

The use of genitive citations in academic writing

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Abstract

Citation, an indispensable feature of academic English writing, is often regarded as an indication of the degree of sophistication in academic writing. Building on previous studies that have shown the importance of integral citation in academic writing, this study investigates one of the subcategories of integral citation: “genitive citation” (e.g., *Smith’s study*, where ‘s denotes a possessive relationship: the *study* is in Smith’s possession, so *Smith* is the possessor, *study* is the possessee). Based on a corpus of 82 articles collected from the discipline of applied linguistics, with 41 from six leading international journals written by experts and 41 from the MICUSP linguistics sub-corpus written by college students, this study renders a cognitive semantic analysis of (a) the possessee nominals in genitive constructions and (b) the evaluative functions of genitive citations. Based on the specificity of cue validity, possessee nominals are classified into three types: 1) research-as-a-whole; 2) ideological; and 3) methodological. The analysis yields the following results. First, genitive citations are commonly used by both experts and students, with the use of *s*-genitive citations significantly outnumbering that of the *of*-genitives. Second, expert writers prefer possessee nominals with specific meanings while student writers tend to use words with less specificity, especially in terms of methodological possessee nominals. Third, in terms of evaluative function, the expert writers’ *s*-genitive citations include much more sophisticated employment of engagement and attitude resources than those used by student writers, though both groups make extensive use of this structure. Based on the analysis, the study proposes a semantic framework for classifying possessee nominals in *s*-genitive citations. Limitations of the study and implications for future research are also discussed.

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1. Introduction

Academic discourse was once called ‘the discourse of “Truth”’ (Lemke, 1995, P. 178) as it was supposed to present an objective description of the natural and human world. However, studies have shown that academic writing has lost its reputation as an impersonal, faceless, and objective presentation of information. It is “author controlled,” but including a dialogic interaction between the writer and the reader, and in this textual interaction, the writer attempts to step into texts, express authorial stance, foresee and address readers’ potential reactions to their claims, and guide them to particular interpretations (Jiang, 2016). Hoey (2001) likens this dialogic interaction to “ballroom dancing”, each party making sense from the textual interaction by anticipating what the other party is likely to do. One way to achieve this evaluative function is the appropriate use of citation. Citation, a reference to prior studies, is a vital feature in academic writing. Through

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appropriately formatted citations, writers can both project their own authority on the topic, and project themselves and locate their membership in a specific academic community. Successful academic writing requires skillful deployment of citations not only for attribution, but also for evaluation (Parkinson, 2011).

In the era of “publish or perish”, the need for researchers to command the conventions of academic English writing is becoming increasingly important, and this is the case for both scholars and students. However, ample evidence has shown that student writers, whether they are native or non-native English-speaking students, have difficulty in understanding how to cite references appropriately and effectively (e.g., Campbell, 1990; Thompson and Ye, 1991; Mansourizadeh and Ahmad, 2011; Shi, 2004). Developing competency in this area is thus particularly necessary for students to become proficient and successful academic English writers.

In the discipline of linguistics, the majority of citation analyses have mainly focused on different forms and functions of citations (Swales, 1990, 2014; Thompson, 2005; Thompson and Tribble, 2001), reporting verbs used in citations (Hyland, 1999; Swales, 1990/2001; Thomas and Hawes, 1994; Thompson and Ye, 1991), application of appraisal framework (Hood, 2004, 2010; Hyland and Jiang, 2017; Lancaster, 2012, 2014; Martin, 2000; Martin and White, 2005), modifiers (Huang, 2007; Lau et al., 2016; Lei and Wei, 2011), hedges and boosters (Hyland and Milton, 1997; Hyland and Tse, 2004), and nominal structures (Jiang, 2015), etc. However, for the genitive citation, which is also a common form of integral citation (e.g. Swales, 2014), less is known about the preferential choices of genitive forms and properties of possessee nouns. We use “genitive citations” to label the citations where the cited authors’ names appear in genitive constructions (e.g., *Smith’s work* = *possessor + possessee/head noun*, *the work of Smith* = *possessee/head noun + possessor*). As far as we know, no research has compared the use of genitive citations in texts written by novice writers and expert writers. Studies (Lancaster, 2012; Swales, 2014) have shown that genitive citations have highly “concept-focused” meanings and are more likely to be used by high-performing writers. Against this backdrop, this study compares the use of genitives by novice writers with their use by expert writers, with the aim of identifying the rhetorical patterns of integral citations in academic writing. The findings of this study may provide some useful information for helping students and emerging researchers enhance their citation skills.

The uses and functions of possessives are widely discussed (e.g., Langacker, 1991, 1993, 1995; Stefanowitsch, 2003; Taylor, 1989, 1991, 1994a, 1994b), but few studies have examined them in academic English research writing. Thompson and Ye defined the genitive citations as the “possessive forms of the proper name” (1991, p. 366), but the focus of their study was on reporting verbs, rather than citations. Swales (2014, p. 124) proposed a five-fold subcategorization of integral-citations by analyzing the role that the cited author’s name plays in a sentence. According to Swales, the genitive citation structures were potentially evaluative because nouns chosen as the possesseees in the structures were a greater conceptual integration of the cited sources. But in his research, he did not explain in detail why genitive citations were of highly evaluative significance nor did he further explore the difference of possessee nominals in the sense of conceptual integration. Taylor (1991) investigated the semantic relation of the possessive genitive by comparing the use of this construction in spoken and written texts. However, the focus of Taylor’s study was limited to the role of possessor nominals in identifying the possessee, “by establishing a reference point entity from whose perspective the referent of the head noun can be more easily identified” (Taylor, 1991, p. 59). It is necessary to examine meanings of possessee nominals, especially when they are relational nouns, denoting certain relationship intrinsically. In addition, the written texts in his study are confined to non-academic texts, i.e. extracts from a biography, a work of popular science and a novel, as well as newspaper articles and samples of spontaneous speech.

In academic writing, properties of possessor nominals of genitive citations are pre-determined, for they are either humans or schools with certain authority in specific research field, while possessee nominals can be used in diversified ways (e.g., *study, analysis, research, framework, system*). It is the variation of possessee nominals that has aroused our research interest. Thus, the current study will specifically investigate the distribution of genitive citations (both *s*-genitive citations and *of*-genitive citations) and the semantic functions of possessee nominals in genitive citations by means of comparing articles written by novice and expert writers. It aims to address the following two research questions:

- 1) What are the semantic properties of genitive citations in academic writing?
- 2) How do expert and novice writers differ in their use of genitive citations?

In addressing the above questions, we hope to uncover the rhetorical pattern of integral citation in academic writing to help enhance our understanding of citation practices in English academic writing.

2. Possessives in English

English has two possessive constructions: one is the *s*-genitive, which is morphologically marked by the possessive clitic *-s* and precedes the head noun, and the other is the *of*-genitive, syntactically marked by the preposition *of* and

follows the head noun. The *s*-genitive and the *of*-genitive are also known as prenominal possessive and postnominal possessive respectively (Taylor, 1994a). Examples are illustrated in (1a) and (1b):

- (1) a. [NP_{mod}'s N_{head}]
 e.g. *the university's budget*
 b. [DET N_{head} of NP_{mod}]
 e.g. *the budget of the university*
 (adapted from Stefanowitsch, 2003, p. 413)

It seems that the semantic relations encoded by the two genitive forms denote a wide range of semantic relations between the two nominals, besides the meaning of possession. Taylor (1989) argues that the possessive constructions are semantically indeterminate and they can be interpreted in different ways (e.g., strict possession relation, kinship relation, thing-property relation, whole-part relation). Stefanowitsch (2003, p. 421) has identified ten major semantic relations evoked by the two constructions (e.g., possessee-possessor, interpersonal relations, attribute-holder, participant-event). Similarly, Langacker (1995) classifies the various relations expressed by the possessive constructions into eighteen subtypes (e.g., ownership, kinship, part/whole relations).

Although genitives are said to be open to multiple interpretations, these relationships are highlighted differently and it is the salient aspect of our world knowledge that limits the relation scope (Langacker, 1993, p. 6). Therefore, we expect that the semantic relations of genitives in academic English may be smaller in number than and perhaps deviate from those in everyday English. At first glance, some relations (kinship) may be less common in academic English. In integral citations, the researchers are depicted as the possessors of some generally abstract entities, i.e., their intellectual properties. Researchers as the possessor have exclusive rights over the theories, ideas, findings, etc. that they have proposed.

Another important point is that while some scholars consider the two genitive forms to be semantically equivalent (cf. Standwell, 1982 and Deane, 1987 for a positive attitude of this claim), some other scholars view them as semantically distinct (Stefanowitsch, 2003; Langacker, 1991, 1993, 1995; Taylor, 1991, 1994a). As Langacker (1991, 1993, 1995) states, the use of genitives is a manifestation of cognitive ability, and the possessor nominals in both constructions function as the reference point for the sake of establishing mental contact with the head nouns. In order to facilitate the identification of the head noun, the possessor is expected to be highly active. However, the two constructions are different in terms of the range of semantic relations that are evoked. Specifically, the *of*-genitive is mainly confined to the intrinsic relations, e.g., subpart-whole, subcategory-category, and thing-constituent material, while the *s*-genitive expresses a wider range of semantic relations. Stefanowitsch (2003) uses "inherentness" to distinguish the different range of semantic relations evoked by the two constructions; head nouns in the *s*-genitive could be either relational or non-relational entities, while in the *of*-genitive, they could only be relational entities.

As Langacker states, "possessives are the purest, most basic and universal manifestation of the reference-point relationship, and for the analysis of possessives, it is best described as the ability to invoke the conception of one entity for purpose of establishing mental contact with another." (1993, p. 5). The possessive morpheme invokes its base, and within this base it profiles the reference-point relationship, whereby the reference point affords mental access to the target. Usually possessors in *s*-genitives saliently and naturally lend themselves to reference-point function to establish mental contact with a target, and a person is naturally and efficiently invoked as the "mental address" to provide access to the items he possesses. Two phases of mental contact are involved in this process. First, with a definite possessor, the speaker and the hearer already have mental contact with the reference point. From there, the definite possessor as the reference point is sufficient to put the hearer in mental contact with the definite target. While in the structure *the N of X*, when *N* bears an intrinsic relation to *X*, *X* will be naturally taken as the reference point for establishing mental contact with *N*. Thus the *of*-phrase (*of X*) profiles an intrinsic relationship between the schematic trajector and the landmark, and in this process, it is the *X* that abbreviates the landmark's specifications (Langacker, 1993, 1995). Langacker (1993, p. 30) also points out characteristics of the cognitive salience of the preferred reference point: human > non-human; whole > part; concrete > abstract; visible > non-visible.

In the similar vein, Taylor (1994a) states that the prenominal possessive construction provides the speaker with a device for introducing a new concept into a text (the possessee) by attaching it to an already accessible concept (the possessor) which is expected to be higher in topicality, whereas the postnominal possessive construction profiles an intrinsic relation. In Taylor's words, "the imports of possessor phrase is to make explicit the mental path that a conceptualiser must follow in order to identify the target" (1994a, p. 71). Stefanowitsch's (2003, p. 427) empirical data show that "the *s*-genitive strongly prefers highly active modifiers". Based on the properties of possessor nominals aforementioned, we have good reasons to expect that possessors of genitive citations in academic writing would be the researchers, because the researchers as human beings are higher on the hierarchy animacy and topicality. Furthermore, we believe that the choice of a researcher as possessor is not arbitrary; instead it may be motivated by a number of factors.

For example, some researchers may be more likely to be cited in s-genitive citations, because they are more “given” to readers, i.e., they are more widely known than others.

The reference-point ability of possessor nominals is also applicable to the interpretation of genitive citations in English academic writing. In the comprehension of citations like *Smith's framework*, *Smith's model*, *Smith's system*, readers are more likely to identify the possessions (*framework*, *model*, *system*) by accessing the individual (*Smith*), than the other way round. Suppose a given individual has numerous possessions, we may not be very familiar with these possessions except that they belong to a particular individual. In Langacker's (1993, p. 10) terms, “a person is naturally invoked as a mental address providing access to the cluster of items he possesses.”

2.1. Intrinsic relations denoted by possessee nominals

Possessee nominals in possessive constructions are different in *intrinsicness*. Intrinsicness is a function of conceptual autonomy. An entity is conceptually autonomous if the entity can occur independently without making reference to other entities. By contrast, an entity is conceptually dependent to the extent that it is impossible to conceptualize this entity without making mental reference to other participants (Langacker, 1991, p. 286–291). Taylor (1989, 1994b) elaborates on the meaning difference of the two phrases: *Tom's book* and *Tom's wife*.

From the perspective of semantic relation, we can infer that certain semantic relations exist between *wife*, *book* and *Tom*. By virtue of our encyclopedia knowledge, for *Tom's book*, the relation between the two entities is quite variable. The *book* may be the one that is written, bought, published, owned by Tom, or the one that Tom is reading, looking for or carrying, etc. Thus a *book* can be linked with many kinds of entities (e.g., its author, buyer, publisher, owner, reader, and carrier). In contrast, *wife* designates a woman that a person married, who is a partner in a continuing marital relationship. It only denotes a woman who is related to Tom by marriage, but not a woman who holds any relations with Tom. “The married woman who is currently has an extramarital affair with Tom” will not be a possible interpretation of *Tom's wife* (Taylor, 1994b, p. 213). *Tom's wife* is semantically determinate with respect to the nature of the relation that holds between Tom and the wife; on the other hand, *Tom's book* lacks this element of determinacy, and in the head nouns' base of predication there is not a specific entity that can be chosen as an exclusive candidate for elaboration. So compared with a book, a wife is more easily to be identified. Words like *wife* are called intrinsically (or saliently) relational nouns, which inherently specify a relation that holds between one entity and the other, while words like *book* are called non-intrinsically (or non-saliently) relational nouns, which can evoke various kinds of semantic relations. Among these open-ended relations, it is the salient aspect of our world knowledge that limits the relation scope (Langacker, 1993, 1995; Taylor, 1989, 1994b; Stefanowitsch, 2003). Langacker calls this “reference point's salience” (1993, p. 6). The more salient part of our encyclopedic knowledge about a *book* confines it to a book that someone wrote, and the less salient part may extend it to a book that someone has bought, published, etc.

Although the meaning and relation of possessives in everyday life are open-ended, those in academic are predictably restricted (e.g. *book* with the s-genitive citations would most likely be interpreted as the author's intellectual property, i.e., a book the author wrote). However, there is still some variability in the words/expressions to refer to someone's academic work, *X's book*, *X's theory*, *X's model*, among others. So far, we are not clear about which possessee nominals are typically used in academic English, and what kind of specific semantic relations they encode. In order to address these questions, the present study focuses on the possessee nominals in genitive citations.

3. Methods

The use of genitive citations is investigated by observing a large number of instances retrieved from academic papers. For the sake of expository convenience, disciplinary variation is not taken into consideration, so all the articles are from the same field – (applied) linguistics. It is also a field that we are specialized in, so we could have a better grasp of both the content and the form of the genitive citations during our data analysis. As suggested by Swales (1990), different citation conventions may have their preferred choice between integral and non-integral citations., The sampled articles used in this study all followed the author/date citing convention.

In order to observe the potential variations of genitive citations among writers of different writing expertise, we roughly defined the texts in two levels: expert vs. novice, based on whether they are published or not.

3.1. Collection of academic texts

The texts of novice writers are taken from the linguistics sub-corpus of Michigan Corpus of Upper-level Student Papers (MICUSP). MICUSP is mainly targeted to teachers and students in the EAP/ESL fields and is freely available at <http://micusp.elicorpora.info/>. The interface of the corpus is shown in Fig. 1. A collection of around 829 papers (roughly 2.6

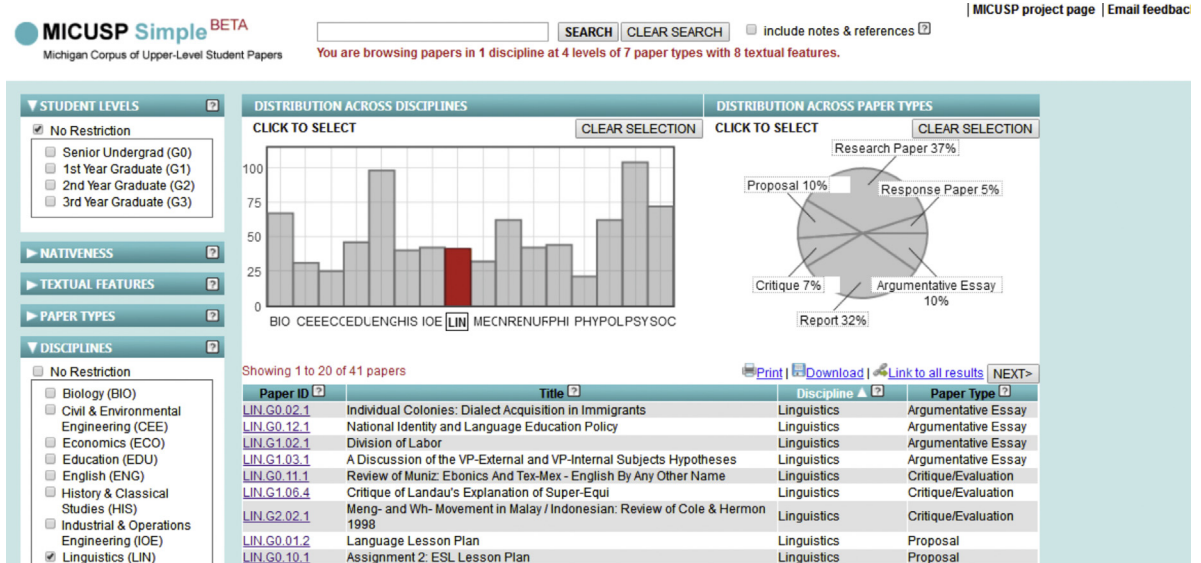


Fig. 1. Interface of MICUSP.

million words) drawn from 16 disciplines across four academic divisions (Humanities and Arts, Social Sciences, Biological and Health Sciences, Physical Sciences) of the University of Michigan are incorporated, including four levels of papers (Senior Undergraduates (G0), 1st Year Graduates (G1), 2nd Year Graduates (G2), and 3rd Year Graduates (G3)). The left-hand column of the MICUSP interface provides the option of discipline selection. When the discipline label of "linguistics" is selected, it returns 41 articles in total.

The texts of expert writers are published articles which are randomly selected from six international journals of linguistics: *Applied Linguistics (AP)*, *The Modern Language Journal (MLJ)*, *System (SY)*, *ELT Journal (ELT)*, *Journal of Pragmatics (PR)*, and *TESOL Quarterly (TQ)*, all prestigious journals in the field. In order to counter-balance the number of novice texts, we choose the same number of expert articles, published between 2008 and 2017. The publication date was not controlled, since diachronic change is not the focus of this study. In addition, the writer's first language background is not controlled, based on the view that in international publication, it is the authors' expertise rather than their L1 status that is the primary criterion for academic writing quality (Hu and Cao, 2011; Tribble, 2015).

Considering that citation frequency and density may be influenced by the length of an article, the total number of words is counted. Each corpus consists of 41 articles, amounting to 143,556 words in students and 301,384 words in experts (detailed information of these articles is reported in Appendix). For each included article, tables, figures, acknowledgements, references and appendixes were removed.

3.2. Locating, identifying and marking-up genitives

Two steps were involved in the identification process. First, in the search bar of Foxit Reader, we entered the forms of "s", "s'" (for there are authors' names which end with -s, e.g., Jenkins, Swales) and "of" successively, and the searching results appeared in the search box on the right. Among these results, two main kinds of s-genitives were found, one was the kind with a non-human entity as the possessor (e.g., *a text's difficulty level*, *the study's design*) and the other was the kind with a human entity as the possessor (*learner's long-term memory*, *the writer's skills*, *Li's (2013) study*, *Dörnyei's model*). In present study, only those instances that had cited authors' names as the possessors were selected. Second, based on the searching results, we manually marked up the target genitives; specifically, all the s-genitive citations were colored in yellow and all the of-genitive citations were colored in green (c.f. Fig. 2).

As a preparation for the quantitative analysis of the genitive citations, a dataset was entered in a Microsoft Excel spreadsheet, so each specific instances of the genitive citations from each text is displayed in

The retrieved genitive citation phrases were subject to further coding based on the classification scheme developed by us (see 4.2 for more detailed information). The coding of possessee nominals was mainly carried out by the first author by determining the semantic field of each possessee nominals. When uncertainty arose, an agreement was reached through discussion between both authors. In this step, some s-genitive citations were excluded from the dataset because the

However, Sweeney and Hua's (2010) findings suggest that not all attempts at accommodation are productive or well received. For example, in trying to speech in real time. The results of Campbell et al. (2014) illustrate this point.

Fig. 2. Marking up the Genitives.

possessee nominals were not directly research-oriented, for instance, *success, invitation, world, campaign*. Finally, a total of 679 integral genitive citations were identified after this step, with 445 in the expert corpus and 234 in the student corpus. The complete list of genitive citations is available in the online dataset. Based on the intrinsicness property of possessee nominals, the retrieved genitive citation phrases were subject to further coding to show the semantic relations they encoded. According to the framework of "specificity of cue validity" developed by the two authors, we analyzed the semantic meanings of the 193 different possessee nominals in the experts' texts and 86 in the students' articles, and came up with a classification scheme for conducting further analysis of the distributions of the different types of possessee nominals in both corpora.

According to the conventions of academic writing, a formal citation typically includes publication date and/or page references and is listed in the bibliographical reference list. To ascertain the formality of the genitive citations, each citation is coded in these two aspects, in a separate column of the spreadsheet. We find that 64.94% of genitives in the expert corpus (289 tokens) were cited with publication date and/or page information, while student writers rarely cite with such information (11.54%, 27 tokens). Most of these genitive citations were included in the bibliographical reference list, with 3 exceptions (0.7%) in the expert articles and 31 (13.25%) in the student articles. These differences indicate that the students citations were much less formal than expert writers', i.e., they deviated substantially from the standard practice in academic writing.

3.3. Syntagmatic patterning of genitives

It is important to note the common behavioral patterns of the *s*-genitives in sentences. Firstly, "In X's study" was the most frequent pattern in the expert articles, with 31 occurrences, while it occurred only once in the student articles. The students used other possessee nominals like *findings, work, analysis, account, and scheme* in place of *study*. Another finding is that, in the expert articles, possessee nominals were often introduced by prepositional (participle) phrases (PP), like *based on, drawing on, according to, following/follow, similar to, different from, such as, contrary to, in line with, align with*, to form the pattern of PP + X's + possessee nominals. In contrast, in the student texts, only two such prepositional phrases were found, i.e. *following/follow, according to*. Furthermore, expert writers used the prepositional phrases in a diversified way, in marked contrast to the lack of prepositional phrases in the student articles; this contrast suggests a great disparity between the two writer groups' grasp of research content and writing proficiency. Another interesting finding is the use of the "hybrid genitive" a construction in which the *s*-genitive is embedded in the *of*-genitive, with the *of*-genitive preceding the *s*-genitive (e.g., *results of Smith's research*). The following are some examples from the corpora.

the findings of Norris and Ortega's (2000) meta-analysis (AP8)
the findings of de Jong et al.'s (2012, p. 21) study (TQ3)
the results of Biber et al.'s study (TQ6)
the results of Biber et al.'s (1999) and Gardner and Davies' (2007) studies (TQ6)
the results of Loeb and Leonard's study (G0.07.3)
the results of Pérez & Alfonseca's BLEU implementation (G1.01.1)
the results of Clyne's data (G0.03.1)
the results of Banks's corpus study (G0.03.1)

The semantic relation encoded by the hybrid genitive (*the X of Z's Y*) can be interpreted as follows: the possessor in *s*-genitive (*Z*) facilitates the identification of the possessee (*Y*), and when the possessee nominal (*Y*) is identified, the *s*-genitive construction (*Z's Y*) functions as the reference point of the hybrid genitive to further facilitate the identification of the possessee in *of*-genitive (*X*). Thus, we can say that *Z's Y* corresponds to the modifier in *of*-genitive and *X* to the head noun's referent.

The *s*-genitive reflects the possessor-possessee relation for the researcher and the general research noun whereas the *of*-genitive is mainly a manifestation of the subpart-whole relation. The anomalous instance from the non-expert

subcorpus (*the results of Clyne's data*) may show lack of control of this particular hybrid structure, although the following appropriate instance (*the results of Banks's corpus study*) comes from the same source (G0.03.1).

4. Results and discussion

4.1. Frequency of genitive citations

Table 1 presents the frequency of the genitive citations used by the experts and students. In addition to the token frequency, the normalized frequency is also reported, so as to ensure the comparability between these two corpora that differed substantially in size in terms of word count (not article count).

As shown in Table 1, both expert and student writers are in favor of *s*-genitive citations, while *of*-genitive citations are seldom used, which shows the ratio of 1:33 for experts and 1:46 for students. This is in line with the results of Taylor's (1991) study, which found only 2 postnominal possessives among a total of 240 genitive citations, indicating that prenominal possessives are more widely used in English.

In order to ascertain the givenness of the cited authors in *s*-genitive citations, we retraced each in its preceding context. An author is assumed to be given if it has a prior mention, and not given otherwise. Let us look at the following *s*-genitive citation taken from AP4 (P. 15 line: 8): *However, Sweeney and Hua's (2010) findings suggest that . . .* Our retracing shows that the names *Sweeney and Hua* are mentioned four pages earlier. *Sweeney and Hua (2010) suggest that such strategy choices may simply arise from lack of experience with linguistically diverse settings . . .* (AP4, P. 11, line: 17). The prior mention serves to introduce the cited authors, thus making the subsequent mention in *s*-genitive citations more natural and legitimate. According to our data analysis (c.f. annotation in the dataset), the majority of the *s*-genitive citations were given. Specifically, there were 330 tokens (76.39%) in the expert writings and 205 tokens (89.52%) in the student writings.

The frequency difference between the two constructions may be attributed to the following factors. First, the preferred use of *s*-genitive citations is probably due to the semantic function of this structure. Following Lancaster (2012, p. 204–207), *s*-genitive citations are “concept-focused”, which are commonly used in high-performing writers' writing. In Swales' (2014, p. 133–134) terms, citations of this type are “a greater ‘conceptual integration’ of the cited sources” and are potentially evaluative. Based on Taylor's (1994a, 1994b) and Langacker's (1993, 1995) studies, the *s*-genitive construction is multi-functional, for it may not only include a topical possessor nominal but also a focused possessee nominal. In the *s*-genitive citation in academic writing, the high topicality of the possessor nominals presents the authors' authorities in a specific field and simultaneously facilitates the identification of the possessee nominals. In this way, the author's authority is taken into consideration, which ensures the credibility of the cited information, to a certain extent; on the other hand, the research content is highlighted, which helps present explicitly what the author wants to express.

The second reason is the different degree of activation and givenness of the possessor nominals in the two constructions. As shown in Langacker (1993, 1995), possessor nominals as the reference points in both constructions are expected to be highly active. However the possessor nominal's preference for activeness in *of*-genitive is much weaker than that of *s*-genitive. This is to say that the possessor nominal's reference-point function in the *of*-genitive is weaker than it is in the *s*-genitive, which makes it more difficult for readers to identify the research content and to trace back to the source of the message. Considering givenness, the difference in the level of givenness between the possessor nominal and the possessee nominal in *of*-genitive is much smaller, according to Stefanowitsch (2003). Givenness is in line with the concept of topicality as discussed in Taylor's (1994a) study. Topicality means a concept that has been introduced in the preceding discourse. As Taylor states, possessor nominals are high in topicality while possessee nominals are low in topicality. Thus, in the *of*-genitive, the closeness between the possessor and the possessee in the degree of givenness indicates that the possessor is relatively low in topicality. In other words, the function of *of*-genitive is to anchor a new concept (the possessee nominal) by using another new concept (the possessor nominal). Applied to academic writing, if the cited author is not in the reader's focus of consciousness, the cited information will be less accessible.

Table 1
Frequency of *s*-genitives and *of*-genitives in the two corpora.

| | Experts | | Students | |
|--------------------------------|--------------------|---------------------|--------------------|---------------------|
| | <i>s</i> -genitive | <i>of</i> -genitive | <i>s</i> -genitive | <i>of</i> -genitive |
| Token frequency | 432 | 13 | 229 | 5 |
| Normalized freq. (per million) | 1433.39 | 43.13 | 1595.20 | 34.83 |
| Range of dispersion (per text) | 10.54 | 0.32 | 5.59 | 0.12 |

The third reason is the animacy property of the possessor nominal. The natural choice of human possessors in *s*-genitives matches well with the purpose of citation in academic writing, where the cited author is held responsible for the cited content.

The frequency difference can also be interpreted from the perspective of economy. Szmrecsanyi (2010) examined the factors that influenced language users' choice of the *s*-genitive and the *of*-genitive, and one of the language-internal factors was the "economy-related factors". As Dahl (1971, p. 172) argues, the *s*-genitive is more frequently used in the registers and contexts where "tendency to brevity" is pivotal. Writers are in favor of the *s*-genitives since evidence shows that journal articles and term papers are registers known for high lexical/informational density.

Coherence at discourse level could be another reason for the different selections of the two constructions. Consider the following example.

Example 1

*The importance of discourse type and comprehension measure should also be taken into account in comparing our results to those found in reading. They are perhaps best **compared with the results of Hu and Nation** (2000), who... (AP7)*

In example 1, the word '*results*' (underlined) is first mentioned in the preceding sentence, and when the writer refers to the results of other works, compared with the use of the *s*-genitive citation (*Hu and Nation's results*), it is more appropriate to use the *of*-genitive citation (*the results of Hu and Nation*) which can maintain the information flow and not be interrupted.

As shown in Table 1, *of*-genitives are rarely used in both expert and student articles. Some *of*-genitive instances were eliminated (8 tokens in the expert corpus and 2 tokens in the student corpus respectively), because they did not meet our standards (e.g., *with the exception of Koike and Pearson (2005), in the manner of Yu (2010)*). All targeted instances of *of*-genitive citations in the expert and student articles are presented below, with 13 from the expert corpus and 5 from the student corpus.

Experts

the results of Campbell et al. (2014)
the results of Hu and Nation (2000)
the arguments of Cenoz and Gorter (2015) and Block (2015)
the pioneering work of Benjamin Lee Whorf (1956)
the publication of Wolfe-Quintero, Inagaki, and Kim (1998)
the conclusion of Biber et al. (1999, p. 408)
the finding of Biber et al.
the procedure of Kyle and Crossley (2015)
the observations of Crossley et al. (2015) and Kyle and Crossley (2015)
the scheme of O'Malley and Chamot (1990)
the work of Icek Ajzen
in the words of Dahl (2004:1807)
the work of Bell (1984)

Students

Chapter 8 of Banks (1994b)
pg. 42 of Cook
the positions of Barnet and Tucker
the work of Pérez & Alfonseca
the sense of Heim 1982

One reason for the use of *of*-genitives could be its easy interpretation property (Hawkins, 1981). As Stefanowitsch (2003) states, the semantic relations evoked by the two constructions are different in *inherentness* and head nouns in *of*-genitive can only be intrinsic relational entities. This intrinsic relation narrows the interpretation scope of the possessive construction, which makes it easier to understand the semantic meaning of the structure. Also, we suggest that the choice of an *of*-genitive citation may be governed by the **end weight principle**: when the names of possessor are lengthy (e.g. multiple authors), they tend to occur in postnominal possessives. However, we should note that the end-weight principle is only a general tendency, so it is not strictly observed. The instances of single-authored *of*-genitives serve as evidence (e.g. *the work of Bell (1984), Chapter 8 of Banks*). Data also suggest that students were less aware of the end weight principle so they used more such *of*-genitives.

It is important to note that, in the example "*the results of Hu and Nation (2000), [who...].*", the names of the researchers are followed by a relative clause and the syntax of the *of*-genitive makes the authors' names available, thus

facilitating the link between the clauses; the *s*-genitive would not do so and could be considered stylistically substandard. However, in the example of a single author “*the work of Benjamin Lee Whorf (1956), [which . . .]*”, the name is also followed by a relative clause but this refers to “work”; in this case, the contiguity of the researcher causes no problem and the justification for the *of*-genitive may well be the “end weight” principle with the author given his full name.¹ A total of 3 such instances are found in our corpus, and the last one is: “*the publication of Wolfe-Quintero, Inagaki, and Kim (1998), [who . . .]*”, which, by highlighting the cited authors’ identity, facilitates the link between the clauses. Therefore, based on above instances, for a sentence with a relative clause in the *of*-genitive citation, the semantic meaning is influenced by the relative clause and the highlighted entity in the sentence is determined by the relative word (noun) in the clause rather than by the possessee nominals.

Because of the fact that *of*-genitive citations appeared only eighteen times in our corpora, and the reasons for the use have been explained in detail above, we will focus our attention on *s*-genitives in the discussion of the semantic features of possessee nominals below.

4.2. Possessee nominals in genitive citations and the classification scheme

In academic writing, possessee nominals with different specificity can be used to express different levels of intrinsic relations. For example, in *Smith’s work*, *work* can be interpreted either as the abstract views that Smith expressed in his book or as the concrete book that Smith wrote. However, *Smith’s model* is likely to refer to a *model* proposed or created by Smith than a *model* that bears any relationship or connection with Smith. Further, if Smith proposed different *models* in his previous research, it is necessary to specify the particular *model* the writer intends to refer to. Therefore, when the possessor is determined, patterns with high specificity (*Smith’s X model*) are better than low specificity (*Smith’s model*). Analyses reveal that the intrinsicness of the possessee nominals affects the identification scope, and this intrinsicness to a certain extent reflects the specificity of the possessee nominals. In sum, the definite possessor nominal functioning as the reference point narrows the conceptual dominion and promotes the identification of the possessee nominal, and the specificity of the possessee nominal influences the domain of potential semantic relations, and further determines readers’ efforts in identifying and understanding the writer’s intended meaning. In English academic writing, the changeable possessee nominals in genitive citations make it important to investigate the properties of possessee nominals. Taylor (1994b) put forward the property of “cue validity” to study the possessor nominals in English genitives, but how do we investigate the property of possessee nominals of genitive citations in the present study? Based on discussion aforesaid, we develop “specificity of cue validity” to give a cognitive semantic analysis of possessee nominals in English academic writing.

A total of 193 different possessee nominals are found in the experts’ articles and 86 in the students’ articles. The top ten possessee nominals used in the 82 articles and in each of the two groups are listed respectively in Table 2.² Here the possessee nominals are presented in their base form (lemma), so the frequency is the sum of both the singular form and the plural form.

As shown in Table 2, *study* and *analysis* are the most frequent two possessee nominals in 82 articles. In the extended list, words like *data*, *theory*, *findings*, *framework*, *work*, *description*, *research*, *account*, *explanation*, *idea*, *terms*, *results* are also commonly used. The preferred possessee nominals vary from writer to writer. Specifically, for expert writers, the most frequent nominals were *study* and *hypothesis*, with a frequency of 84 and 20 respectively; while in the students’ writings, *analysis* and *proposal* were the most popular ones, with the frequency of 48 and 29. Among the top ten possessee nominals of the sum frequency, there were only four possessee nominals that appeared in both experts’ and students’ writings, including *study*, *model*, *analysis* and *view*. Another finding is that some common possessee nominals were rarely used in the students’ articles, occurring either once (*finding* and *research*) or never once (*theory* and *results*).

Concerning the meaning of the top ten nominals in the overall frequency, as Table 2 shows, 3 words represent general meaning, i.e. *study*, *analysis*, *paper*, and the rest seven all signify relatively specific meaning. However, when it comes to the top ten used possessee nominals in the expert and student corpora respectively, three of the top ten lexis represent relatively general concepts, with *study*, *analysis* and *research* in the experts’ writings and *analysis*, *paper* and *study* in the students’ writings, and the rest of the top ten lexis in the two groups all signify more specific content. Furthermore, the degree of specificity of the possessee nominals may vary from noun to noun varies. For example, a *hypothesis*, *model*, *definition*, *theory* and *framework* were more frequently used in the experts’ writings, but words with more specific meanings, such as *proposal*, *model*, *description*, *account* and *argument* were used more often in the students’ writings. A

¹ We’d like to acknowledge the anonymous reviewer for this explanation.

² It should be noted that, the possessee nominal *list* is also frequently used in our corpus, with a frequency of 15. But this high frequency is for the reason that it has 10 occurrences in the same article by the same possessor (TQ6). Considering its low dispersion range, it is not included in the top ten list.

Table 2
Top ten possessee nominals.

| Possessee nominals | Total Frequency | Tokens in expert | Tokens in student |
|--------------------|-----------------|------------------|-------------------|
| Study | 91 | 84 | 7 |
| Analysis | 61 | 13 | 48 |
| Proposal | 30 | 1 | 29 |
| Hypothesis | 24 | 20 | 4 |
| Model | 24 | 16 | 8 |
| Claim | 16 | 7 | 9 |
| Definition | 13 | 12 | 1 |
| Argument | 13 | 7 | 6 |
| View | 12 | 8 | 4 |
| Paper | 12 | 1 | 11 |

reason for this variation in the preferred lexis between the two groups could be the difference in writing ability or proficiency. Experts are more experienced in academic writing and they have read more than students, so they understand better when and where specific possessee nominals are required and are better able to support their research discussion by using more specific hypotheses, models, frameworks, etc. As novices in this field, students generally have much more limited knowledge, experience, and skills in academic writing. As a result, they do not often know which possessee nominals to use, and when, where, and how to use them. In other words, they may have a limited number of possessee nominals at their disposal. Genre might be another reason for the differences. The MICUSP articles are students' unpublished term papers, which mainly deal with analysis in their course assignments, while published articles by experts need to present new theories and/or new findings from research that drew on previous studies, which required extensive examination and evaluation of existing research.

Based on the principle of "specificity of cue validity", we find that some words (like X's *study*, *research*, *analysis*, *work*) are more general, while others are more specific (X's *hypothesis*, *results*). In our understanding, a piece of research may be the sum of two components: ideology and methodology. When we are talking about someone's research, we may refer to the research generally as a whole, or more specifically to the particular views or methods. In this way, we classify the possessee nominals into three types: Research-as-a-whole, ideological, and methodological, as shown in Fig. 3.

Words like *study*, *research*, *analysis*, *work*, *paper*, *book*, and *article* are sorted into the research-as-a-whole possessee nominals, when the cited information was about the overall research (see example 2). Although some nominals are product-oriented, others are more process-oriented. This distinction is not maintained (investigated?) in this study.

Example 2

As in **Villarreal's study**, comments from some students suggested that they had developed more positive attitudes by coming to understand the difficulties international teaching assistants face. (AP4)

The ideological possessee nominals refer to the theory, hypothesis, view, result of the cited research (e.g., *hypothesis*, *theory*, *view*, *comments*, *results*, *findings*, *claim*); or definition, classification, description of, comment on professional terms, concepts or linguistic phenomena (e.g., *conceptualization*, *classification*, *definition*, *description*); or specific theoretical framework, model, scheme, taxonomy, system (e.g., *typology*, *model*, *scheme*, *system*, *framework*) (see example 3).

Example 3

To examine **Skehan's (1996, 1998) trade-off hypothesis**, correlation coefficients (Pearson's *r*) were calculated between oral accuracy and oral fluency. (MLJ2)

The methodological possessee nominals refer to method, process, data etc. related to or research objects involved in the cited author's experimental process. Words like *method*, *participants*, *corpus*, *procedure*, *data*, *subject*, *example*, and *list* are included in this type (see example 4).

Example 4

Huang's (1999) spoken corpus of recorded face-to-face conversations and radio interviews totaling 76 min resulted in 461 tokens of *na*- words (including *na*, *nage*, *nazhong*, etc.). (AP6)

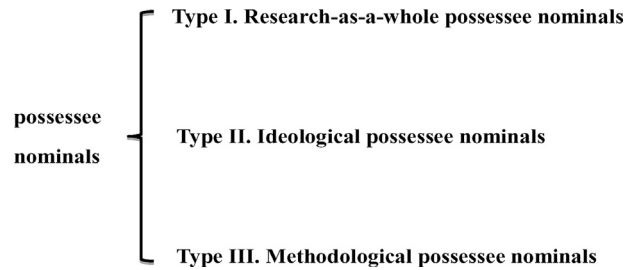


Fig. 3. The classification scheme of possessee nominals in academic citation.

It should be noticed that some of the possessee nominals in our data are difficult to be classified for its semantic ambiguity (e.g., *work, finding, book*). Possessee nominals like *work, paper, book, article, text* are ambiguous because they may mean either the abstract contents or the physical objects. In the present study, ambiguous possessee nominals are categorized according to their meaning in the local context.

4.3. Distribution of possessee nominals

A total of 432 possessee nominals were found in the experts' texts and 229 in the students' texts. According to the classification scheme, the number and percentages of each type in the two groups are presented in Table 3.

The choice of the three types of nominals by both experts and students **shows** a similar pattern: ideological possessses boast the largest share, methodological is the least used, research-as-a-whole comes between (Fig. 4).

A closer examination reveals some differences between the two groups. Table 3 presents the descriptive statistics regarding the use of the three types of possessee nominals. For the research-as-a-whole possessee nominals, the students had an appreciably higher normalized frequency than the experts, whereas the normalized frequency of methodological possessee nominals was substantially higher than for the students, suggesting that possessee nominals with higher specificity are more frequently used by experts. The raw frequency data were submitted to a Chi-square test and the results were significant ($\chi^2 = 16.186$, $df = 2$, $p = 0.00031$) with a critical value χ^2 ($p = .01$) of 9.21.

There appear to be four likely reasons for writers to opt for a research-as-a-whole possessee nominal. First, there is no need to describe the details of the cited work and the author just wants to give a simple description of this given work. Secondly, when multiple works of the same author or different works of different authors are cited, possessee nominals with specific meaning may influence the scope of the citation. For instance, in example 5 and example 6, four different studies of the same author and two different studies of two different authors are cited respectively, and a generalized noun serves to group the individual works together, while a specific possessee nominal would not achieve this purpose.

Example 5

Schmid's studies (1997, 2000, 2001, 2007) are the best known on the subject of shell nouns, particularly as far as English is concerned. (PR2)

Example 6

Nikula (2008) and Hellermann's (2009) studies, on the other hand, focused on the pragmalinguistic sophistication in performing a face threatening act (e.g., disagreement and correction) as found in learners' use of syntactic mitigations and hedging. (SY3)

Table 3
Distribution of three types of possessee nominals.

| Possessee nominal types | Experts | | | Students | | |
|--|-----------------|------------------------------------|--------------------------------|-----------------|------------------------------------|--------------------------------|
| | Token frequency | Normalized frequency (per million) | Range of dispersion (per text) | Token frequency | Normalized frequency (per million) | Range of dispersion (per text) |
| Research-as-a-whole possessee nominals | 124 | 411.44 | 3.02 | 85 | 592.10 | 2.07 |
| Ideological possessee nominals | 245 | 812.92 | 5.98 | 133 | 926.47 | 3.24 |
| Methodological possessee nominals | 63 | 209.04 | 1.54 | 11 | 76.63 | 0.27 |
| Total | 432 | 1433.39 | 10.54 | 229 | 1595.20 | 5.59 |

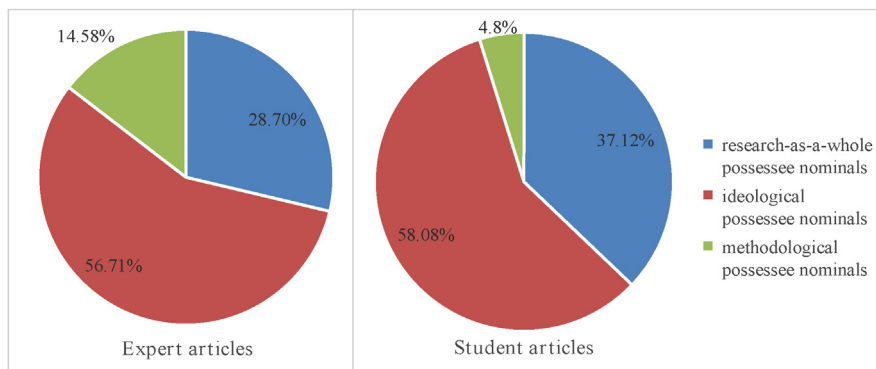


Fig. 4. Distribution of three types of possessee nominals.

The thirdly likely reason is that the writer might not have a clear understanding about the research issues and theories in question, so a general description of the cited information is chosen. The fourth but also the least likely reason is that the writer might not have read the work being cited and is citing it from a secondary source, which often ends with a superficial description of the work cited. These four reasons in combination might account for the higher proportion of research-as-a-whole possessee nominals in the students' texts than in the experts' texts.

The wide use of possessee nominals with specific meaning by expert writers might have resulted from the fact that writers of published academic writing are responsible for the credibility of the cited information, and the high level of specificity of the cited information can not only increase readers' confidence in the credibility of the information but also, to some extent, show the writers' knowledge and skills in academic writing. Imagine at an academic symposium, three participants are talking about their citation of Chomsky's theory:

Speaker A: "I know Chomsky well; I cited his *book* in my paper."

Speaker B: "I also know Chomsky well; I cited his *theory* in my paper."

Speaker C: "I also know Chomsky well; I cited his *Minimalist Program* in my paper."

There is no doubt that the last one is the most specific and appropriate one. According to speaker C, Chomsky can not only **directly and** accurately think about the specific content that C cites, but also tell that C' is a knowledgeable scholar **in the field**. Thus, when details of the cited information are needed, the more specific the cited message is, the more credible the message and the writer will be, and the less effort the reader will need to understand the writer's intended referent.

4.4. Evaluative functions of genitives

The appraisal theory is a particular approach used to explore, describe and explain the way language is used to evaluate, to adopt stances, to construct textual personas, and to manage interpersonal relationships (Martin and White, 2005). The theory evaluates language in terms of three functions: intertextual positioning, dialogic positioning, and attitudinal positioning. Communication, either written or spoken, is primarily a dialogic interaction between writers/speakers and readers/listeners, rather than an isolated monologic utterance. To write/speak is to reveal the influence of, to refer to, to take up, or respond to what has been done before, and simultaneously to anticipate or acknowledge the likely responses from the potential or imagined readers/listeners (Martin and White, 2005, P. 92). Attitude deals with our feelings, including affect, judgment, and appreciation. Affect concerns the expression of emotion (e.g., *happy, sad, fear*). Judgment and appreciation both deal with the assessment of things, but the former is on the moral aspect of behavior (e.g., *kindness, truthful, good*) and the latter on the aesthetic aspect (e.g., *elegant, simple, unique*) (Martin, 2000, p. 142). Attitude, being inherently gradable in meaning, is canonically realized by adjectives (Martin and White, 2005, p. 58). Engagement categorizes propositional statements on the basis of whether the possibility of dialogue is acknowledged or not, which can be classified into monogloss and heterogloss. The former is regarded as bare assertion with no overtly referencing to other viewpoints and voices, while the latter recognizes or allows the recognition of alternative viewpoints. Expert and student writers use **attitude** and engagement resources strategically in evaluating their own and previous research.

Adjectives in s-genitive citation indicate writers' assessment of the cited information. A closer examination shows similarities and variations in expressing attitude between the two sets of articles. Table 4 shows the occurrences of explicit appreciating attitudes in the two sets of data.

Table 4
Appreciation adjectives in s-genitives.

| Experts | Students |
|---|---|
| Cekaite and Aronson's excellent study (2005) | Hyland's sizeable corpus |
| Stæhr's indirect method | Hyland's large corpus |
| Biber et al.'s (1999) comprehensive corpus-based description | Tucker's elaborate characterizations |
| Aljaafreh and Lantolf's (1994) often-cited study | Lasnik's (1995) seminal analysis |
| Talmy's classic binary dichotomy | Chomsky's older work |
| Hyland and Tse's (op.cit.) important critique | Landau's primary claim |
| Nesi and Gardner's (op.cit.) important work | |
| Jenkins' ' challenging ' approaches | |
| Rubin's (1975) and Stern's (op.cit.) landmark articles | |
| Biber, Johansson, Leech, Conrad, and Finegan's (1999) and Gardner and Davies' (2007) informative studies | |

We find that the adjectives in the students' writings were less varied, compared with those in the experts' writings, although there have been claims that EAP students experience less difficulty in attitude options (Hood, 2010; Swain, 2010). Another difference is the degree of appreciation. Adjectives in the experts' texts were more salient in appreciation meaning (e.g., *important*, *landmark*, *excellent*, *noticing*), which is in line with Hood's (2010) finding that compared with students, experts have a stronger overall preference for explicit appreciation. This difference may be due to experts' existing authority in the academic community, which makes them more confident in showing their own attitudes in a more explicit and precise way.

Based on Martin and White (2005, p. 98), the use of s-genitive citations in academic writing is a manifestation of the heteroglossic resources in the engagement domain. Consider the following examples:

Example 7

The power of internally persuasive discourse is that it allows a person to have control over his or her use of language; moreover, through this ownership and personal choice, the individual can use language meaningfully to facilitate a linguistic and ideological growth or, in Bakhtin's terms, "ideological becoming". (TQ5)

Example 8

In Acton's view, this type of embodied monitoring can be significantly more effective than auditory monitoring because "the ear is often the last to know. (TQ1)

In example 7, by referencing words of outside sources, the writer presents himself as someone who knows the existing scholarship on the issue in question. The writer engages himself with the cited author interactively, which signals his acknowledgement of the attributed author's suggestions. Thus, the writer puts himself in a position of sharing responsibility for the quoted source. In contrast, in example 8, the writer presents himself as only a messenger who merely conveys the views of an external voice, a practice which distance him/herself from the cited author's opinion, indicating that he takes no responsibility for the reliability of the information. By this move, the writer wants to show that this is just one of a number of viewpoints currently in play in the academic discipline and there may exist other voices in this field which may stand with, stand against, or take a neutral attitude to the said view *S-genitive* citations, as engagement resources in academic writing, help the writer explicitly refer to the external voice and simultaneously signal a certain stance towards the attributed proposition. As Hyland (2005, p. 110) puts it, to create convincing discourses, authors in soft-knowledge areas are more likely to use explicit evaluation and engagement resources.

In addition, the use of possessive prepositional phrases (e.g., *following Robinson's claim, according to Storch's classification, in Kong's study*) commits more deeply to the cited work. Patterns of this type are mainly used in research-as-a-whole possessee nominals and ideological possessee nominals, with 106 tokens in the experts' writings and 34 in the students' writings. The higher ratio of prepositional phrases in the expert texts agrees with the findings of Swain (2010) and Loi et al. (2016). As Swain (2010) suggests, engagement plays a more critical role in effective persuasive discussion and it is the engagement resources that best differentiate the well-argued essays from the less effectively argued ones.

4.4.1. Evaluative functions of ideological possessee nominals

As shown in Section 4.3, there is a major difference between experts and students in using the research-as-a-whole possessee nominals and methodological possessee nominals. However, a closer examination of ideological type also yields some interesting points.

Ideological possessee nominals like *hypothesis*, *model*, *analysis*, and *system* were commonly used by both the experts and students. However, compared with the students, the experts tended to use the subclasses of these nominals to further specify the semantic meaning (e.g., *hypothesis* vs. *Interaction Hypothesis*, *trade-off hypothesis*, *Cognition Hypothesis*; *Model* vs. *Socio-Educational Model*; *framework* vs. *TFS framework*). The ideological possessee nominals fall into two sub-types: common-noun ideology and proper-noun ideology. As we know, a proper noun is a noun that in its primary application refers to a unique entity which is highly specific in reference, as distinguished from a common noun, which usually refers to a class of entities or non-unique instances of a specific class. Compared with the 47 tokens of proper-noun ideology in the expert articles, there were only 7 tokens in student articles, which, to some extent, suggests a difference between the experts' and the students' level of writing skills. The reference-point function of possessor nominals, as discussed above, facilitates the identification of possessee nominals; thus, the use of nonspecific possessee nominals will increase the reader's effort in understanding the author's intended meaning. In other words, possessor nominals in possessive constructions promote readers' access to possessee nominals, but this reference-point function is greatly reduced when it is followed by a general noun as the possessee. The experts' use of possessee nominals with high specificity helps readers to trace back to the source of the cited work, as well as indicates the authors' knowledge in a particular field. Students, however, as the emergent writers in this field, may have difficulty in mastering the specific theories in the field, which may explain the students' under-use of such nominals in their academic writing.

It is also worth noting that many ideological possessee nominals are deverbal nouns (derived from verbs). Nominalizations (such as *conceptualization*, *classification*) express a participant-event relationship (Stefanowitsch) or an action carried out (Langacker) relationship, because the possessor is interpreted as the actor of the process profiled by the verb base. Other nominals such as *claim*, *proposal*, *suggestion*, *observations*, which denote cognitive and speech act, are derived from reporting verbs (Thompson and Ye, 1991; Thomas and Hawes, 1994). These nominals may express similar evaluative functions as their verb base, and imply different degrees of agreement and/or commitment on the part of the citing author/s.³

4.4.2. Evaluative functions of methodological possessee nominals

Although the methodological possessee nominals are the least used among the three types of possessee nominals in our corpus, differences in this type between the two groups are significant (c.f. Fig. 4), with a percentage of 14.58% in the expert articles and only 4.8% in the student articles. Five word types (11 tokens), i.e. *corpus*, *data*, *figure*, *speaker* and *System*, were found in the student's writings, while in expert articles, the type frequency was 35 (63 tokens), e.g., *spoken corpus*, *data*, *list*, *participants*, *Academic Keyword List*, *Modern Language Aptitude Test*. A comparison between the two sets of data reveals that the methodological possessee nominals in the experts' writings were used in a more specific and varied way. By illustrating the specific methodology of the cited work, on the one hand, experts can give an accurate and clear description of the methodology used in the cited work; on the other hand, they can make a comparison with the cited work's methodology for the purpose of highlighting his/her own research method (c.f. examples 9, 10).

Example 9

Interestingly, however, **Henry's data** (from Belfast English) show speakers utilizing precisely the constructions that Rupp's speakers do not allow; that is, in nonexistentials such as... (G1.06.3)

Example 10

Aijmer's London-Lund Corpus data consist of 297 thanks tokens yet only three thanks responses, which provides evidence for the claims made by Edmondson and House (1981) and Leech and Svartvik (1994) that thanks responses are not very common in British English. (PR4)

The above examples show that the students and experts' choices of methodological possessee nominals are different in terms of their degree of specificity. In example 9, the source of the data collected in Henry's study is not specified when the cited author is first mentioned, thus leaving readers confused about the writer's purpose of comparison with the cited author's work. While the detailed presentation of the data source in Example 10 makes the subsequent argument more credible, which greatly improves the significance of the comparison. The sketchy description of the experimental materials in the student example may disturb the information flow and hinder the readers' understanding of the ongoing study, while the specific description in the expert example can not only help readers know what the data were about, but also facilitate the readers' understanding of the data being cited. When Aijmer was first mentioned in the cited article, the expert chose to use the methodological possessee nominal with high specificity to help the reader know about the cited data, and in the

³ The anonymous reviewer is appreciated for this point.

subsequent mention, it became feasible to use the short-hand expression *Aijmer's (1996) data*. In this way, the citing author created a space for further negotiating with the methodology of the cited work. The difference in the use of some of the methodological possessee nominals reflects that the experts paid more attention to specific research methods in academic research, while the students tended to have limited knowledge about research methods.

5. Conclusions

This article has examined the semantic features of genitive citations in academic writing and identified some similarities and differences in the use of possessee nominals between expert and student writers. To begin with, *s*-genitive citations are much more widely used in academic writing than *of*-genitive citations. Second, based on the “specificity of cue validity”, possessee nominals are classified into three types, namely, research-as-a-whole, ideological, and methodological. Among them, the ideological possessee nominals boast the lion share. Third, expert writers use significantly more specific and diversified methodological possessee nominals than student writers. Fourth, expert writers' employment of *s*-genitives is of much more sophisticated deployment of engagement and attitude resources than that by student writers, though both groups use this structure extensively. The differences stem from the depth and breadth of cumulative knowledge and the writing experiences gained over the years by expert writers, which obviously are not readily available for novice writers. Therefore, novice writers should raise their awareness of the various types of possessee nominals in genitive citations, pay attention to the different semantic and rhetorical functions of these possessee nominals, and actively engaged in learning and using these advanced writing skills. Specifically, student writers should actively engage in more scholarly activities, such as producing research papers, attending seminars, etc., which will provide them with experience and learning opportunities in their disciplinary communities. In addition, it is also necessary to analyze and model after the use of genitive citations in experts' texts (see [Paltridge, 2004](#)). For EAP instructors, explicit instructions about the sub-categorizations of possessee nominals could facilitate students' acquisition. They should invite students to explore the conventional practices of genitive citations in expert writers' texts. Students can be asked to identify different categories and functions of genitive citations used by expert writers, and be guided to confirm the author's purposes in the given genitive citation use, which will, in turn, help to raise students' awareness of possible categories and rhetorical functions of genitive citations. Corpus based pedagogy can also be an effective method in citation practice instruction. In the case of genitive citation analysis, the current study provides a new perspective for citation research that may help contribute to our understanding citation practices in English academic writing. In addition, the study also has broadened the scope of the appraisal theory-based research regarding the use of attitude and engagement resources in academic writing. Practically, the findings can help student writers become more conscious of the use of genitive citations in their discipline, and combine theory with practice by modeling after (or on) patterns produced by expert writers. Furthermore, the findings of the study may assist EAP curriculum developers and teachers in the design and instruction of advanced English academic writing courses.

However, this study has a few limitations. First, this study has examined the semantic features of genitive citations of 82 articles from a single discipline (linguistics). To develop a more comprehensive classification of possessee nominals, it will be necessary to investigate, in future studies, articles from different disciplines to identify how variations in different disciplinary norms may shape the use of possessee nominals. Second, the writings in the student corpus were term papers while the writings in the expert corpus were journal articles. Future research should try to use the same genre in comparing students' and experts' writings to avoid genre difference as a confounding variable on research results. It will also be useful to examine comparable data from different text types (e.g., monographs, textbooks, dissertations) (see [Swales, 1990](#)). Third, empirical research articles and non-empirical academic articles need to be distinguished in future research (see [Bazerman, 1988](#); [Swales, 2004](#)). Last but not least, this study did not include any qualitative data, such as interviews with applied linguists. Such data would triangulate and enrich our findings by considering what things writers take into account when they use genitive citations to make their knowledge claims. Future research may benefit by adding such an analysis of this type of data.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.lingua.2019.102769](https://doi.org/10.1016/j.lingua.2019.102769).

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