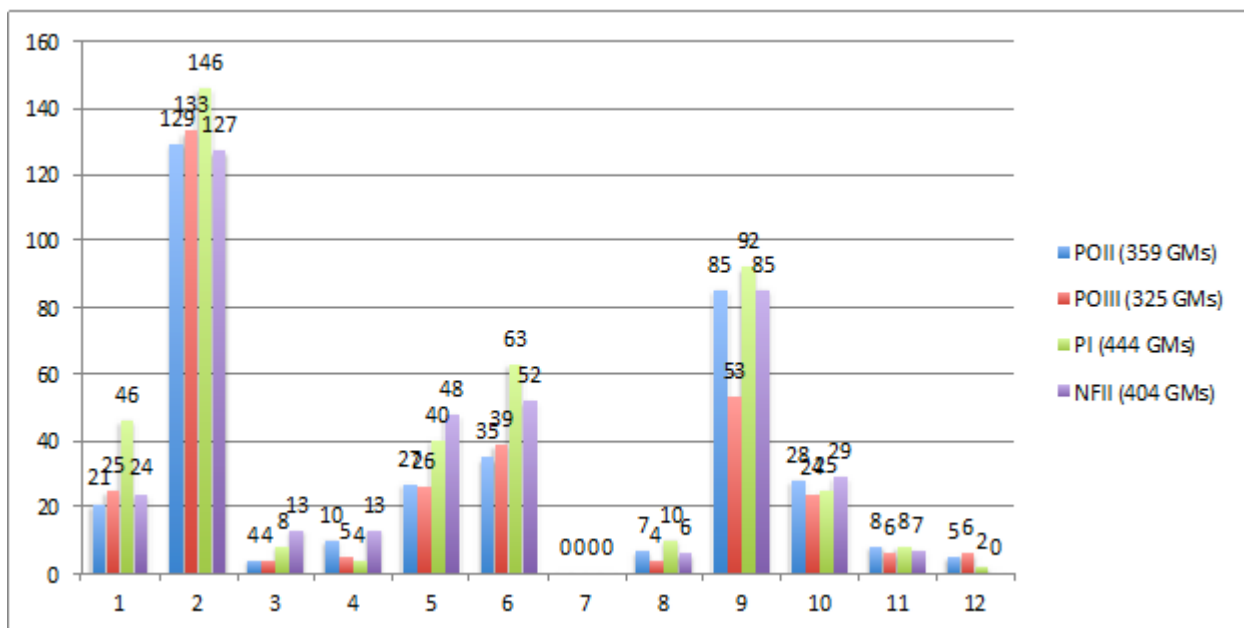


Figure 20. Similar frequency patterns of grammatical metaphors in four textbooks

Figure 19 and 20 show typical patterns of increase in the number of grammatical metaphors in the textbooks: *AAIL*, 122 total GMs; *AAIII*, 175 total GMs; *POI*, 166 total GMs; *PO II*, 359 total GMs; *POIII*, 325 total GMs; *PI*, 444 total GMs; *NFII*, 404 total GMs). Although there is a

remarkable difference between the first part and the later part in *New Favorite II*, the frequency of type 2 in *New Favorite II* is also similar. The average grammatical metaphors in *All Abroad! II*, *All Abroad! III*, and *Power On III* is 155, and the average number of grammatical metaphors used in *Power On II*, *Power On III*, *Prominence I*, and *New Favorite* is 383, more than double that of the former. However, it should be noted that the increase in the total number of grammatical metaphors from Figure 19 to Figure 20 corresponds with the emergence of some minor grammatical metaphorical types, such as types 3, 4, 7, 8, 11, and 12, but these types do not increase in the same way the total number of grammatical metaphors and the major types 2, 5, 6, and 10 increase. Despite the increase of major grammatical metaphors in Figure 19, consistently being 2.5 times greater than the ones of Figure 20, the increase of minor grammatical metaphors is not consistent in Figure 19 and 20. Types 1 and 9 are found more often than the minor types, but the number of grammatical metaphors depends on individual texts in this study.

Table 4 also shows the inconsistent frequency increase in the minor types in the *Prominence* series.

Table 4  
*Minor grammatical metaphorical types in the Prominence series*

	<i>Prominence I</i>	<i>Prominence II</i>	<i>Prominence III</i>
Type 3	8	6	10
Type 4	4	16	22
Type 7	0	0	0
Type 8	10	13	26
Type 11	8	12	13
Type 12	2	7	9
Number of Total GMs	444	763	1231

Grammatical metaphors increase from *Prominence I* to *Prominence III*, but the number of these minor types do not necessarily correspond with the increase of the total number of grammatical metaphors.

Table 5 shows Types of grammatical metaphors recording double-digit of frequencies in each textbook.

Table 5  
*Dominant grammatical metaphorical types in textbooks*

Textbook	NH1	NH2	NH3	AAI	AAII	AAIII	POI
1st GM Type	Type 5 (44%)	Type 2 (36%)	Type 2 (40%)	Type 2 (34%)	Type 2 (35%)	Type 2 (27%)	Type 2 (37%)
2nd GM Type	Type 2 (22%)	Type 6 (21%)	Type 9 (20%)	Type 6 (19%)	Type 9 (16%)	Type 9 (25%)	Type 6 (15%)
3rd GM Type	Type 6 (22%)	Type 5 (15%)	Type 6 (14%)	Type 1 (15%)	Type 6 (14%)	Type 1 (17%)	Type 9 (13%)
4th GM Type	Type 8 (11%)	Type 8 (10%)	Type 5 (11%)	Type 9 (12%)	Type 5 (11%)	Type 6 (13%)	Type 10 (13%)

Textbook	POII	POIII	PI	PII	PIII	NFI	NFII1/2	NFII2/2
1st GM Type	Type 2 (36%)	Type 2 (41%)	Type 2 (33%)	Type 2 (41%)	Type 2 (36%)	Type 2 (33%)	Type 9 (25%)	Type 2 (36%)
2nd GM Type	Type 9 (24%)	Type 9 (16%)	Type 9 (21%)	Type 9 (20%)	Type 9 (17%)	Type 6 (25%)	Type 2 (21%)	Type 9 (20%)
3rd GM Type	Type 6 (10%)	Type 6 (12%)	Type 6 (14%)	Type 6 (15%)	Type 5 (14%)	Type 9 (11%)	Type 6 (15%)	Type 6 (12%)
4th GM Type			Type 1 (10%)		Type 6 (12%)	Type 1 (10%)	Type 5 (14%)	Type 5 (11%)

In comparison with Type 6, of which percentages are relatively stable throughout the textbooks, the one of type 9 tend to gradually move their ranks from the lower to the higher according to the progresses of textbook grades and grammatical metaphorical difficulty in the terms of numbers and frequencies. For example, *All Abroad! I* ranks type 6 as the second highest grammatical metaphor in percentage (19%) and type 9 as the 4th (12%), but *All Abroad! II* reversely ranks type 9 as the second (16%) and type 6 as the third (14%). This reversal of grammatical metaphorical type frequencies between lower grade textbooks and lower grade textbooks also happens between *New Horizon II* and *III*, *Power On I*, *Power On III*, and *New Favorite I* and *New Favorite II*. This delayed dominance of type 9 may be understood as its feature of type 9 in textbooks as the emergence of type 9 is related to the introduction of causal verbs in *New Horizon II*. The frequency of type 2 is always the highest except for *New Horizon I* and the first

part of *New Favorite II*. Table 5 also shows the grammatical metaphorical dependency of logical meanings on type 9 in all the textbooks. Other than type 9 in all the high school textbooks and *New Horizon 3* and type 10 in *Power On I*, the other Types of logical grammatical metaphors do not appear more than 10%.

### Comparison of Frequency of Grammatical Metaphor in Chapter

Figure 21, 22, 23, and 24 show the transitions of the number of grammatical metaphors in each chapter in the textbooks.

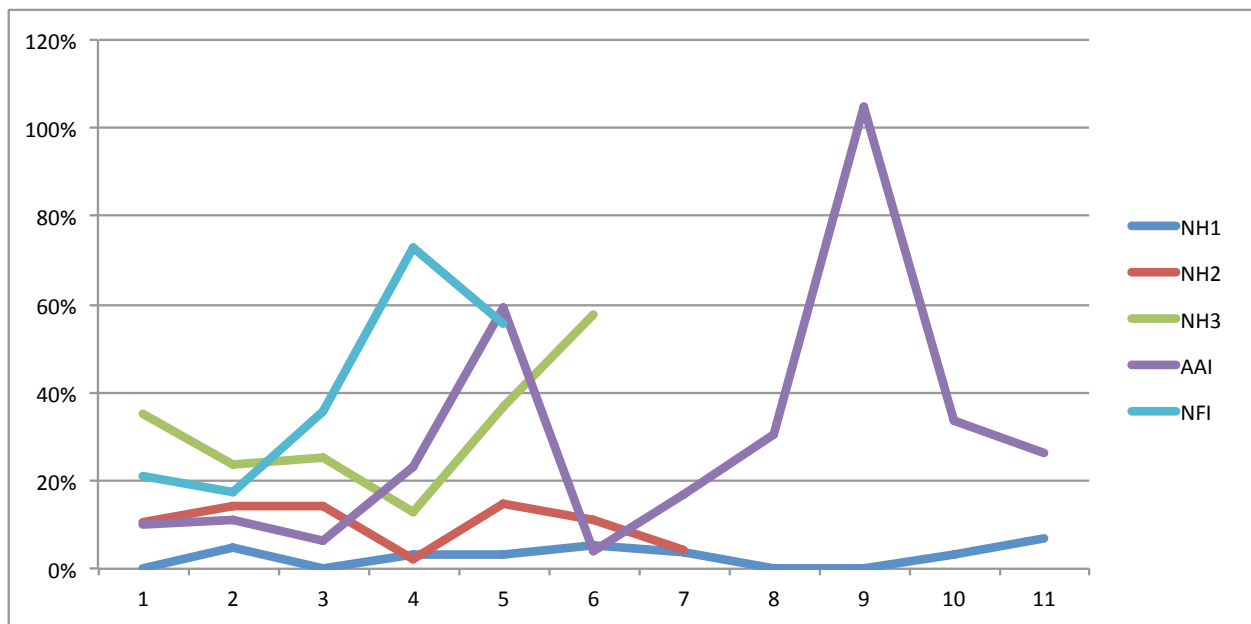


Figure 21. Transition of frequency of grammatical metaphors in chapters of *NH1*, *NH2*, *NH3*, *AAI*, and *NFI*

*New Horizon 1* and *New Horizon 2* do not show much difference of the number of grammatical metaphor throughout the textbooks, but *New Horizon 3* shows the highest frequency of grammatical metaphors in Lesson 6, the last chapter. *All Abroad! I* shows two grammatical metaphorically complex texts in Lessons 5 and 9 out of 10 Lessons. The following texts in Lessons 6 and 9 become less metaphorically complex (Lesson 5, 59%; Lesson 6, 4%, Lesson 9,

105%; Lesson 10, 33%) and the last four Lessons become more complex. *New Favorite I* starts with lower frequencies (Lesson 1, 21%; Lesson 2, 17%) and goes up to near the average in Lesson 3, and shows a higher frequency in the last Lessons (Lesson 4, 73%; Lesson 5, 56%).

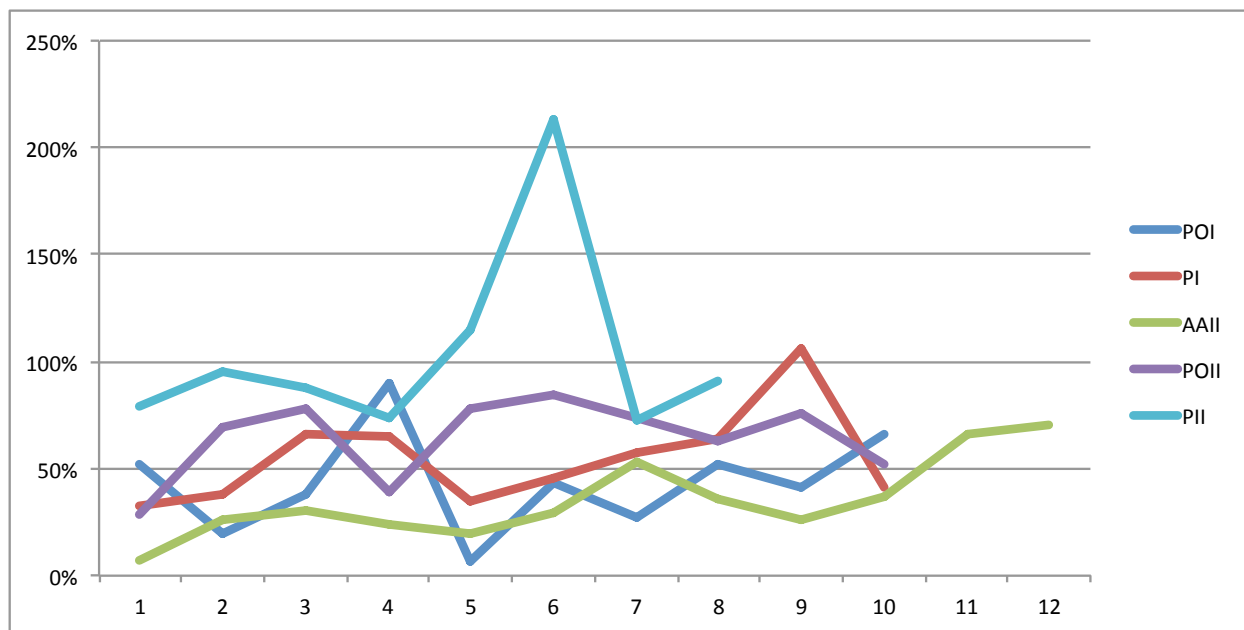


Figure 22. Transition of frequency of grammatical metaphors in chapters of *POI*, *PI*, *AAI*, *POII*, and *PII*

*Power On I* shows the highest frequency in Lesson 4 (90%) and the lowest frequency in the following chapter, Lesson 5 (7%). After Lesson 5, it repeats a gradual increase and decrease and reaches a relatively higher frequency than the average (44%) in the last chapter, Lesson 10 (67%).

*Prominence I* shows the highest frequency in Lesson 9 (107%) and the frequency drops in the next and last Lesson 10 (42%). Lessons 3, 4, 7, and 8 are above the average from 58% to 64% and Lessons 1, 2, 5, 6, 10 are between 32% and 46%. The lessons can be sequentially grouped by grammatical metaphors, Lessons 1 and 2, and Lesson 3 and 4, Lesson 5 and 6, and Lesson 7 and 8, and the sets of grammatical metaphorically difficult texts, Lessons 3 and 4 and Lessons 7 and 8 texts, follow the ones with grammatical metaphorically less complex texts, Lessons 1 and 2

and Lessons 5 and 6, in *Prominence I. All Abroad II* shows a relatively gradual increase in grammatical metaphorical complexity from the first Lesson 1 to the last Lesson 12. The frequency increases from Lesson 1 to Lesson 3 (Lesson 1, 7%; Lesson 2, 26%; Lesson 3, 31%), and decreases in Lessons 4 and 5 (Lesson 4, 24%; Lesson 5, 19%). It increases in Lessons 6 and 7 (Lesson 6, 29%; Lesson 7, 53%), and decreases in Lessons 8 and 9 (Lesson 8, 35%; Lesson 9, 26%), and increases again from Lessons 10 to 12 (Lesson 10, 37%; Lesson 11, 67%; Lesson 12, 70%). *Power On II* shows a similar pattern of increase in Lessons 1 to 3 and Lessons 4 to 6. Lessons 1 and 4 show grammatical metaphorically lower frequencies in this textbook (Lesson 1, 29%; Lesson 4, 39%), and Lessons 2 and 3, and Lessons 5 and 6 show an increase from the lower frequencies in the chapters before (Lesson 2, 69%; Lesson 3, 78%; Lesson 5, 78%; Lesson 6, 84%). The last four Lessons show a sequential combination of a higher frequency and a lower frequency (Lesson 7, 74%; Lesson 8, 63%; Lesson 9, 75%; Lesson 10, 52%). *Prominence II* shows a relatively gradual frequency change around 83% except for Lessons 5 (115%) and 6 (213%). Lesson 6 in *Prominence II* has the highest frequency of grammatical metaphors in this study.



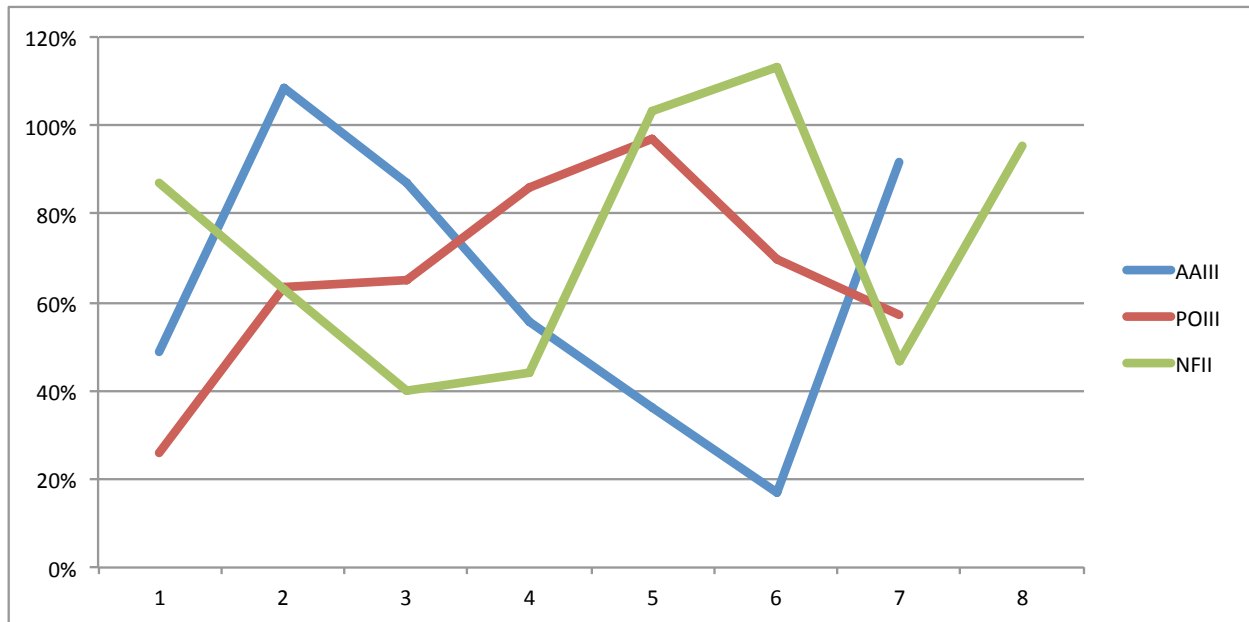


Figure 23. Transition of frequency of grammatical metaphors in chapters of AAI, POI, and NFI

*All Abroad III* shows an increase in the frequency between the first Lesson and second Lesson, 49% to 108%. It gradually decreases from the next lesson, Lesson 3 to Lesson 6, 87% to 17%, and it shows a sudden increase in the last chapter, Lesson 7 (92%). *Power On III* exhibits a gradual increase in the frequency from Lesson 1 to 5, 26% to 97%, and the frequency drops in Lesson 6 (70%) to 7 (57%). *New Favorite II* has two groups of grammatical metaphorical frequencies. The first group is grammatical metaphorically higher group, which is above the average (77%), and includes Lessons 1, 5, 6, and 8 (87%, 103%, 113%, and 95%, respectively). The second group is grammatical metaphorically lower group, which is below average, and includes Lessons 2, 3, 4, and 7 (63%, 40%, 44%, and 47% respectively). As the numbers of grammatical metaphors found in the first 4 chapters in *New Favorite II* and the last 4 chapters in *New Favorite II* show, the concentration of Lessons with the higher frequencies in the later part

of *New Favorite* and the concentration of Lessons with the lower frequencies in the first part of *New Favorite* were found.

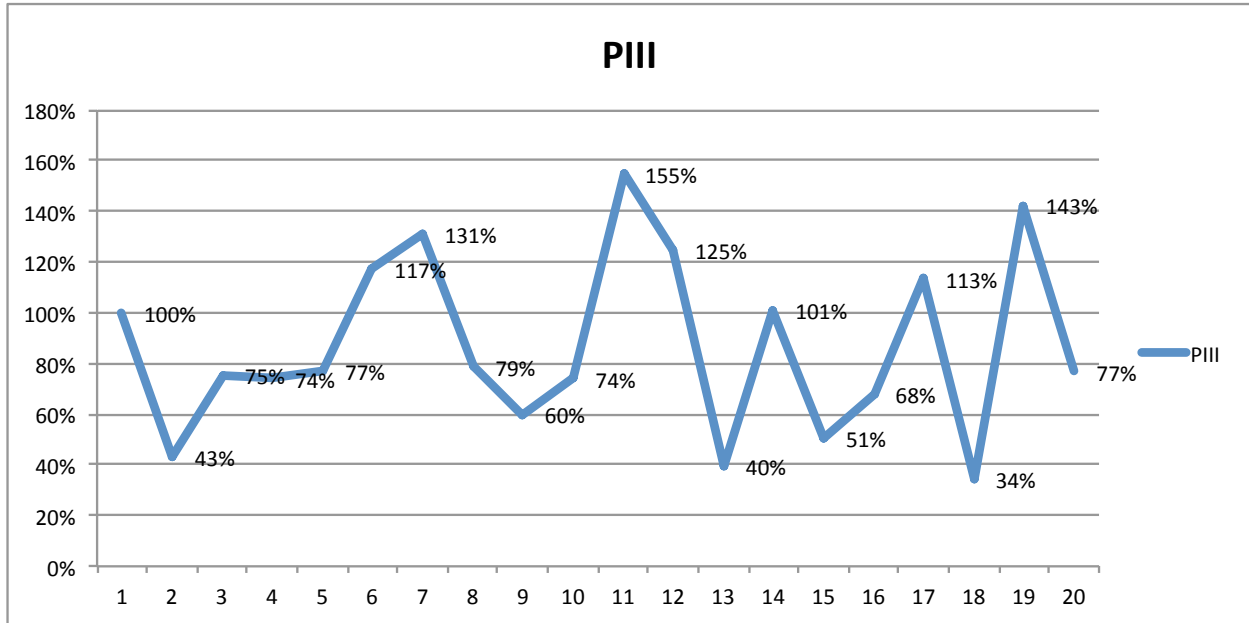


Figure 24. Transition of frequency of grammatical metaphors in chapters of PIII

*Prominence III* shows large gaps between sequential Lessons. Some serial Lessons keep relatively the same frequencies (e. g. Lesson 3, 75%; Lesson 4, 74%; Lesson 5, 77%; Lesson 8, 79%; Lesson 9, 60%; Lesson 10, 74%), but other sequential Lessons often show over 50% of frequency difference (e.g. Lesson 1, 100%, to Lesson 2, 43%, and Lesson 18, 34%, to Lesson 19, 143%). Although *Prominence III* is composed of combinations of shorter texts in odd-numbered Lessons (500 words) and longer texts in Lessons with even numbers (1000 words), the number of words in the texts do not correspond to the frequency of grammatical metaphors. Lessons with 500 words show a higher frequency more than the following Lesson with 1,000 words in half of the cases.

Table 6 shows the number of grammatical metaphors, clauses, and frequencies of grammatical metaphors in the earlier and later part of high school textbooks (Lessons in the middle, Lesson 6 in *All Abroad! I*, Lesson 4 in *All Abroad! III*, and Lesson 4 in *Power On III*, are not counted in Table 6).

Table 6  
*Difference between the First Part and the later Part of Textbooks*

Textbook	AAI 1/2	AAI 2/2	POI 1/2	POI 2/2	PI 1/2	PI 2/2	AAII 1/2	AAII 2/2
GMs	21	46	65	101	185	259	33	89
Clauses	89	112	164	217	397	442	148	184
Frequency of GMs	24%	41%	40%	47%	47%	59%	22%	48%

Textbook	POII 1/2	POII 2/2	PII 1/2	PII 2/2	AAIII 1/2	AAIII 2/2	POIII 1/2	POIII 2/2
GMs	134	225	327	436	85	70	84	193
Clauses	232	331	392	377	106	151	163	270
Frequency of GMs	58%	68%	83%	116%	80%	46%	52%	71%

Textbook	PIII 1/2	PIII 2/2	NFI 1/2	NFI 2/2	NFII 1/2	NFII 2/2
GMs	626	605	18	61	114	290
Clauses	784	704	93	96	191	336
Frequency of GMs	80%	86%	19%	64%	60%	86%

*All Abroad! II*, *Power On III*, *Prominence I*, *Prominence II*, *New Favorite I*, and *New Favorite II* show over 20% increase between the first and the later part. *All Abroad! III* shows a 34% decrease between the earlier and the later part of it. At the clause level, *Power On I* increases the number of clauses between the earlier and later part more than double. The number of clauses used in *Power On II*, *Power On III*, and *New Favorite II* increase by about 100 clauses in the later part. *Prominence I* uses about 300 fewer clauses in the later part.

## CHAPTER 4

### DISCUSSION AND CONCLUSION

This research has attempted to examine the qualitative and quantitative transitions of grammatical metaphors in Japanese EFL textbooks for the developmental appropriateness of grammatical metaphors. Through the clause-by-clause analysis of the way in which grammatical metaphors are used in the EFL textbooks examined, this research has shown that there are both quantitative and qualitative differences in the grammatical metaphors. *New Horizon 1* and *2* contain grammatical metaphors, but the frequencies are below 10% and there is a gap between *New Horizon 2* (9%) and *New Horizon 3* (30%). After the use of *New Horizon 3* in the junior high school, one of *All Abroad! I*, *Power On I*, or *Prominence I* is selected as a first-year high school textbook, but the selection will create a tremendous difference in terms of the number of grammatical metaphors used, hence affecting the way the students will appreciate the complex nature of moving back and forth from congruent to incongruent expressions. For example, in the case of *All Abroad I*, the frequency is the same with that in *New Horizon 3* (30% in *NH3*; 30% in *AAI*), and possible difficulties with understanding grammatical metaphors could be predicted in the increase in type 1 from *New Horizon 3* to *All Abroad! I*. However, *Power On I* shows 44% of grammatical metaphors and *Prominence I* uses 53% of grammatical metaphors.

The significance of these frequency differences among these first-year high school textbooks will be more apparent when considering these in the actual one-year operation of English language instruction for first-year high school students due to the other findings: the number of clauses and grammatical metaphors in the textbooks. For example, *Power On I* contains more than twice the number of grammatical metaphors of *All Abroad! I* and *Prominence I* contains more than 6 times the number of grammatical metaphors (*AAI*, 68 GMs; *POI*, 166

GMs; *PI*, 444 GMs). Although *Power On I* is not very different from *All Abroad! I* in terms of the number of total clauses, *Prominence I* contains more than twice the number of total clauses of *All Abroad! I* and *Power On I* (*AAI*, 226 clauses; *POI*, 381 clauses; *PI*, 839 clauses). This means that English language instruction using *Prominence I* should be done two times as fast as that using *All Abroad! I* or *Power On I*, despite the simultaneous treatment of a higher frequency of grammatical metaphors in the instruction. As a matter of fact, when the number of clause grammatical metaphors of *Prominence I* is compared to the upper-grade high school textbooks in the other two series, *Prominence I* has a higher number of clauses and grammatical metaphors as well. Although the frequency of grammatical metaphors in *Prominence I* does not reach most of the frequencies of grammatical metaphors in the upper-grade textbooks in the other series (*AAII*, 37%; *AAIII*, 60%; *POII*, 64%. *POIII*, 66%; *PI*, 53%), first-year high school students using *Prominence I* should decode a greater number of grammatical metaphors than second- and third-year high school students using the *All Abroad!* series or the *Power On* series in the upper-grade classes (*AAII*, 122 GMs; *AAIII*, 175 GMs; *POII*, 359 GMs; *POIII*, 325 GMs; *PI*, 444 GMs). From the perspective of grammatical metaphor, the complexity of packing clausal meanings at the semantic stratum into lexico-grammatical clausal elements in the textbooks does not support the grade sequence of the English Communication classes. For example, *Prominence I*, which is used in English Communication I classes, uses a much higher number of grammatical metaphors than *All Abroad! II*, which is used in the English Communication II class. The same phenomenon is observed in the case between *Power On II* used in the English Communication II class and *All Abroad! III* used in the English Communication III class. This inverse proportion between the levels of textbooks and those of grades might have the potential to negatively affect the pedagogical effectiveness.

The high school textbook series shows two patterns of the development of grammatical metaphors from the second year high school textbooks. *All Abroad II* in the *All Abroad!* series shows a similar frequency with *All Abroad! I*, and *All Abroad III* shows a gap from the previous-grade textbooks. In the *Power On* series and *Prominence* series, the second-year textbooks show grammatical metaphorical gaps from the first-year textbook, and show similar frequencies of grammatical metaphors between the second-year and third-year textbooks. In other words, learners with the *Power On* series and the *Prominence* series are provided with equally difficult or metaphorically complex texts for two years in a row. In addition, due to the similar frequencies among *All Abroad! III*, *Power On II* and *Power On III*, learners with the *All Abroad* series might be expected to reach the level of difficulty that the *Power On* series provides for the second-year students during the third year of using *All Abroad III*.

In particular, *Power On II* and *III* show similar features in almost all the lexico-grammatical and semantic areas examined in the analysis. On the basis of such similarities in terms of the use of grammatical metaphors, it should perhaps be questioned whether or not adopting *Power On III* is pedagogically meaningful. From the perspective of grammatical metaphor, it is unclear what learners might learn from the use of *Power On III* during their third year of high school. *Prominence III* shows a tremendous difference from *Prominence II* in the number of clauses and grammatical metaphors as well as in the number of grammatical metaphorical types, types 1 and 5, but *Prominence II* shows the highest frequency in the total number of grammatical metaphors in all the textbooks, and Lesson 6 in *Prominence II* marks the highest frequency of grammatical metaphors in this research. *All Abroad! III* is different from the other textbooks with regard to the balance of grammatical metaphors in the earlier and later parts. In *All Abroad III*, grammatical metaphorically complex texts are concentrated in the first parts

despite of the fact that the other textbooks generally show an increase of grammatical metaphors in the later parts.

The *New Favorite* series shows a tactical development of grammatical metaphors. The second part of the texts is generally more grammatical metaphorically complex than the first part. The dispersion of grammatical metaphorical types is not significantly different from the other textbooks, but this consistent feature is obvious in comparison with the textbooks for English Communication classes.

Although there are differences in the total numbers of clauses among the high school textbook series, the differences in the total numbers of grammatical metaphors among the high school textbooks are more significant in this study. There is over two times the difference in number from the *All Abroad!* series to the *Power On* series (the *All Abroad!* Series, 365 GMs; the *Power On* series, 850 GMs). There is roughly seven times the difference from the *All Abroad!* series, and 2.5 times the difference from the *Power On* series to the *Prominence* series (the *Prominence* series, 2438 GMs). In regard to the types of grammatical metaphors, type 2 is most frequently found in all the grammatical metaphorical types. Type 9 often follows type 2, and types 5, 6, and 10 come after type 9. Types 3, 4, 7, 8, 11, and 12 are difficult to find in the textbooks, and type 7 is found only once. As these minor grammatical metaphors emerge with an increase of grammatical metaphors in the texts, they might occur at a later time than some major types in grammatical metaphorical language development. The proportion of experiential grammatical metaphors to logical grammatical metaphors in textbooks does not show a consistent change according to the progress of student's academic grade and the textbook series. It might be said that the transitional patterns of logical grammatical metaphors used in the textbooks do not equally increase along with the difficulty levels of the texts. Types 9 and 10 are

found in the earlier grade textbooks, but type 4 emerges later and type 7 seems a unusual kind in this study. As Halliday (1993a) has argued regarding the theory of learning that “learning is learning to mean, and to express ones meaning potential” (p. 113), this lack of lexico-grammatical and semantic varieties as implied in the use of grammatical metaphors might be a limitation of English language teaching with Japanese EFL textbooks in terms of wide varieties of grammatical metaphorical challenges for students. As an implication for English language teaching based on this analysis, the lack of types 4 and 7 should be more concerning, and they need to be intentionally instructed due to the lack of the number and frequency of these types in the textbooks.

The ratio of grammatical metaphors found in the textbooks is an example of EFL textbook features of grammatical metaphors. The result of this analysis might further be examined in comparison with textbooks used in other ESL/EFL contexts and in comparison with textbooks in content areas in English speaking countries in order to find grammatical metaphorical features of textbook genres. However, since analyzing EFL textbooks is a relatively new area of research from the SFL perspective, developmental linguistic features of the texts might further be examined from the SFL genre perspective. In addition, the future research of grammatical metaphors in the standardized tests, such as the TOEFL iBT and IELTS, might show further gaps in the levels of difficulty between EFL textbooks and standardized tests. On the basis of the highest frequencies of grammatical metaphors per clause in the textbooks in this research, 100% of grammatical metaphor per clause would be an indication of grammatical metaphorical difficulty and complexity for the users of the *All Abroad!* series and the *Power On* series, and 150% of grammatical metaphors per clause would be an indication of grammatical metaphorical complexity for the users of the *Prominence* series.



To sum up this rather long and number-filled research project, it might perhaps be instructional to remind ourselves of Walker's (2012) argument that examining language from a functional perspective is tantamount to seeing language development as intellectual development (p. 305). To this remark, we might then add that the differences as quantified, tabulated, and reported on in this thesis project are closely related to language educational issues leading to intellectual abilities, and not simply mere difference in the frequency of numbers of grammatical metaphors in EFL textbooks.

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## APPENDIX A



Office of Research Integrity

December 16, 2015

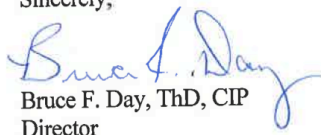
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Huntington, WV 25701

Dear Yuya:

This letter is in response to the submitted thesis abstract to examine the textbook-specific developmental changes in the way that one of the newest findings in Systemic Functional Linguistics, that of grammatical metaphor, is incorporated sequentially in English textbooks published in Japan from the Systemic Functional Linguistic perspective. After assessing the abstract it has been deemed not to be human subject research and therefore exempt from oversight of the Marshall University Institutional Review Board (IRB). The Code of Federal Regulations (45CFR46) has set forth the criteria utilized in making this determination. Since the information in this study does not involve human subjects as defined in the above referenced instruction it is not considered human subject research. If there are any changes to the abstract you provided then you would need to resubmit that information to the Office of Research Integrity for review and a determination.

I appreciate your willingness to submit the abstract for determination. Please feel free to contact the Office of Research Integrity if you have any questions regarding future protocols that may require IRB review.

Sincerely,



Bruce F. Day, ThD, CIP  
Director

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## **VITA**

Yuya Kaneso

### **Education**

Master of Arts in English, TESOL option

Marshall University, Huntington, West Virginia, USA, May 2016

Bachelors of Arts in English Language and Communication, Minor in Education

Kansai Gaidai University, Hirakata, Osaka, Japan, March 2014

### **Research and Scholarly Activities**

Presentation

Kaneso, Y. (2016, March). Distance between EFL textbooks and TOEFL iBT from a Systemic Functional Perspective. Paper presented at West Virginia TESOL (WVTESOL) Conference, Huntington, WV.

Hong, H & Kaneso, Y. (2016, March). The role of Grammatical Metaphor in EFL Context Teaching. Paper presented at Tennessee TESOL (TN TESOL) Conference, Murfreesboro, TN.

### **Employment Experience**

2014-2016     Student Teacher, West Virginia International School