

A CORPUS-BASED INVESTIGATION OF THE EFFECT OF NATIVENESS  
AND EXPERTISE ON REPORTING PRACTICES IN ACADEMIC WRITING



SELAHATTİN YILMAZ

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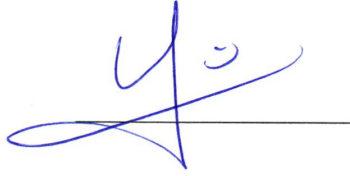
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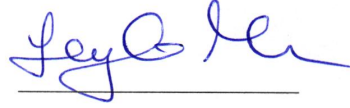
A Corpus-based Investigation of the Effect of Nativeness and Expertise on Reporting  
Practices in Academic Writing

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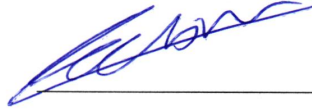
Prof. Yasemin Bayyurt  
(Thesis Advisor)



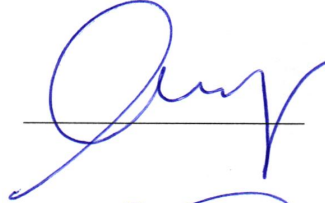
Assoc. Prof. Leyla Martı  
(Co-advisor)



Assist. Prof. Şebnem Yalçın



Assist. Prof. Senem Yıldız



Assist Prof. Derya Altınmakas  
(External Member)



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## ABSTRACT

### A Corpus-based Investigation of the Effect of Nativeness and Expertise on Reporting Practices in Academic Writing

The study aims to investigate the role of nativeness and expertise level on reporting practices in writing in applied linguistics with regards to patterns of use and construction of stance. The study compares four different corpora of research papers: (1) 30 research articles that were written by native writers of English and published in native English contexts, (2) 30 research articles that were written by Turkish non-native writers of English (3) 30 unpublished research papers written by graduate native writers of English and (4) 30 unpublished research papers written by graduate Turkish non-native writers of English. A corpus-based analysis of texts was carried out to explore the features of other-sourced research reports, that is, verb controlling *that* clauses used to report previous research in a study. AntConc 3.4.3 was used to extract the clauses that were analyzed in terms of subject type, reference type, reporting verbs, tense, voice and aspect, as well as the cross sectional distribution of these features. The study showed that expertise level is an important factor in disciplinary writing as native and non-native expert writers showed little variation in their reporting practices. Although both native and non-native novice writers were found to differ from expert writers considerably, remarkable differences were found between native expert and non-native novice writers. This finding indicates that nativeness status becomes less important as the expertise level increases. Furthermore, the findings support the view that non-native writing is discursively hybrid, which is more evident in novice writing.

## ÖZET

### Ana Dil ve Uzmanlığın Akademik Yazmada Kullanılan Dolaylı Anlatım

#### Uygulamaları Üzerindeki Etkisinin Bir Derlem Odaklı Analizi

Bu çalışma uzmanlık seviyesi ve anadilin, uygulamalı dilbilim yazılarında kullanılan dolaylı aktarım uygulamalarındaki rolünü kullanım kalıpları ve yazar duruşunun oluşumuna bağlı olarak araştırmayı hedeflemektedir. Çalışma, (1) ana dili İngilizce olan yazarlar tarafından yazılmış 30 araştırma makalesi, (2) ana dili Türkçe olan yazarlar tarafından İngilizce yazılmış 30 araştırma makalesi, (3) anadili İngilizce olan lisansüstü öğrenciler tarafından yazılmış, basılmamış 30 araştırma çalışması, (4) anadili Türkçe olan lisansüstü öğrenciler tarafından İngilizce yazılmış, basılmamış 30 araştırma çalışmasından oluşan dört derlemi karşılaştırmaktadır. Başka metin kaynaklı dolaylı araştırma anlatım cümlecikleri, yani, geçmişte yapılan çalışmalarını bildirmede kullanılan, fiil ile başlayan yan cümlecikler, derlem odaklı metin analizi yöntemiyle incelenmiştir. Özne türü, referans türü, dolaylı anlatım fiilleri, zaman, çatı, görünüş, ve bu özelliklerin makale bölümleri arası dağılımları, AntConc 3.4.3 kullanılarak çıkarılmış ve analiz edilmiştir. Çalışma, ana dili İngilizce olan ve olmayan yazarlar arasında çok az fark bulunduğundan uzmanlık seviyesinin disiplin odaklı yazmada önemli bir unsur olduğunu göstermiştir. Hem ana dili İngilizce olan hem de olmayan çirak yazarların uzman yazarlardan ciddi anlamda farklılaştığı bulunmuşsa da, en önemli farklar ana dili İngilizce olan uzman yazarlar ile anadili İngilizce olmayan çirak yazarlar arasında bulunmuştur. Bu bulgu uzmanlık seviyesi arttıkça ana dilin rolünün daha az önemli olduğunu göstermektedir. Ayrıca, bu bulgu anadili İngilizce olmayan yazarların, özellikle ana dili İngilizce olmayan çirak yazarların, metinlerinin söylemsel olarak melez olduğu görüşünü desteklemektedir.

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## LIST OF ABBREVIATIONS

AF: Actual frequency

EAP: English for academic purposes

EFL: English as a foreign language

L1: First language

L2: Second language

NEC: Native expert corpus

NF: Normalized frequency

NNEC: Non-native expert corpus

NNSC: Non-native student corpus

NSC: Native student corpus

TTR: Type/token ratio

# CHAPTER 1

## INTRODUCTION

This chapter aims to provide an overview of the background, aim and significance of the study as well as the definitions of the key terms used throughout the thesis.

### 1.1 Background to the study

Construction of writer identity is a multidimensional process that is shaped primarily by social factors such as genre conventions and discourse types that professional communities prefer for written communication (Ivanic, 1998). This is also the case in academic writing since it has highly discourse and genre-specific qualities. An academic article is not only about the wealth of information that is conveyed, but also about the social interactions in the discourse communities with which the writers are engaged (Hyland, 1999). These social interactions mainly include “how knowledge is constructed, negotiated and made persuasive” (Hyland, 2000, p.3). One of the building blocks of the social interactions in academic discourse is citation practices which enable intertextual connections to build a successful argument. As Hyland (1999) states, citation is “the attribution of propositional content to another source” (p. 341). By citing others’ work, writers not only create a link between their research and previous related studies, but also attempt to create their place in the related field of study (Charles, 2006a; Hyland, 1999; Swales, 1990).

Citations practices are known to have great complexities as they have been studied from a broad array of perspectives (Charles, 2006a). One of these widely investigated challenging features of citations is reporting. As Swales (1990) states, a

great number of citations are performed with reporting verbs which can have various functions and meanings that help the academic writers position themselves, ranging from neutrally reporting to taking a positive or negative stance towards the cited work. Furthermore, use of reporting verbs can be seen as one of the most explicit ways of making attribution to other sources (Hyland, 1999). In relation to the fundamental functions of reporting verbs, Pecorari (2010) also stated that “selecting an appropriate reporting verb entails making choices about how to represent the orientation of the writer and the author towards the reported proposition, as well as how the proposition served the original text and how it serves the new one.” (p. 45). Therefore, since understanding these lexical as well as highly rhetorical choices of reporting verbs can reveal a great deal of information about the academic writing practices, analysis of reporting verbs from different perspectives has gained considerable importance.

The complexities of reporting verbs affect the non-native speakers’ writing to a considerable extent as well. Research shows that both expert and novice non-native writers face difficulties while reporting previous studies, and studies attribute these difficulties to linguistic, disciplinary, genre-based and cultural factors (Bloch, 2009, 2010; Liu & Zhou, 2014; Luzón, 2015; Mansourizadeh & Ahmad, 2011; Rowley-Jolivet & Carter-Thomas, 2014; Thompson & Yiyun, 1991). Hence, it is of major importance to include reporting as an element in English for Academic Purposes (EAP) pedagogy. In achieving this, corpus-based analysis could be taken as a starting point to diagnose the possible areas of difficulties and provide explanations for these difficulties, which, in turn, will be pivotal for improving EAP pedagogy (Flowerdew & Wang, 2015; Gilquin, Granger & Paquot, et al., 2007; Lang, 2004). Studies have also shown that corpus-based instruction on reporting verbs could help

non-native novice writers at different levels of expertise to have a greater command of reporting practices in their writing (Charles, 2012; Friginal, 2013; Lee & Swales, 2006; Yoon & Hirvela, 2004).

## 1.2 Rationale and aim of the Study

The motivation for the study came from my observation that it is an under-researched topic due to the limited number of studies on non-native expert writers and less experienced student writers, as well as studies on advanced non-native writers in Turkish context (Çandarlı, Bayyurt & Martı, 2015; Rowley-Jolivet & Carter-Thomas, 2014). However, although few in number, studies have documented important differences in reporting between native and non-native expert writing (Liu & Zhou, 2014; Rowley-Jolivet & Carter-Thomas, 2014). Furthermore, research on student writing has mostly focused on dissertations which are generally completed at the end of degree programs when students are more experienced (Luzón, 2015).

Novice writers, on the other hand, start with writing papers for assessment and such papers have different communicative and rhetoric functions than expert writing since they are not written for publication or a large audience of experts (Nesi, Sharpling & Ganobcsik-Williams, 2004, p. 440). As for the studies in Turkish context, a great number of studies investigated how Turkish writer of English writer in academic contexts but at undergraduate level (Altınmakas, 2015; Bayyurt, 2010; Can, 2006; Çandarlı et al., 2015; Uysal, 2008, 2012) and graduate level (Akbaş, 2012, 2014a, 2014b; Bayyurt & Akbaş, 2014). However, these studies did not focus on reporting and citation practices. Although several studies partially touched on the issue (Ağçam, 2015; Işık-Taş, 2008; Yağız, 2009), they did not focus on reporting practices separately to reach conclusions about knowledge and argument

constructions as well as stance taking. Lastly, to the best knowledge of the researcher, to date, no study on reporting practices has looked at the role of expertise and nativeness status by including all parties. Studies generally compared expert and novice non-native writers (Işık-Taş, 2008; Jalilifar, 2012; Mansourizadeh & Ahmad, 2011; Parkinson, 2013a); however, they did not specify the L1 status of expert writers, and did not investigate native novice writing. Therefore, the primary aim of this study is to analyze the role of the nativeness status and expertise in the construction of stance in reporting practices of applied linguistics writing by comparing native expert writers, non-native expert writers, native novice writers, and non-native novice writers.

### 1.3 Significance of the study

Based on the research gap it aims to fill, this study is believed to contribute to the field in several aspects. First, the study is important in understanding the choices of reporting by different groups of writers, and the findings could help us understand the rhetorical, linguistic, and cultural factors behind these choices (Bloch, 2010). Second, the current study aims to focus on articles in applied linguistics in order to gain a better understanding of reporting practices in the discipline, as writing practices vary according to the social interactions and the research culture within discourse communities (Hyland, 2000; Swales, 1990). Lastly, a corpus-based textual analysis is considered an important starting point for improving pedagogy, and developing more effective curricula (Tribble, 2015). Thus, it is believed that such a comparative corpus-based study of reporting practices will contribute to the understanding of the role that expertise and the nativeness status play, which could have important implications for EAP writing pedagogy.



## 1.4 Definition of key terms

This section explains the key terms and concepts that the study is built on. It includes theoretical backgrounds of the terms, as well as the operational definitions used for the study.

### 1.4.1 Corpus Linguistics

Corpus linguistics is the study of language that relies on “bodies of text as the domain of study and as the source of evidence for linguistic description and argumentation” (Kennedy, 1998, p.7). With the use of concordancing tools, corpora are exploited to explore mainly the word frequencies, phraseological patterns, and collocational structures (Hunston, 2002). Such a systematic analysis of large databases of language provides researchers with ample evidence from authentic data (Sinclair, 1990). Hunston (2010) also argues for the importance of corpus approaches to the investigation of evaluation as follows:

1. They allow a researcher to establish that a given word or phrase has a typical evaluative use or polarity.
2. They permit quantification of evaluative meaning in one set of texts over another, by counting the occurrences of given forms.
3. They permit mapping of meaning elements on to form elements where these coincide consistently.
4. They allow a researcher to observe consistency in co-text in meaning as well as in form. (pp. 166-167)

In line with the benefits of corpus techniques both in language studies and specifically on language of evaluation, this study focuses primarily on a quantitative analysis of stance construction in other-sourced research reports. Word frequencies as well as phraseological patterns of evaluative language in research reports are analyzed across four different sets of texts to understand differences in reporting

behaviors across writer groups based on their nativeness status and expertise level. Findings are discussed in relation to evaluative stance taking in reporting practices.

#### 1.4.2 Citation

Citation is defined as “a research report which has a specific reference point that is clearly identifiable” (Charles, 2004, p. 153). Although citation analysis has an earlier history, its roots in applied linguistics go back to studies conducted by Swales (1981, 1983, 1986). Apart from early, more bibliographical citation studies from different disciplines such as sociology of science or informatics, Swales (1986) identifies his work as a content citation analysis (CCA) and defines it as “studies of citing behavior of researchers and scholars in their construction of academic text” (p. 40).

Swales (1986) highlights the importance of developing a system for categorizing citations. In line with this, Swales (1990) provides a commonly used dual categorization of integral/non-integral citation types. While the former includes the name of the researcher as an integral part of the sentence, the latter mentions the researcher outside the sentence in parentheses or elsewhere in the text. (Swales, 1990, p. 148). Jacoby (1987, cited in Swales, 1990) also adds a category called *summary* which refers to the more general mention of researchers, or studies without an explicit source (p. 55). While several categorizations including that of Swales’s (1990) exclude this type, Charles (2004, 2006a) also used the same category under the name of *general reference*.

Another dichotomous categorization of citations Swales (1990) presented is reporting and non-reporting, based on the presence of a reporting verb. Another feature of citations that early studies focus on is the tense, aspect and voice of the citation sentences (Malcolm, 1987; Pickard, 1995; Shaw, 1992). Swales (1990)

further stated that tenses could be related to author stance in a continuum, the past tense being on the distant end, and the present tense being used in the most involved manner (pp. 153-154). Several similar categorizations have also been used in understanding disciplinary differences (Charles, 2004; Thompson, 2001), differences between local and Anglo-Saxon academic cultures (Zhang, 2008; Dueñas, 2009), as well as citation practices of non-native writers (Luzón, 2015; Mansourizadeh & Ahmad 2011).

This study also employs the categorization system that Charles (2004, 2006a) developed to analyze the use and functions of reporting clauses in citations in relation to the expression of stance. The details and the modifications made to the framework are explained in the methodology section. In addition, tense, aspect, voice of the clauses and cross-sectional distributions of reporting features are also analyzed to understand the textual properties of reporting practices.

#### 1.4.3 Discourse community

Swales (1990) defines discourse community as “socio-rhetorical networks that form in order to work towards sets of common goals” (p. 9). In order to reach these goals, members of discourse communities, that is, people who possess specific kinds of knowledge in a field, communicate through certain channels, adhering to certain regulations (Carter, 1990; Porter, 1986). As Borg (2003) explains, both in life in general and applied linguistics as an academic discipline specifically, we interact with individuals and groups of individuals that make up communities of similar interests and purposes. This thesis focuses on applied linguistics writers as members of an academic discourse community. Expert and novice writer groups represent both full and new members of the community in order to understand the role of expertise.

#### 1.4.4 The notions of expertise and the expert writer

Carter (1990) discusses the concepts of expertise and expert writers under two different schools of thought, which are cognitive and social theories of writing. Carter explains that cognitive psychology sees writing as made up of general heuristics, while social theorists emphasize the role of domain-specific knowledge.

Carter (1990) also defines expert writer as “one who has attained the local knowledge that enables her to write as a member of a discourse community” (p. 266). However, Carter also highlights the importance of both domain-free and domain-specific knowledge stating that they are complementary and are in continuous interaction during novice-to-expert transformation in writing. Hyland (2009b) also supports the idea that writing requires both general language and writing strategies and abilities, as well as the knowledge specific to discourse communities (p. 53). Furthermore, the term *expert writer* is also used by Swales (2004) as *senior researchers*, which he defined in a continuum with the term *junior researchers* as:

broadly English proficient scholars and researchers who either have English as their first language, are essentially academically bilingual, or have acquired a useful range of linguistic and rhetoric proficiencies within their disciplinary cultures covering the relevant genre sets and their associated language skill areas. (p. 56)

In this study the term is operationalized for two expert writer corpora as native and non-native Turkish writers of English who are published authors in quality journals. The quality of the writing is operationalized as publications in SSCI-indexed journals. This leads us to assume that the selected writers have the academic and genre-specific knowledge to be considered experts in their discourse communities.

#### 1.4.5 Evaluation and stance

Evaluation can be defined as a mental activity of attitudinal expression through language used to position oneself towards an idea, person or situation in text (Hunston, 1994, 2010). Thompson and Hunston (2000) defined three main functions of evaluation which are:

- (1) to express the speaker's or writer's opinion, and in doing so to reflect the value system of that person and their community;
- (2) to construct and maintain relations between the speaker or writer and hearer or reader;
- (3) to organize the discourse. (p. 6)

While traditional approaches identify academic writing as objective and neutral, Hunston (1994) opposes this by arguing that persuading the academic community about the novelty and significance of a study is a face-threatening act which can only be achieved through using evaluative language to situate one's own work (p. 142). This shows centrality of the concept in academic writing.

Based on the different traditions the researchers come from, studies have looked at different aspects of evaluation under different names such as stance (Conrad & Biber, 2001) and appraisal (Martin & White, 2005). The notions of evaluation and stance-taking are generally considered as highly interdependent. Thus, evaluation can be seen as an indication of where one stands in relation to others, a certain level of evaluation is also seen as an important constituent of stance (Biber, Johansson, Leech, Conrad & Finegan, 1999; Biber & Finegan, 1989; Du Bois, 2007; Englebretson, 2007; Hunston, 2010). Nevertheless, no matter how differently these social constructs are operationalized for different research questions, it is important to note that stance cannot be discussed only at a textual level since it is highly context-dependent, and shaped by the writers' personal

choices as well as the genre conventions of discourse communities (Charles, 2004; Gray & Biber, 2012; Guinda & Hyland, 2012; Hunston, 2010).

A great deal of research has investigated evaluation in academic texts to understand the writers' involvement in the text, social interactions with the readers and other writers, as well as how they position themselves in the discourse types they produce. For example, Biber and Finegan (1989) used the construct to analyze variation among registers, while Thompson and Yiyun (1991) focused on the evaluative functions of reporting verbs in citations. Charles (2004, 2006b) also investigated stance to understand differences between two contrasting disciplines.

With a similar focus on disciplinary writing and analysis of *that* complement clauses, this study uses the definition of stance by Charles (2004) as follows:

Stance is the expression of the writer's attitude towards, viewpoint on, or feelings about the entities or propositions that he or she is talking about. It uses the sources of evaluation in order to position the writer in relation to the propositional content, the reader and the other members of the disciplinary community. (p. 2)

This study employs the term in order to analyze language of attribution in verb-controlling *that* complement clauses. These clauses are known to bring other voices to texts and help writers position themselves in relation to these voices (Silver, 2012). Parkinson (2013b) also suggests that the controlling words (such as nouns and verbs) and the information conveyed in the *that* clause communicate the evaluative stance of the writer. For example, while integral citations and human subjects give direct reference to the cited researcher, non-integral citations and non-human subjects conceal the other voices and integrate them into the text (Charles, 2004, 2006a). Therefore, this study employs the term *stance* as a means of understanding writers' standpoint in relation to the other-sourced voices in the form of references.

#### 1.4.6 Genre

As conceptualized by Swales (1990) in his preliminary work on genre analysis in academic discourse, genres play a central role in discourse communities. He sees genres, together with tasks, as belonging to members of different discourse communities. Bhatia (1993) defines *genre* in four steps:

1. Genre is a recognizable communicative event characterized by a set of communicative purpose(s) identified and mutually understood by members of the professional or academic community in which it regularly occurs.
2. It most often is a highly structured and conventionalized communicative event.
3. Various genres display constraints on allowable contributions in terms of their intent, positioning, form and functional value.
4. These constraints are often exploited by the expert members of the discourse community to achieve private intentions within the framework of socially recognized purpose(s). (pp. 49-52)

In this study, research articles are considered as a specific genre because they have the primary function of “sharing new scientific knowledge” (Berkenkotter & Huckin, 1995, p.27).

#### 1.4.7 Intertextuality

A term seen as a crucial element of discursive practices, intertextuality was defined as “the property texts have of being full of snatches of other texts, which may be explicitly demarcated or merged in, and which the text may assimilate, contradict, ironically echo, and so forth” (Fairclough, 1992, p. 85). According to the way it is represented in the text, Fairclough divides intertextuality into two categories: (1) manifest intertextuality where text includes parts that are explicit borrowings from other texts, (2) constitutive intertextuality (interdiscursivity) which takes into account, either explicitly or implicitly, all possible elements that constitute a text

including styles, genres, and different discourses. Although Fairclough did not focus specifically on academic discourse, manifest intertextuality has been used to highlight the centrality of citations to building arguments and taking a scholarly position in academic papers (Groom, 2000; Hyland, 1999; Thompson, 2002).

This study uses manifest intertextuality as a fundamental concept due to the focus on reporting practices of academic writers in other-sourced research reports which primarily function as intertextual connectors between the cited research and the citing study.

#### 1.4.8 Reporting

There have been several definitions of reporting in related studies (Lang, 2004; Thomas & Hawes, 1994; Thompson & Yiyun, 1991; Zhang, 2008). All are similar in defining reporting as reference to previous research. Thomas and Hawes (1994) define reporting as “attribution of propositional content of a source outside the author of the article in the current situation, and the marking of this by presence of any of a number of signals of attribution” (p.129).

##### 1.4.8.1 Research reports

Research reports are the most explicit and traditional ways of expressing reporting (Thompson, 1996). According to Charles (2006a), research reports are reports that are attributed to a source other than the writer of a text through the use of proper names, pronouns, and research-related words or phrases as a subject (p. 312). Following also Biber et al. (1999), research reports are operationalized as verb-controlling *that* complement clauses where previous research is mentioned either with explicit attribution to sources or implicitly to make general claims.



#### 1.4.8.2 Reporting verbs

The term is briefly defined by Thompson and Yiyun (1991) as “verbs used in citations” (p. 1). To the best knowledge of the researcher, no study on reporting verbs has attempted to define the term due to the fact that it is a common one in EAP literature and textbooks. However, it has been a widely researched aspect of citations. Swales (1990) categorized reporting verbs as reporting citations. As Thomson & Yiyun (1991) also showed, reporting verbs are one of the central elements of citations that carry a wide array of functions including evaluation of the cited author.

A great amount of studies discovered reporting verbs from different perspectives such as discipline-specific writing (Pickard, 1995; Thomas & Hawes, 1994), disciplinary differences (Charles, 2004, 2006a; Hyland, 1999, 2002a; Thompson, 2001), reporting practices of L2 writers (Lang, 2004; Luzón, 2015), as well as studies with a primarily pedagogical focus (Bloch, 2009, 2010). Several categorizations have also been proposed in order to analyze the functions of reporting verbs including their representation of activities, evaluative potential and the role in the construction of stance (Charles, 2004, 2006a; Hyland, 1999, 2002a; Thomas & Hawes, 1994; Thompson & Yiyun, 1991). In line with the specific focus of this study, only reporting verbs in other-sourced research reports are analyzed.

In this chapter, we introduced the general outline, aim and significance of the study. The next chapter covers the theoretical background and previous studies on reporting practices.

## CHAPTER 2

### LITERATURE REVIEW

This chapter provides the theoretical framework of the study, which is followed by a survey of the literature on reporting practices in academic discourse.

#### 2.1 A social approach to academic discourse

There have been several approaches to the study of academic discourse that rely on different understandings of the notion as well as the methodology for the scholarly enquiry to study it. As Bhatia (2002) explains, the early approach applied linguistics took focused on “a unified register” (p.25), that is, an understanding of academic discourse regardless of differences in disciplinary contexts. Bhatia further explains that a more recent understanding of academic discourse takes a pluralistic and systematic approach and prioritizes genre-based and disciplinary variations, suggesting that disciplines have their own genre conventions. As Figure 1 shows, these conventions lead to variations across disciplines and genres.

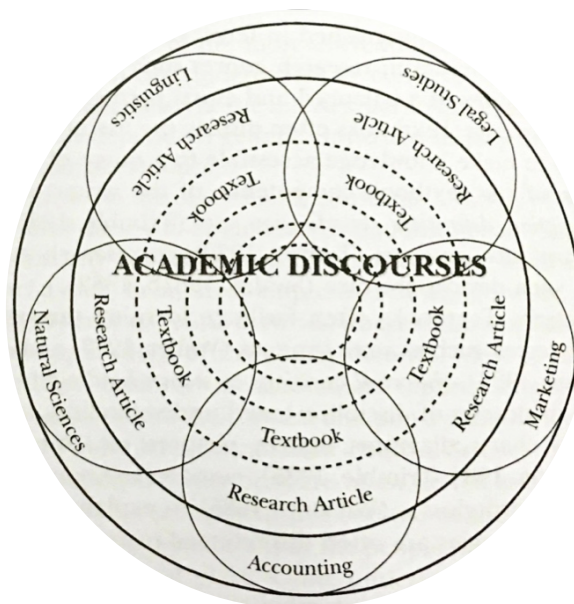


Fig. 1 Schema of variations in academic discourse

Source: Bhatia, 2002, p.34

Such a variation is largely due to the dynamics such as interactions that take place in discourse communities through which knowledge is constructed. In the case of academia, these actions are manifested mostly in writing which is the primary means of construction of knowledge, as well as negotiation between and persuasion of community members (Hyland, 2000). Hyland (2000) further explains the power of writing as follows:

Writing therefore, is not simply marginal to disciplines, merely an epiphenomenon on the boundaries of academic practice. On the contrary, it helps to create those disciplines by influencing how members relate to one another, and by determining who will be regarded as members, who will gain success, and what will count as knowledge. Texts, therefore, contain traces of disciplinary activities in their pages; a typical clustering of conventions – developed over time in response to what writers perceive as similar problems – which point beyond words to the social circumstances of their construction. They offer a window on the practices and beliefs of the communities for whom they have meaning. (p.5)

This shows us the embedded power of writing as a means of contraction of knowledge in academic discourse. As Bazerman (1998) also argues, scientific writing should be seen as a social practice where individuals interact with genres as well as community members, which leads to an ongoing evolution of all parties and adds more to the complexity and multidimensional character of academic discourse. Therefore, the academic writers are required to have sufficient command of socially situated genre-knowledge to exist in their target disciplinary communities, which can be seen as a strategic competence essential for success (Berkenkotter & Huckin, 1995). Such a social and context-sensitive approach is important in understanding academic writers' practices and processes of knowledge construction.

## 2.2 Intertextual connections in academic writing: The case of reporting

An essential element of the social interactions and genre conventions in academic discourse is reporting which is done in the form of references to previous work in the field. Fairclough (1992) defined it with his term *manifest intertextuality* as a rather explicit act of mentioning other sources in text, which is shaped according to the discourse type targeted, and it allows for variations in the positioning of the representing as well as represented texts and voices. As Hyland (2000) also argues, the modern academic papers are entitled to be contextualized in the larger discourses that they address, which is achieved in the form of citations (p. 20). Thus, the knowledge and meanings as well as the communicative power of citations have been an important area of research in different disciplines including sociology of science, informatics, and applied linguistics.

Applied linguistics research on citations has taken many forms such as genre analysis (Swales, 1981, 1983, 1990), more systematic corpus-based analyses of texts (Shaw, 1992; Thomas & Hawes, 1994; Thompson & Yiyun, 1991; Thompson, 1994), as well as more qualitative case and interview studies (Berkenkotter & Huckin, 1995; Harwood, 2009; Harwood & Petric, 2011). In his *Create Your Own Research Space* (CARS) framework that explains the organization of introductions in research articles, Swales (1990) also talks about the centrality of giving references to situating one's own work in the wider context of disciplinary discourses (p. 141). After observing the publication processes of an experimental research article by a young doctoral student in biology, Berkenkotter and Huckin (1995) came to the conclusion that academic writers should express the novelty of their work together with an explicit statement that it belongs to the target disciplinary discourse by employing appropriate citation behaviors. Thus, reporting plays a key and

determining role in the construction of new scientific knowledge (Hyland, 1999).

This requires a thorough understanding of appropriate citation behaviors in disciplines.

Based on the comprehensive analysis of academic writing as part of the COBUILD project, Thompson (1994) also identifies the three main functions of reporting in academic writing such as enabling writers to (1) connect their work with that of the experts in the field (2) build a well-supported argument for their position and (3) claim expertise by showcasing their knowledge on the topic (pp.178-179). A similar categorization comes from Bloch and Chi (1995, cited in Zhang, 2008) who identified three categories of reporting as *background*, *support*, and *critical* in their contrastive study on English and Chinese rhetoric.

### 2.3 Evaluative potential of reporting

Social interactions in citations such as appropriating and contextualizing one's own claims in line with both epistemological values and rhetorical practices of disciplines have also led to a realization that the reporting structures carry evaluative meanings, as well (Hyland, 2000; Thompson & Yiyun, 1991). Much as evaluation has been a focal point in academic discourse in general, it has also been so in reporting research for the past few decades.

In one of the early studies of evaluation in academic discourse, Hunston (1989, p.135) argued that research articles can be seen as individual elements in a dialogue where citing early studies has the power to shape or constraint what the following articles on the topic will say. Reporting verbs are one of the most explicit grammatical features of reporting as they express the interaction between the voices of the citing writer and the cited author (Hunston, 1989; Hyland, 2002a). Through

reporting practices, writers can employ different levels of evaluation. For example, an integral citation enables the involvement of the cited author and a following reporting verb could neutrally report, confirm or criticize the research to situate one's own work, while non-integral citations and *it* subjects signal a less evaluative and more impersonal reporting behavior (Charles, 2004; Hyland, 1999, 2002a; Thompson & Yiyun, 1991). Furthermore, tenses and voice can show how much writer involvement is expressed. For example, Malcolm (1987) states that "the shift from the present to the past . . . is directly related to a shift from a reference to the report itself . . . to activities that went on during the authors' experiment" (p.41). As Swales (1990) also argues, a citation in the present tense can be perceived as more factual and supportive of the researcher's claims than a citation in the past tense, while the passive voice gives us the impression that personal involvement of both the cited and the citing author is left out (Swales, 1990). As these studies indicate, there are differences in lexico-grammatical realizations of reporting behaviors of writers that can be observed in their texts.

The next section reviews the literature related to reporting practices in academic discourses.

#### 2.4 Previous research on reporting

In line with the complex and multidimensional nature of reporting, the past few decades have seen a proliferation of research that has looked into linguistic realizations of the reporting practices in academic writing, ranging from explorations of disciplinary discourses, processes of knowledge and stance construction, to novice and non-native writing with the aim of improving EAP practices. This section aims to provide summary of the research that has been done on reporting practices. The

studies are grouped into different strands so as to facilitate the discussion and relate the literature to the aims of the current study.

#### 2.4.1 Studies on reporting practices of expert writers

Expert writing has been heavily researched in terms of reporting practices. These studies mostly focused on reputable and high quality publications and did not specify nativeness status of the authors.

An early example is Malcolm (1987) who analyzed 20 research articles on pediatrics and reached the conclusion that each tense refers to a function such as the present tense for generalizations, the past tense for mentioning specific studies and present perfect for talking about areas of research.

As one of the preliminary studies on the functions of reporting verbs, Thompson and Yiyun (1991) looked at reporting verbs in the introduction sections of about a hundred academic papers from several disciplines (no definite number is given in the article). As Table 1 shows, reporting verbs were categorized as having denotative (functions in discourse) and evaluative functions (evaluation of the cited source). Denotative verbs were also divided into two subcategories as author (the author whose work is cited) and writer acts (the writer who is citing others' work). While author acts were divided into three - textual (denoting verbal expression), mental (mental processes), and research (research processes and findings); writer acts were classified as comparing (citing by placing one study with others) and theorizing (placing cited author's work in the argument being developed). Evaluative verbs are divided into three main sub-categories: author's stance (cited author's stance towards the reported information) writer's stance (the researcher's stance towards the reported information), and writer's interpretation (writer's attitude towards placing the cited author's work in her study by interpreting the reporting

information). These subcategories were also divided into different denotative and evaluative categories as shown in Table 1. However, as qualitative analyses showed, some categories of reporting verbs were used for more than one function and the authors, noted that these categories are not clear-cut. For example, a negative evaluation and modality in reporting may easily change an author act to a writer act, which brings in writer evaluation to the cited author's proposition. As a consequence, the authors suggested that such textual analyses could be helpful in seeing the complexities of reporting practices. They pointed to the wide range of reporting verbs and varying layers of reporting, which could yield important information about both the features of reporting verbs and their realizations in academic papers.

Table 1. Denotative and Evaluative Categories of Reporting Verbs

		Categories	Examples
Denotation	Author Acts	Textual	<i>state, write</i>
		Mental	<i>think, believe</i>
		Research	<i>measure, find</i>
	Writer Acts	Comparing	<i>correspond to, compare with</i>
		Theorizing	<i>explain, support</i>
Evaluation	Author's stance	Positive	<i>accept, invoke</i>
		Negative	<i>attack, challenge</i>
		Neutral	<i>pose, quote</i>
	Writer's stance	Factive	<i>notice, prove</i>
		Counter-factive	<i>betray, disregard</i>
		Non-factive	<i>advance, believe</i>
	Author's interpretation	Author's discourse interpretation	<i>mention, note</i>
		Author's behavior interpretation	<i>admit, advocate</i>
		Status interpretation	<i>bring out, conform</i>
		Non-interpretation	<i>adopt, apply</i>

Source: Thompson & Yiyun, 1991



Following Thompson and Yiyun's (1991) influential work, Thomas and Hawes (1994) investigated the use of reporting verbs in 10 medical research papers, which led to a modified framework of research activity-based typology. As can be seen in Table 2, the categories are quite similar to those in the denotative categories of Thompson and Yiyun's (1991) framework. Experimental verbs correspond to research verbs, while discourse verbs correspond to textual verbs and cognition verbs to mental verbs. Research verbs were found to have the highest frequency, followed by discourse and cognition verbs. The authors concluded that verb types also correlate with reporting functions such as cognition verbs that are used when a general consensus exists in the field.

Table 2. Categories of Reporting Verbs Based on Research Activities

Experimental verbs	Procedural	Pre-experiment
		Post-experiment
Cognition verbs	Finding	Objective
		Effect
Discourse verbs	Certainty	Informing
		Argument
	Qualification	
	Tentativity	

Source: Thomas & Hawes, 1994

Another study on reporting practices of expert writers is Pickard's (1995) analysis of 11 applied linguistics. The author investigated subject types, reporting verbs and tenses of integral citations. She found that the most common pattern is the use of integral citation with the name of the cited researcher as the subject, the use of reporting verbs such as *argue*, *suggest*, *propose* and the use of present tense. She concluded that such analysis of expert writing could inform EAP pedagogy for ESL

students who lack the necessary linguistics sources to cite effectively and enhance “involvement with their sources” they use in research writing (p. 97).

By analyzing 80 research articles from eight disciplines, Hyland (1999) and Hyland (2002a) also investigated reporting practices such as citation types and reporting verbs. Both studies reported findings from the same dataset, except that Hyland modified his categorization of reporting verbs, as seen in Figure 2, by integrating denotation and evaluation and by analyzing them in a unified manner in the 2002 study. As the studies showed, in terms of research activities in denotation, discourse verbs were the most frequent category in disciplines such as sociology and applied linguistics, traditionally known as social sciences, whereas research verbs were the most frequent among hard sciences such as engineering and physics. In terms of evaluation, all disciplines tended to stay neutral, but social sciences writers’ reporting practices employed a more evaluative language. Hyland concluded that reporting practices show disciplinary variations, and partly confirm the traditional hard versus soft sciences dichotomy. Hyland (2002a) also suggested that EAP instruction for L2 academic writers should go beyond teaching the surface forms and highly conventionalized rhetorical properties of reporting verbs by taking into account the effects of the choice of reporting verbs on the reader such as the author’s voice and preferred relations to the reported text.

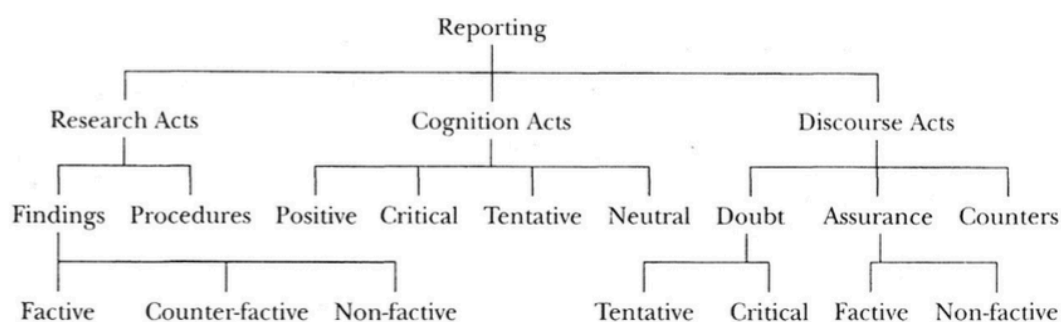


Fig.2 Framework of Reporting Verbs

Source: Hyland, 2002a, p. 119

Parkinson's (2013b) study is a rather recent one that looked at 50 research articles in social sciences for a cross-sectional analysis of verb, noun and adjective-controlling *that* complement clauses. She concluded that while authors conceal their claims and mostly use them in the results and discussion sections, they explicitly use others' claims in the form of integral and non-integral citations which are generally found in the introduction and discussion sections with a more frequent use of ARGUE and FIND verbs according to Charles's (2004) categorization. The author concluded that these commonalities are all important signals of building an argument to put forth a new scientific claim.

#### 2.4.2 Comparative studies on non-native expert writing

Highlighting the need to understand the differences between citation behaviors of native and nonnative expert writers Rowley-Jolivet and Carter-Thomas (2014) compared three different corpora of research articles (L1 French, L1 English, and L2 English by 11 French writers) in the fields of engineering, science, and computational linguistics. They found that the articles by French writers of English show less lexical variety, inappropriate use of reporting verbs, and overuse of would-conditional and the evidential adverbial *according to*. They attribute this to a vague and less implicit expression of stance due to the influence of native language and French academic culture. Following Charles's (2006a) study, Liu and Zhou (2014) also looked at stance in self and other-sourced research reports in order to understand the differences between native and Chinese expert writers of English in applied linguistics. The findings indicated that Chinese writers did not use self-mentions as frequently as native writers did. However, the study also showed that whereas Chinese writers preferred to use verbs that make stronger claims (such as *indicate*,

*show*) towards cited works, native writers used verbs that are more neutral and tentative (such as “suggest, argue”). Yeganeh and Boghayeri (2015) also compared the reporting verb groups (ARGUE, SHOW, FIND and THINK) as in Charles (2006a) in the research articles on second language acquisition by native English writers and Persian writers of English. While *ARGUE* verbs were the most frequent group in both corpora, the frequency was much less among Persian writers who had a higher use of *FIND* verbs, which was seen as a feature more common hard sciences.

A common feature of all studies on non-native expert writing is that these writers’ distinctive citation behaviors were all attributed to L1 influence, not the lack of disciplinary knowledge or discourse community membership. However, distinctive qualities such as the use of reporting verbs, subject types, and expressing evaluation were also acknowledged to be found in the previous literature on novice writing.

#### 2.4.3 Research on reporting practices of novice writers

Research also focused on novice and non-native writers as well. While the complexities of choosing appropriate reporting verbs in an academic discourse could pose challenges for novice writers, this challenge becomes even greater for non-native novice writers as they have to be both proficient in the language and be competent in using the academic conventions of the target discourse community (Bloch, 2010; Flowerdew, 1999; Lang, 2004). Thus, the following parts focuses the studies that investigated the reporting verb use of novice and nonnative academic writers.

#### 2.4.3.1 The case of native novice writers

Several studies focused on native novice writers to explore whether there are disciplinary differences in doctoral dissertations in terms of reporting practices. An early study by Shaw (1992) looked at reporting verbs and the relations between functions of tense, aspect and voice introduction sections of doctoral dissertations by five native and one near-native speakers in agricultural biology and biochemistry. Using Thompson and Yiyun's (1991) framework, Shaw found that most verbs fell under textual and mental verb categories, with the past tense being the most frequently used tense followed by the present perfect and the present tense. He also found that sentences in the past and the present tense were mostly in the active voice and referring to a human subjects. The passive voice was found to be more common with the present perfect tense and non-human subjects. While the past tense was used to provide specific details, simple present and present perfect tenses were found to be used when less specific information was given about the previous research.

Thompson (2001, 2002) also investigated the use of citations and reporting verbs to see the differences in the expression of intertextuality of doctoral dissertations written in two related disciplines: agricultural botany and agricultural and food Economics. He found that the types and functions of citation types, and the tendency of the writers to stay neutral are the common features in the two corpora, which Thompson attributed either to the genre of thesis or the disciplines in question. However, the citation types and reporting verbs used in agricultural economy were found to be more varied, and the macrostructure was found to be less conventionalized than those of agricultural botany theses. Moreover, in terms of tense and voice usage, the past simple active was found to be the most frequent structure in agricultural botany compared to the present simple active in agricultural

economy. In terms of pedagogy for novice writers, Thompson highlighted the importance of noticing the features of citation use both one's own writing and in expert writing samples for practice and familiarity.

Charles (2004, 2006a) looked at stance in doctoral dissertations by native speakers in natural sciences and politics in order to understand the disciplinary differences in the construction of stance in academic discourse. Charles's (2004) analysis included adverbs, it patterns, noun and verb-controlling *that* clauses in self and other-sourced research reports, while Charles' (2006a) study focused on the clausal patterns in other-sourced researched reports. Among the wide array of linguistic features and patterns investigated in Charles (2004), a more frequent use of ARGUE verbs and interpersonal adverbs confirmed the more discursive (textual) nature of politics as a soft science. On the other hand, less interpersonal adverbs that highlight universal claims to reach a consensus in the field (such as "generally") and a more frequent use of SHOW and FIND verbs showed the "impersonal and value-free nature" of materials as hard science (p. 233). The author attributed these to differences that are present between the two contrasting disciplines that were investigated. She also acknowledged that thesis writers may refrain from expressing stance explicitly and confidently due to their transitioning identity from student to academics. Reporting results from the same corpora, Charles (2006a) found that the most common pattern in both corpora is integral citation with a human subject and an ARGUE verb used in the present tense. The following less frequent pattern is integral citation with a human subject and a SHOW or FIND verb used in the past tense, and it was found more frequently in the materials corpora. While the former was used to build an argument primarily about the previous research by mentioning the researcher and making more tentative claims, the latter was used to report

previous findings of similar studies and make stronger claims about the research findings cited. Charles also highlighted the importance of an EAP pedagogy that starts with a disciplinary and genre-based investigation of these citation patterns and stressed the importance of teaching patterns saying “This will help them [novice writers] to write in a way which is not just grammatically correct, but also appropriate both for their specific purposes and within their disciplinary community” (2006a, p. 327).

#### 2.4.3.2 The case of non-native novice writers

A great range of studies explored L2 writing of writers from different L1 and academic backgrounds, as well as writings in different genres such as dissertations and course papers. It is important to mention previous research as categorized according to different genres since the length, expectations, editing process and the audience are quite different, which also has considerable effects on reporting practices. In line with this argument, the studies on dissertations will be reported first, and the student essays and course papers will follow.

Lang’s (2004) study on the use of reporting verbs employed textual analysis, interviews with students and tutors, and case studies with the participants. In terms of the textual analysis, 12 master’s theses in business written by Taiwanese speakers of English were examined with an adapted version of Thompson and Yiyun’s (1991) framework by changing the categories of some verbs and looking only at author acts. The results showed that dissertations with an A-level grade had a more even and appropriate distribution of reporting verbs compared to the B and C-level ones where overuse and underuse of certain reporting verbs were observed. While A-level dissertations mostly used the textual verbs, followed by research and mental verbs,

the others used research, textual, and mental verbs respectively. Disciplinary variations in the use of reporting verbs were also reported in sub-disciplines of business such as finance, marketing and accounting. Furthermore, participants' problems with using reporting verbs such as using a small number of verbs repeatedly, inability to take a critical and evaluative stance and difficulties related to Chinese language and culture were explored for a more informed EAP pedagogy.

In his comparative study of the introductions of 65 Iranian master theses in English and 65 published journals in applied linguistics Jalilifar (2012) stated that there were remarkable differences between the two corpora. While he found similarities such as a higher frequency of non-factive verbs over factive and counter-factive verbs in both corpora, he also reported a limited range of reporting verbs, less evaluation and limited use of citation functions in introductions of the Iranian master's students. He associated these findings with the differences in audience and discourse expectations along with linguistic and cultural differences. Jalilifar and Dabbi (2013) also analyzed a similar set of data, 65 master's theses in applied linguistics by Iranian graduates. They found that students mostly used integral citations with a human subject and that they took a neutral stance in using reporting verbs. The authors related these findings to the lack of expertise, disciplinary knowledge, and knowledge of citation conventions and functions. While they stated that the findings could be about the research context of Iranian students, they highlighted the importance of teaching a wide range of citation functions and forms in EAP courses.

McCulloch (2012) analyzed five pre-master dissertations by Japanese writers of English in two disciplines (applied linguistics and development studies) and interviewed the writers. She found that students had problems with source use such



as extensive use of direct quotations and reporting factually without voicing their opinions. Students also failed to take an evaluative stance and position themselves in the target academic discourse community mainly because of the writing tradition of their own culture such as L1 discourse and writing conventions about source use and writer stance. The author suggested teaching of academic writing with a dialogic and socially constructed view so that students can be aware of rhetorical and social functions of citations. Manan and Noor (2014) also looked at the use of reporting verbs in six master's theses written by Malaysian students. They analyzed reporting verbs according to Hyland's (1999) framework and the results revealed that Malaysian graduate students used reporting verbs of research acts more frequently than cognitive acts, with the lowest being the discourse acts. The authors indicated that their data showed Malaysian students' preference for neutrally reporting studies rather than critically evaluating them. Finally, the study advised the instruction of how to use reporting verbs in research writing in EAP courses in the light of the theses local corpus findings.

Considering different genre conventions, a line of research also focused on essays and papers written for assessment purposes generally for taught courses at graduate and undergraduate programs. For example, Neff, Dafouz, Herrera, Martínez, Rica, Díez, Prieto and Sancho (2003) carried out a comparative study of writer stance in student argumentative texts from native (taken from Louvain Corpus on Native English essays - LOCNES) and nonnative speakers of English (taken for International Corpus of Learner Essays ICLE) in terms of evidentiality with a specific focus on modal verbs and reporting verbs. In terms of reporting verbs, they investigated nine verbs (suggest, wonder, argue, explain, express, recognize, say, show, state) that were given under writer's stance category in Thomson and Yiyun

(1991). The results indicated that native texts had a more balanced variety of reporting verb use in the verbs such as *say*, *state*, *show*, *argue*, while non-native speakers had a tendency to overuse use the verb *say* and underuse the others. The authors argued that this finding about the limited lexical items used by non-native writers has a direct effect on L2 writers' ability to take an appropriate writer stance.

The Michigan Corpus of Upper-level Student Papers (MICUSP) is an important corpus of student writing that includes papers from several disciplines at both undergraduate and graduate levels (Römer & Swales, 2010). The following two studies looked at reporting in different versions and sub-sections of the corpus, which include both native and nonnative learner writing. Ädel and Garretson (2006) modeled Hyland (1999) to look at differences between professional and student writing. Hyland's data were compared to the pilot version of MICUSP. The analysis included citation types, and examined the use of reporting verbs only in attribution. Disciplinary variations between soft and hard sciences were found. For example, verbs such as *point out*, *argue*, *think*, *believe* were found only in soft disciplines such as linguistics, philosophy, economics, while verbs such as *investigate*, *explore*, *observe* were highly frequent in hard disciplines such as engineering, biology, nursing. However, similar to Hyland (1999), reporting verbs in biology were reported to show similarities to those in soft disciplines. In comparison to the reporting verb choices in professional writing as reported in Hyland (1999), student papers used a greater variety of verbs, and their preferences did show a restricted amount of overlap with the ones in the articles. However, unlike what they expected, the authors also stated that discipline-specific words were also commonly used in student papers. Swales (2014) is another study that looked at citation types, use of the cited authors' names and the effects of the citation system as well as the choice of

reporting verbs in the sub-corpus of 37 biology papers from MICUSP. He categorized reporting verbs as *factive* and *non-factive*, as in Hyland (1999, 2002a). Among the 31 highly frequent reporting verbs in the corpus, only five were found to be factive such as show, find, demonstrate. Swales concluded that student biology writers skillfully re-evaluated the cited work rather than seeing them as mere facts. He attributed this finding to the fact that “the corpus consists of only ‘A’ papers from a flagship research university” (p.1), arguing that papers with lower grades, and written by students at programmes that offer limited research experience could provide different findings.

Mansourizadeh and Ahmad (2011) compared citation types and functions in Malay expert and novice writers of English in chemical engineering. Novice writers used more verb controlling citations than noun controlling ones. They also employed the function of attribution more than that of support which was typical of expert writers. The authors concluded that there are remarkable differences mainly due to novice writers’ lack of “cumulative knowledge and experiences gained through the years by the expert writers” (p.160). They suggested modeling discipline-specific expert writing to teach citation conventions in EAP writing courses.

Parkinson (2013a) analyzed *that* complement clauses in South African ESL students’ research papers that report questionnaire results and articles by expert writers in the field biomedical and health science. It was found that while ESL writers were in the process of learning the values of academic writing such as using abstract words instead of human subject. Students also had a tendency to use verbs that are categorized as MEAN verbs (think, believe) in Charles (2006a), which the author related to a more conversational than academic way of writing. This was also evident in the abundant use of unattributed and secondary sources.

Luzón (2015) looked at the citation patterns in literature reviews written collaboratively by Spanish student writers of English. Her comparison of citation patterns of native expert writers of English and L2 English writers showed several problems in student writing such as underuse of non-integral citations and misuse of reporting verbs. Luzón attributed these findings to low language proficiency, lack of disciplinary knowledge and that of citation practices.

#### 2.4.4 Investigation of Stance and Reporting in Turkish Context

Several corpus-based studies have been conducted to understand how Turkish writers of English produce written genres in disciplines. However, reporting practices have not received much attention. Thus, studies that investigated texts produced by Turkish writers from different perspectives have also been reviewed to gain a better understanding of how Turkish writers of English produce academic texts and express their stance.

A great number of studies on Turkish writers of English analyzed academic writing in terms of metadiscourse, that is, “the ways writers project themselves into their discourse to signal their attitude towards both the content and the audience of the text” (Hyland & Tse, 2004, p.1). Metadiscoursal features such as taking an authorial stance, and interacting with the reader in accordance with the target discourse communities and genres are seen as important qualities of successful academic writing (Hyland, 2005).

Several studies focused on undergraduate argumentative writing of Turkish writers of English (Algı, 2012; Bayyurt, 2010; Can, 2006; Çandarlı et al., 2015; Uysal, 2012). Can (2006) and Çandarlı et al. (2015) are similar as they compared metadiscourse across three groups: L1 Turkish essays, English essays by Turkish

writers and English essays by native writers. Can (2006) found that bilingual writers expressed a stronger stance in writing both in Turkish and English than the Turkish monolingual writers. Çandarlı et al. (2015) concluded that authorial presence markers (boosters, self-mentions and attitude markers) are used more frequently in L1 Turkish essays, while the frequencies are much less in L2 English, and L1 English essays, which the authors related to the hybrid nature of L2 writing by Turkish students. The studies by Bayyurt (2010), Algı (2012) and Uysal (2012) are also similar as they compared essays by Turkish students both in English and Turkish. Both Bayyurt (2010) and Algı (2012)'s findings revealed that English essays of Turkish writers had more frequent use of hedges than intensifiers, as opposed to higher frequencies of boosters in Turkish essays. This finding showed that Turkish writers tend to minimize their presence as authors in their English essays. Uysal (2012) found that making explicit claims, use of hedging, and indirectness are similar in L1 and L2 writing which signals a more global, and Western-influenced writing instruction. However, according to Uysal (2012), high frequency of adorned /literary language, questions, and providing evidence and assertiveness occur more in L1 writing shows similarity to Arabic/Confucian discourse.

Research by Akbaş (2012, 2014a, 2014b) is also a group of metadiscourse studies that focused on different sections of master's dissertations. Akbaş (2012) looked at the introduction and conclusion sections of master dissertations written in Turkish, and in English by Turkish L1 speakers. The analysis showed in Turkish dissertations writers make more assertive claims in both sections while the use self-mention much less in dissertations in English. Akbaş (2014a) also analyzed discussion sections of master's dissertations in education by L1 English and L2

English writers. He found that the L1 Turkish writers employed more impersonal and objective metadiscourse with no self-mentions (such as first personal pronoun), while L2 English writers had more instances of both groups. However, he also found similarities such as the use of attitude markers and the first person plural pronoun in both groups. The findings were also interpreted as that the L2 writers employ features of both native and target academic writing conventions. Akbaş (2014b) compared discussion sections of dissertations written in social sciences by L1 English, L1 Turkish and L2 English by L1 Turkish academic writers in terms of authorial voice and presence and found that L1 Turkish writers were more certain in conveying their propositions than L1 and L2 English writers, while L1 Turkish and L2 English writers tended to write more impersonally by using less authorial references than L1 English writers. Therefore, L2 English writers seem to exhibit characteristics that resemble both L1 Turkish and L2 English writing in different aspects. Aiming to explore the perceptions of graduate Turkish writers in terms of hedges and boosters both in L1 and L2 writing, Bayyurt & Akbaş (2014) also found that the Turkish graduate students were better at identifying hedges and boosters in L2 texts than in L1 texts.

Although the above mentioned studies did not explore writer stance in reporting practices, they are important in understanding the way Turkish writers of English writes academic texts in relation to L1 Turkish and L1 English writing. While the Turkish L1 writing requires being more assertive in making claims and using less direct self-mention, according to the Anglo-Saxon writing conventions, making less tentative claims but expressing more authorial presence is expected. As the studies reported, Turkish writers of English follow a blend of local and global

discourse conventions due to several factors such as language and culture background, as well as L2 instruction and exposure to English writing conventions.

One of the few studies that partially looked at reporting practices of Turkish writers is Işık-Taş's (2008) study where she compared introductions of 25 doctoral dissertations and published research articles in international journals of English language teaching. The study compared introductions in two genres in terms of vocabulary, readability, use of verb tenses and citations, move-step structures and authorial presence markers. Research articles were found to be more academically oriented, lexically dense and consistent with Swales's (1990) CARS model than the dissertations. In relation to reporting practices, integral citations were preferred more in dissertations compared to more frequent use of non-integral citations in research articles, along with different choices of reporting verbs. However, no differences in tense preferences were found as the past simple tense was found to be the most common pattern in both corpora.

Yağız (2009) aimed to explore the challenges Turkish graduate students face when they write in English. The analysis included questionnaires and interviews with 70 graduate students from language teaching, literature and translation departments in several Turkish universities that provide English-medium instruction, as well as a textual analysis of introductions of 10 applied linguistics research papers written by graduate students by using Swales's (1990) CARS model. While the participants were found to have a high awareness of the values and characteristics of academic writing, problems related to lexical and organizational properties of writing such as coherence of ideas, formality and limited discipline-specific lexical repertoire were found. In terms of reporting practices, questionnaires and interviews showed that the students were not aware of the functions of citations in academic writing, while

textual analysis showed that the students tended to summarize rather than evaluate the cited sources. Yağız recommended explicit EAP writing instruction, stronger collaboration between students and disciplinary experts and building a habit of revising.

Two other studies focused on verbs but not specifically those in research reports or citations. One of them is by Bozdağ (2014) who conducted a comparative study of Turkish and native writers of English about the use of lexical verbs in academic writing instead of reporting practices or reporting. Similar to Neff et al. (2004), he compared L2 Turkish sub-corpus of International Corpus of learner English (ICLE) with The Louvain Corpus of Native English Essays (LOCNESS). He found that Turkish writers of English use a limited number of lexical verbs and employ verb patterns more repeatedly compared to native writers. Another study is Ağçam's (2015) study that looked at author stance as expressed through epistemic verbs in doctoral dissertations among native English writers, Turkish writers of English, and Spanish writers of English. Focusing only on the findings, discussion and conclusion sections, the study found that Turkish writers used epistemic verbs (especially certainty verbs such as show, see, find) a lot more frequently than the other two groups. Hence, Ağçam highlighted the importance of teaching appropriate stance-taking in academic writing courses to Turkish graduate students.

Although reporting practices of Turkish writers of English is a rather under-researched area of inquiry, the existing research hints that Turkish writers of English have distinct writing characteristics which could have direct implications for EAP in terms of choosing the structure and the vocabulary for the right context, and expressing stance in accordant with dynamics of discipline-specific writing.



#### 2.4.5 Studies on reporting practices with a pedagogical focus

Several other studies did not only analyze corpora to discover the features of reporting verbs, but also introduced materials or methodologies to use this textual information as a starting point.

Yoon and Hirvela (2004) aimed to teach a 10-week corpus-based writing course to two groups of ESL university students by using corpus tools and focusing on problem areas for non-native writers including the use of content words, prepositions and reporting verbs. Survey responses and interviews with the participants showed that students had positive attitudes towards the role of corpus tools in teaching writing “particularly for learning common usage and collocates of words and for building confidence in their writing” (p.278). Lee and Swales’s (2006) study is also a preliminary classroom study that outlines a corpus-based EAP course offered to four nonnative Chinese PhD students. The 13-week long course included practice of corpus techniques such as concordancing in academic corpora, followed by students’ building of two corpora: one of their own writings and another from expert writings in their own field. The students carried out their own research to learn more about a specific aspect of writing in their respective disciplines and presented their work at the end of the course. As the authors reported, the students were able to increase their rhetorical awareness in terms of disciplinary genres by studying the work expert writers from the target discourse communities that they would join in the future. Charles’s (2012) aimed to teach a corpus-based writing course to a groups of students from different disciplines. Students compiled their own corpora of research articles and worked on several lexico-grammatical structures such as reporting verbs linking, adverbials, citations, reporting verbs and personal pronouns in order to improve their argument building and stance-taking

skills during a six-week course. Questionnaires showed that students found the course and the corpus tools effective, practical and they were eager to use corpora in the future. Friginal's (2013) study is another classroom study that aimed to test the effect of corpus instruction on improving writing skills of forestry students in terms of four linguistic features: linking adverbials, reporting verbs, verb tenses and passive structures. After an analysis of professional writing and expert writing, discrepancies were found in the mentioned linguistic features in learners' writing. A two-week instruction was given to two groups, one of which received corpus-based and the other received traditional textbook instruction. The corpus group made remarkably more progress in all domains than the textbook groups. In the end, the students were able to use a greater range of verbs with an awareness of their functions, more past tense than the present tense and a greater number of linking adverbials.

Motivated by the problems non-native and novice academic writers face in the selection and use of reporting verbs, Bloch (2009) created an online interface that includes example sentences with functions and structural features of reporting verbs following a corpus-based analysis of reporting verbs from two corpora of research articles and reviews of scientific writing. While Bloch (2009) introduced the freely available interface and discussed the possible learning outcomes, Bloch (2010) explained the selection and categorization of the reporting verbs and provided example sentences from two corpora of expert and learner writing to discuss the areas of problems in learner writing. He made use of categories such as reporting type (integral/non-integral), function (informative/descriptive), source (writer/author), degrees of evaluation (positive, negative, unclear), strength of claims (strong/weak/moderate), and came up with 27 reporting verbs and random examples.

He created a website with explanation and exercises. By highlighting the corpus-based analysis the website relies on, he explains that “this website can help students not only understand the different uses of reporting verbs but also the processes by which syntactic choice relates to the rhetorical context of the writing” (p. 241).

## 2.5 Summary

As can be seen, many studies focused on the use of reporting verbs in academic discourse from varying perspectives, disciplines, genres and groups of academic writers. However, since it is a rather complex area of research and that is influenced by several variables such as academic conventions, discipline-specific knowledge and expectations of discourse communities, there is still a research gap that needs to be filled in. Especially in terms of novice and non-native academic writers, which adds the variable of language proficiency, such studies are of great importance in exploring L2 academic writing practices and improving English for Academic Purposes (EAP) pedagogy.

The next section outlines the methodology of the study including data collection and analysis procedures.

## CHAPTER 3

### METHODOLOGY

#### 3.1 Research questions

The study aims to investigate the effect nativeness status and expertise level of writers in applied linguistics on reporting practices in citations with regards to patterns of use and construction of stance. I aim to explore the role of these factors across four corpora of applied linguistics writing: 1) native expert writing, 2) nonnative expert writing, 3) native novice writing, and 4) nonnative novice writing.

The aim of the study is addressed using the following research questions:

1. What is the frequency and distribution of the clausal patterns in other-sourced research reports?
2. What are the functions of these linguistic realizations of reporting in relation to the construction of stance?
3. What are the sectional distributions of the patterns in research reports?
4. What are the similarities and differences in the use of reporting structures across writer groups in relation to their nativeness status and expertise level?

#### 3.2 Data collection

Four corpora of 30 applied linguistics research papers (120 in total) were compiled: (1) native expert corpus of 30 research articles, (2) nonnative expert corpus of 30 research articles, (3) native novice writer corpus of 30 research papers, (4) non-native novice writer corpus of 30 research papers.

The corpora compiled can all be defined as small specialized corpora. Such corpora are useful in English for Academic Purpose (EAP) for answering research questions about specific genres and registers, as well as allowing for a more contextualized analysis as they are generally built for the researcher's own purpose and use (Connor & Upton, 2004; Koester, 2010). All corpora included papers that report research studies of applied linguistics for two major reasons. First, as Sharoff, Rapp and Zweigenbaum (2013) explained, texts from different sources but on the same subject could be regarded as "strongly comparable" (p.3). Second, reporting practices are known to exhibit disciplinary characteristics (Charles, 2006a; Hyland, 1999). Therefore, one discipline which the researcher is most familiar with and knowledgeable enough to draw conclusions from was chosen.

All research papers are single-authored empirical research articles that followed a certain structure (introduction, literature review, methodology, results, and conclusion) and they were all written or published between years 2007-2015. These papers are selected from published research articles for the expert writer corpora, and research papers written by graduate students for the novice writer corpora. Since the study was initially aimed at only expert writing, the native and non-native expert writing corpora were compiled first. Then, the two corpora of novice writing were compiled. Besides, because expert and novice writing cover two different discourse types and rely on slightly different criteria, the compilation processes will be explained in pairs.

### 3.2.1 The Expert writers' corpora: NEC and NNEC

The native and non-native expert writer corpora are comprised of 60 published research articles. To represent expert writing, the scope is limited to research articles

as one of the most fundamental representations of academic discipline in sharing new knowledge (Berkenkotter & Huckin, 1995, p.27). Another concern was the publication year of the articles in the corpus. As the dynamics in disciplines change over time, so do the rhetorical and textual properties in their writing (Bazerman, 1988). Therefore, articles that were published between 2007- 2015 were chosen.

Another issue to consider was the journal selection process. In selecting the journals from which the research articles were to be taken, I wanted to set certain quality standards by choosing journals that are in the Social Sciences Citation Index (SSCI). SSCI is a highly respected social sciences index that covers journals in more than 50 disciplines, all of which are evaluated objectively and periodically in order to meet certain academic standards (Thompson Reuters, 2015). For this study, 2015 list of SSCI-indexed journals in education and linguistics is used.

The first sub-corpus is the native expert corpus (henceforth, NEC). It consists of 30 single-authored research articles written by native expert writers of English. Since there is a great number of articles in many reputable journals, more criteria were applied in selecting the articles for this corpus. Firstly, the articles were taken from five SSCI-indexed journals with high impact factors in linguistics (Journal Citation Reports, 2013) and were also comparable with the selected journals in the non-native expert corpus in terms of scope. All journals are published in English speaking countries. Table 3 shows the selected five journals with their rank and impact factors.

Table 3. Journals Used in the Native Expert Corpus (NEC)

Rank	Journal	Impact Factor
11	Applied Linguistics (AL)	1.833
22	Language Learning (LL)	1.433
32	Modern Language Journal (MLJ)	1.181
41	TESOL Quarterly (TQ)	1.000
49	System (SS)	0.889

Since there were many articles that met the previous criteria, only the two articles that received the most number of citations each year as of March 2015 according to Google Scholar were chosen.

Nativeness has been defined in several ways ranging from being born into a language to prolonged stay in the society of the target language (Davies, 2004; Hyltenstam and Abrahamsson, 2000). However, we wanted to include nativeness as a variable because it is known that academic writing practices are influenced by language background, local discourse conventions and cultural context (Hyland, 2012). Therefore, since all the selected journals include articles of writers from different linguistic backgrounds, a set of criteria was also needed to determine the nativeness status of the authors. In order to operationalize ‘nativeness’, the following criteria were used:

- Wood’s (2001) ‘strict criterion’ that the author must have an English name
- Rowley-Jolivet and Carter Thomas’s (2014) criterion that the authors are affiliated with an institution in an English-speaking country.
- The researcher’s criterion that the authors were born or educated in an English speaking country.

Based on these criteria 30 research articles written by native speakers of English was selected (see Appendix A for the list of articles in NEC).

The second sub-corpus is the non-native expert corpus (henceforth, NNEC) that consisted of 30 single-authored English research articles that were written by Turkish scholars. Similar to the nativeness criteria for L1 English corpora, papers came from native Turkish speakers of English who have Turkish names and are affiliated with Turkish institutions. These articles were selected from two academic journals titled *Hacettepe University Journal of Education* and *Journal of Education and Science*. These are the only journals that are being published in Turkey and have been indexed in SSCI since 2007 in the field of education including foreign language education. It should be noted that only articles that were in the area of applied linguistics were chosen. The articles were included in the NNEC corpus were published by Turkish scholars between years 2007-2015. A similar set of criteria of nativeness was also used to identify Turkish writers of English.

Based on the above criteria, 31 articles, one of which did not report an empirical study with the traditional organizational pattern, were identified. Therefore, 30 articles were included in the corpus (see Appendix B for the list of articles in NNEC). As for the size of the corpora, NEC corpus reached 270.766 words, while NNEC had 153.729 words, which made a total of 424.495 words. Table 4 shows the numerical description of the two corpora.

As Table also 4 shows, the average length of research articles is much higher in native expert writing than non-native expert writing. However, the word limits in the author guidelines play an important role in determining the size of the articles. The author guidelines for the journals in NEC indicate word limits ranging from a minimum of 7000 to a maximum of 10.000 words. As for NNEC, Hacettepe



University Journal of Education has a limit of 9000 words, while Education and Science do not have any word limit and leave it to editors to decide. Therefore, the difference in corpus sizes is largely due the authors and single studies, rather than restrictions of the journals.

Table 4. The Numerical Summary of Expert Writers' Corpora (adapted from Dueñas, 2010)

	NEC	NNEC
No. of RAs	30	30
Length of texts (range)	5,582-15,927	3,142-5,897
Average length	9.025	5.125
Total no. of words	270,766	153,729
Total no. of other-sourced research reports <sup>a</sup>	390	184

<sup>a</sup> Research reports are defined as *that* complement clauses where previous research is mentioned either with explicit attribution to sources or implicitly to make general claims. ( Biber et al.,1999; Charles, 2004, 2006a)

### 3.2.2 Novice writers' corpora: NSC and NNSC

In order to reach more concrete findings about the differences between native and non-native writers, I wanted to control the expertise variable as well. Two corpora of 60 native and non-native graduate student papers were collected. All research papers were written for assessment purposes as a final requirement of graduate courses offered to master's level students.

For the native student writing corpus (NSC), 30 research papers were collected from two different institutions. First, graduate students enrolled at an applied linguistics master's program at a southeastern public university in the USA were asked to submit their papers via an e-mail that also included information about study and asked for consent (see Appendix C for the English consent e-mail for native graduate students). The papers selected were papers were all master's level

course assignments written for assessment purposes as final projects for courses such as intercultural communication, phraseology, psycholinguistics and second language acquisition. Although 15 papers were collected, only nine of them were comparable to the other corpora in terms of discourse structure, and the topics covered. 21 of the papers were retrieved from Bank of Essays website provided by University of Birmingham. Bank of Essays provides unedited project reports, essays, and dissertations donated by master's students of the English language and applied linguistics master's program of the university. 21 papers taken from the database were randomly selected based on criteria such as the year (2007 and later), discipline (applied linguistics), and genre (empirical research paper), as well as the nativeness criteria used in NEC. Papers selected were written for master's level modules such as second language acquisition, language teaching methodology, sociolinguistics, and written discourse, and classroom and spoken discourse (See Appendix D for the list of papers in NSC). Since the papers were in the public domain, consent was not requested, but the papers were cited as published work, as the website of the project suggests.

The general profile of the students whose papers were included in the study were all native speakers of English who studied at English medium universities in their home countries. As for the admission criteria of the programs, University of Birmingham requires the applicants to hold an undergraduate degree that is related to applied linguistics. The American university, however, does not have such a requirement, which brings together students from different disciplines in the program.

Both universities offer academic writing support in the form of workshops, courses, and one-to-one consultation sessions upon request by students. No

compulsory course or module is required. Furthermore, this is a rarely used type of writing support especially by the native students, especially for essays they prepare as part of their course requirements.

For the non-native student writing corpus (NNSC), 30 research papers that were written by Turkish writers of English since 2007-2008 academic year were collected (see Appendix E for the list of papers in NNSC). The papers are all final research papers of the students written for courses such as second language acquisition, sociolinguistics, cross-cultural communication in language education, and corpus linguistics. The courses were offered at a master's program in foreign language education at a state university in Istanbul. The papers were requested via e-mails, which also included information about the study and asked for the participants' consent in Turkish (see Appendix F for the Turkish e-mail.).

The Turkish writers completed their formal education and undergraduate studies in Turkey. In Turkey, the medium of instruction in formal education is Turkish. Students learn English as a foreign language starting from 2<sup>nd</sup> grade onwards according to the 2012 education reform (Kırkgöz, 2005). However, the participants of this study finished their formal education before 2012, therefore, they did start learning English starting from 4<sup>th</sup> grade onwards. Furthermore, it is known that writing instruction is a neglected issue in formal education despite the recent attempts of the ministry of education to improve the programs and practices (Altınmakas, 2015).

Similar to University of Birmingham, the program requires applicants to hold a degree in or similar to English language teaching. However, the Turkish student participants are quite homogenous in that they are all graduates of the undergraduate programs in English language education. All the undergraduate programs in English

language education offer academic writing courses generally during the first or second semesters of the program. Especially in terms of writing research papers, students do not have any L2 writing experience prior to their higher education programs. As for the writing support at graduate level, the writing center offers online help and consultation upon request by experienced EFL instructors. However, this service does not apply to those students who are writing research papers as part of their graduate programs.

In total, the two novice writers' corpora reached a word count of 277,524, 154,121 of which came from NSC, and 123,413 was from NNSC. Table 5 gives further information about the numerical properties of the two corpora.

Table 5. The Numerical Summary of Novice Writers' Corpora

	NS	NNS
No. of papers	30	30
Length of texts (range)	3,228-9,796	1,984-6,011
Average length	5,137	4,143
Total no. of words	154,121	123,413
Total no. of other-sourced research reports <sup>a</sup>	240	287

<sup>a</sup>Research reports are defined as *that* complement clauses where previous research is mentioned either with explicit attribution to sources or implicitly to make general claims ( Biber et al.,1999; Charles, 2004, 2006a)

Source: Dueñas, 2010

To sum up, a total of 702,029 words of applied linguistics writing was used as the corpus data for the study. While expert writing consisted of 424,495 words (native expert, 270,766; non-native expert, 153,729), student writing made up 277.524 words of all corpora (native novice: 154,121; non-native novice: 123,413). A total of 1101 research reports were identified, and manually coded. As a result, 574 research reports were extracted from the two expert writing corpora, 290 of

which came from the native expert corpus, while the other 184 reports were from the non-native expert corpus. As for the novice writer corpora, of the 527 research reports extracted, 240 clauses came from the native novice corpus, whereas 287 clauses were from the non-native novice corpus.

To ensure comparability across the corpora *tertium comparationis* framework by Moreno (1996, cited in Connor & Moreno, 2005) was used. Although Moreno initially used it to compare two corpora of different languages, it is also useful for studies where certain variables are aimed to be kept constant. *Tertium comparationis* includes criteria such as “text form, genre mode, participants, varieties, tone, channel, formal features, point of view, setting, general purpose of communication, global rhetorical strategy, subject matter, academic discipline, level of expertise, textual unit of analysis, and global super structure” (pp. 159-160). The corpora used in this study are all collections of academic writing in the discipline of applied linguistics. They are all scientific research reports that aim to share results of research in a formal and standard variety of language in a similar way. The controlled differences are the level of expertise (expert/novice), nativeness (L1 English/ L1 Turkish) and audience (writing for the whole research community versus only for assessment). The findings are interpreted based on these factors.

The next section explains the processes of data analysis in detail.

### 3.3 Data analysis

In order to prepare the corpora for the analysis, all the articles were converted into plain text documents. Footnotes, references, and appendices were excluded. The remaining texts were divided into the sections commonly found in applied linguistics research papers such as abstract, introduction, literature review, results, discussion

and conclusion. Several previous studies on citation and reporting practices focused on only certain sections such as introductions (Thompson & Yiyun, 1991), literature reviews (Lang, 2004), or all sections (Charles, 2004). Research has also shown that sections of a paper could have different rhetoric purposes (Parkinson, 2013a; Swales, 1990). Therefore, the inclusion of whole texts as well as sectional sorting enabled further analysis of cross-sectional differences.

### 3.3.1 Extraction of clauses and coding

After the texts were sorted and prepared for analysis, AntConc 3.4.3 (Anthony, 2015) was used to search the corpus for the word *that* to identify *that* complement clauses (see Figure 3). This type of complement clause is identified by Gray and Biber (2012) as “probably the clearest case of a grammatical stance device” (p. 19). In the light of studies that showed the wide range of evaluative functions of *that* complement clauses (Hewings & Hewings, 2002; Charles, 2004, 2006a; Hyland & Tse, 2005), this study also focused on this structure, specifically the verb-controlling *that* clauses used in reporting previous research.

1	investigating the effects of reading on vocabulary acquisition has found	that both L1 learners (Jenkins et al. 1984; Nagy et al. 1985; Nagy et al. 1
2	y in both first and second language acquisition. Central to their theory is	that incidental vocabulary learning is a gradual process in which gains are
3	al. (1984) immediately provided evidence supporting the theory. They found	that vocabulary gains increased as the number of times learners met words i
4	knowledge of meaning. The learners may have made partial gains in meaning	that were not measured by the tests. The first L2 study to examine the effe
5	ary acquisition was done by Saragi, Nation, and Meister (1978). They found	that native speakers of English were able to incidentally acquire 75 per ce
6	e learning gains was found to be 0.34. The size of the correlation confirms	that repetition affected learning. However, it also indicates that other fe
7	tion confirms that repetition affected learning. However, it also indicates	that other factors were involved. They suggested that the meaningfulness of
8	however, it also indicates that other factors were involved. They suggested	that the meaningfulness of the context, and the degree of similarity betwee
9	between the form of the L1 and L2 may affect acquisition. They also suggest	that learners need to meet unknown words ten or more times in a reader for
10	encounters, there was not a minimum number of encounters which guaranteed	that learning would occur. One target word with 96 repetitions was learned
11	learned by only 40 per cent of the learners. One criticism of the study is	that it does not accurately portray second language learning (Horst et al.
12	second language learning (Horst et al. 1998). Horst, Cobb, and Meara argue	that it would be more difficult for L2 learners to infer the meaning of wor
13	study than in other L2 studies. A second reason for the large gains may be	that the learners were more skilled in guessing a word from context. The at
14	kins et al. 1989). Horst et al. (1998) looked at the number of encounters	that were needed to learn unknown words in a graded reader with L2 learners
15	word occurred in the book and the gains made by the students. They suggest	that large learning gains are likely to occur for words which were repeate
16	considerably from word to word. The size of the correlation also suggests	that other factors were involved. Two factors which they believe may have i
17	ng a graded reader on vocabulary learning, Waring and Takaki (2003) found	that learners would need to meet target words at least eight times to have
18	nce of recognizing the words after three months. Their results also showed	that even if target words were met more than 18 times there was only a 10-1
19	e words were met more than 18 times there was only a 10-15 per cent chance	that learners would remember the target words' meanings three months later.
20	ngs three months later. Based on their findings, Waring and Takaki suggest	that it may take well over 20 encounters to learn new words. Two other st

Fig.3 Concordance lines for the search *that* from AntConc 3.4.3

Following Biber et al. (1999) and Charles (2004, 2006a), the searches were limited to finite reporting clauses where *that* is present, which is found to be the common use in academic writing.

After searches were done, the concordance lines were transferred to a Microsoft Office Excel sheet to identify research reports (see Figure 4). The search window size was arbitrarily set to 150 on AntConc to identify research reports easily from the context. In longer clauses where the search window was not enough to identify the research reports, the wider contexts were also analyzed.

overall rank	rank per paper	clause1	clause2	papers	type	verb	verb group	tense	aspect	voice
1	1	hes (2003) points out	that the reliability of a	NS1dsc.txt	Integral citation human subject	point out	ARGUE	present	simple	active
2	2	wever, Hirvela argues	that writing can be use	NS1lr.txt	Integral citation human subject	argue	ARGUE	present	simple	active
3	3	Hyland, 2007) tells us	that writing is a social	NS1lr.txt	Non-integral citation non-human subject	tell	ARGUE	present	simple	active
4	4	and Hedgcock explain	that "reading and com	NS1lr.txt	Integral citation human subject	explain	ARGUE	present	simple	active
5	5	testing reading argue	that it is inappropriat	NS1lr.txt	Non-integral citation human subject	argue	ARGUE	present	simple	active
6	6	Alderson et al. argue	that is still important t	NS1mtd.txt	Integral citation human subject	argue	ARGUE	present	simple	active
7	7	valid. They point out	that when test takers	NS1mtd.txt	Integral citation human subject	point out	ARGUE	present	simple	active

Fig. 4 Excel analysis sheet (Example of a coded paper)

The analysis included all the categories Charles (2004) looked at in her study, in the section where she analyzed the construction of stance in other-sourced research reports, such as citation types (integral, non-integral), general references, subject types of the citations and general references (human, non-human, *it*), and reporting verb groups. Charles (2004) adapted the reporting verb categories from Francis, Hunston and Manning's (1996) categories of verbs in general to academic discourse, and came up with five categories such as ARGUE, FIND, SHOW, THINK, MEAN. Verb groups are capitalized since they represent lemmatized semantic groups. The definitions of the groups with examples are given in Table 6.

Table 6. Reporting Verb Groups

Verb group	Definition	Examples
ARGUE	These verbs represent the ways the writer expresses actions and modes of communication in writing	<i>argue, suggest</i>
FIND	These verbs are used to talk about research findings and emphasize novelty.	<i>find, discover</i>
SHOW	These verbs are associated with expressing a factual information that is presumably unknown to the reader.	<i>show, reveal</i>
THINK	These verbs are about the mental processes such as thoughts, opinions,	<i>think, believe</i>
MEAN	verbs express acts that have future implications	<i>mean, ensure</i>

Source: Charles, 2004, p. 150

Since Charles's categorization was also influenced by the genre (doctoral theses) and disciplines she investigated (materials and politics), I decided to adapt the verb groups, and the verbs listed under them first by comparing them to Friginal's (2013) categorization based on student writing and research articles. Similar to Friginal's (2013) categorization, the *MEAN* group was omitted due to the infrequency and overlaps with *THINK verbs*, and the verbs were merged under the latter category. Moreover, categorization of occurrences was based on the contextual information from the data as the categories had not been used for analyzing applied linguistics papers before.

Literature also shows that another related feature of citation and reporting practices is the tense, aspect and voice of the reporting verbs (Malcolm, 1987; Shaw, 1992; Swales, 1990). Therefore, tense, aspect and voice were also included in the analysis. Table 7 shows the list of all categories that were identified in research reports with examples where necessary.



Table 7. Categories Identified in Research Reports

	Categories	Examples (where needed)
Citation types	Integral citation	... Waring and Takaki (2003) suggest that it may take more than 20 encounters to learn new words. (AL1LR)
	Non-integral citation	Those in opposition to a discrete method of testing reading argue that it is inappropriate to try to analyze reading into smaller components (Alderson, 2000). (NS1LR)
	General reference	Literature on the OCI program reveals that little has changed in classroom practice and language proficiency since 1994. (NS30LR)
Subject types	Human	Ervin-Tripp (1982) found that ... (NNS1LR)
	Non-human	Past studies have confirmed that ... (NNS3MTD)
	It	In several statistical analyses, it was found that ... (NNS14LR)
	ARGUE	Bybee and Scheibman (1999: 582), for example, argue that frequent exposure to multiword sequences can transform them into fused storage and processing units. (NEC4LR)
Verb groups	FIND	Bektas-Cetinkaya (2009a) found that learners were moderately motivated to learn English, and their motivation was mainly instrumental. (NNEC16INT)
	SHOW	Studies have shown that cultural differences in power distance between the ATC and the pilots have led to misunderstandings that have ended in accidents (NSINT).
	THINK	... These scientists believe that interaction on the language itself is in fact crucial in language learning (Ellis, 1994). (NNS27LR)
Tense (present, past)		
Aspect (simple, perfect, continuous)		
Voice (active, passive)		
Interrelations between the categories such as the tense, aspect and voice patterns (e.g.: <i>simple present active</i> ),		
Sections of several categories (grouped as (1) abstract, (2) introduction and literature review, (3) methodology, and (4) results, discussion and conclusion)		

The fact that the coding was done by a single person, that is, the researcher, raises some reliability issues. However, I tried to ensure the accuracy of coding by following Creswell's (2014) suggestion of "constantly comparing data with the codes and . . . writing memos about the codes and their definitions" in order not to deviate from definitions while coding (p.203). Furthermore, following Charles (2004, 2006a) and Friginal (2013) who used similar coding schemes and provided elaborate explanations about the coding procedure was helpful in clarifying the definitions

before analysis. Several studies on reporting verbs (Thompson & Yiyun; Charles, 2006a) stated that the categories do not have clear boundaries, and one verb can be categorized under different categories depending on its meaning and function. However, by adapting different coding schemes to my data, as well as analyzing the contexts in which the verbs were used, I coded each verb under one category in order to reach a more precise set of results.

Lastly, As Ivanic (1998) argues, it is important to acknowledge the impact of researchers' socially shaped multiple identities while interpreting qualitative data. Therefore, I believe that being a graduate student, a non-native novice writer, an EFL instructor, and a candidate member of the applied linguistics discourse community are all important aspects of my personal and professional identities that might have affected both my analysis and interpretation of the results of the study.

After all the clauses (1101 in total) were coded according to the categories, frequencies were counted for each paper for the quantitative analysis.

### 3.3.2 Quantitative analyses

The quantitative analyses of the the occurrences of words and clausal patterns targeted in the study included the use of a commonly used descriptive corpus statistics called normalized frequency and type/token ratios, and also the use of the non-parametric inferential statistical test called the Kruskal-Wallis one-way analysis of variance. Both statistical measures were used to understand the patterns of use of the target structures within and across the groups.

### 3.3.2.1 Normalization

Normalized frequencies are commonly used in transforming the raw counts of any target word or structure in a corpus on the basis of the corpus size in order to enable a reliable comparison across different groups (Gries, 2010). It is calculated as the raw count of a certain word/structure is multiplied by the number of words to be normalized (generally per 1000, 10,000 or 100,000 words), and divided by the number of words in the target corpus.

For the purposes of this study, following Charles (2004), normalized frequencies per 100,000 words of the target words and patterns were calculated. She states that reporting clauses should be normed on the basis of the total number of clauses in each corpus, however, this requires a clause-based parsing of the corpus (p.146). Since this corpus is also not parsed, the findings will be reported as the number of clauses normed to 100,000 words. For example, the raw count of *ARGUE* verbs in NEC is 232. Considering the size of the corpus (270,766 words), the normalized frequency is calculated as:  $(232*100,000)/270,766$ , which gives us the normed figure 85.682. Using Excel, I reported results by reducing the decimals to one as 85.7.

### 3.3.2.2 Type/token ratio

Calculation of type/token ratios enables researchers to make a simplistic interpretation about the lexical variety in a corpus (Granger, 2002). As Baker (2001) explains, a high type-token ratio means that the writer uses a wide range of vocabulary (p. 250). It is calculated as:  $(\text{number of types}/\text{number of tokens}) * 100$ . For example, 45 types of reporting verbs are used 390 times in NEC. Type/token ratio (TTR) of the reporting verbs in the corpus is calculated as:  $(45/390) * 100 =$

11.538%  $\approx$  11.6%. This is a low ratio since only a small group of verbs were used repetitively. This shows that type/token ratio increases as the number of types increases.

### 3.3.2.3 Inferential statistics

Initially, I used Log-Likelihood to determine the significance of differences across groups. However, since this test does not take into account the distribution of linguistic features per paper, I decided to use inferential statistics for a more precise analysis.

Before deciding on which test to use, assumptions for the parametric test were measured. To see if the distribution of categories is normal in all four groups, the Shapiro-Wilk test (Shapiro & Wilk, 1965) was used. Shapiro-Wilk is seen as a very powerful test of normality especially for small sample sizes (Razali & Wah, 2011). The test results showed that all categories have a non-normal distribution except for the *ARGUE* verbs in the native expert corpus. Therefore, the Kruskal-Wallis (Kruskal & Wallis, 1952) one-way analysis of variance test was chosen to compare the categories across the four groups. Kruskal-Wallis can be seen as an extended version of the Mann-Whitney U test of significance, as it compares the ranked observations across two or more groups (Fraenkel & Wallen, 1993, p. 237). For the categories where significant differences were found across the corpora, post-hoc pairwise comparisons were also reported. SPSS 22 also provides post-hoc pairwise comparisons using Dunn's (1964) procedure that gives a Bonferroni-adjusted p value. This enabled us to prevent a Type I error in hypothesis testing.

Although Charles (2004) acknowledges the useful implications of employing quantitative approaches to her frequency-based study of stance in two academic

disciplines, she also highlighted that it might not be “reliable and helpful to attempt a precise quantification of stance”, which is a complex construct that is difficult to measure completely (p. 18). However, it was evident from the initial results that there were remarkable individual differences in the texts. As Brezina and Meyerhoff (2014) also argues, a cumulative observation of corpus data without taking the occurrences in individual texts into consideration could lead to false interpretation of findings. Therefore, this study attempted to include individual observations into the analysis and account for variations in the distribution of categories by using Statistical Package for the Social Sciences (SPSS) 22 program.

This section introduced the research questions and methodology of the study including corpus compilation processes and methods of analysis. The next chapter will report the results of the study.

## CHAPTER 4

### RESULTS

This chapter summarizes the results of the analysis. First, an overall comparison of verb groups, subject and reference types across the corpora is provided. The second sub-section reports the results of analysis based on subject types. The following sub-section covers the analysis of tense, aspect and voice. The final sub-section discusses the results based on the features' sectional distributions.

It should be noted that the results are reported using the normed figures per 100,000 words as well as the statistical test results. Due to the vast amount of comparisons, test statistics and probability values were not reported for insignificant differences (see Appendix G for the overall statistical analysis outputs from SPSS). To sum up, the results are reported via actual frequencies (AF), normalized frequencies (NF), type/token ratios (TTR) and probability values ( $p$ ) for statistically significant differences among groups. Several quantitative comparisons along with additional findings from data are also discussed by giving example sentences from the corpora of the study. Example sentences were given anonymously by including information about which corpus and what section of the article the sentence is taken from. While previously mentioned abbreviations for the corpus names were used, sections were also abbreviated as: ab (abstracts), int (introductions), lr (literature reviews), mtd (methodology), (res) results, dsc (discussions) and (conc) conclusions.

#### 4.1 Overall comparisons of research reports

This section aims to introduce the overall comparisons done across corpora such as frequency of reporting verbs, verb groups, subject and reference types, as well as reporting patterns among these features.

After all *that* complement clauses were extracted, a total of 1101 verb-controlling clauses were found to be used to mention other-sourced information across the 120 texts analyzed. The normed figures show that student writers tend to use the structure more frequently than the expert writers do, and the non-native student writers made use of the structure far more frequently than the other groups. Despite these differences in normalized counts, there was no statistically significant difference across the four corpora.

All the verbs in the clauses were identified as reporting verbs and included in the analysis. When types and tokens of the verbs were analyzed, as shown in Table 8, it was seen that the highest type/token ratio belongs to NNEC, which is followed by NSC, NNSC and NEC respectively. While non-native expert writers and native student writers were found to use a wider variety of reporting verbs, native expert writers and non-native student writers have lower scores.

Table 8. Total Number of Research Reports and Type/Token Ratios (TTR) for Verbs

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
Type	45	16.6	52	33.8	50	35.2	41	33.3
Token	390	144.0	184	119.6	240	155.7	287	232.5
TTR	11.5%		28.2%		20.8%		14.2%	

When looked at individual reporting verbs, as Table 9 also shows, it was seen that six out of the ten most frequent reporting verbs (*suggest, find, argue, show, claim, state*) were found in the lists of all corpora. *Reveal* is the second most frequent verb in NNEC and ninth in NNSC. However, it was not found in the list for NSC and NNSC. Similarly *note* is the sixth most frequently used verb in NEC and ninth in

NSC, although it was not listed among the most frequent verbs for NEC and NNEC. Furthermore, the most frequently used 10 reporting verbs make up the majority of the frequencies across all corpora, that is, 79.2%, 63.5%, 65.8% and 76.3% respectively.

Table 9. Top 10 Most Frequent Reporting Verbs across the Corpora

verb	NEC		verb	NNEC		verb	NSC		verb	NNSC	
	AF	NF		AF	NF		AF	NF		AF	NF
suggest*	75	27.7	state*	19	12.4	argue*	30	19.5	suggest*	37	24.1
find*	74	27.3	reveal	17	11.1	find*	24	15.6	state*	29	18.9
argue*	44	16.3	find*	16	10.4	suggest*	21	13.6	argue*	25	16.3
show*	27	10.0	show*	13	8.5	point out	17	11.0	show*	25	16.3
claim*	21	7.8	argue*	11	7.2	show*	16	10.4	find*	24	15.6
note	18	6.6	suggest*	11	7.2	state*	13	8.4	claim*	22	14.3
report	18	6.6	claim*	9	5.9	explain	12	7.8	conclude	19	12.4
conclude	11	4.1	indicate	9	5.9	believe	10	6.5	indicate	16	10.4
state *	11	4.1	conclude	7	4.6	note	9	5.8	reveal	13	8.5
indicate	10	3.7	emphasize	5	3.3	claim*	6	3.9	point out	9	5.9
Total	309	114.1		117	76.1		158	102.5		219	142.5
Proportion											
to overall	79.2%		63.5%		65.8%		76.3%				
no. of verbs											

\*overlapping verbs in all corpora

Following the distributions of the verbs, the verb groups were coded and counted. As seen in Table 10, normed figures indicated that all groups have a strong tendency to prefer ARGUE verbs (such as argue, state, suggest) remarkably more than the other groups. Differences were found between native and non-native writers in terms of the order of FIND (such as find, observe, identify) and SHOW verbs (such as show, reveal, demonstrate).



While both native expert and native novice writers used FIND verbs as the second most frequent group, non-native expert and non-native novice writers were found to prefer SHOW verbs more than FIND verbs. Statistical difference was found only in the SHOW verb group,  $H(3) = 11.586, p=.009$ . The post-hoc pairwise comparison also showed that NNSC (mean rank=74.17) differed significantly from NSC (mean rank=46.43),  $p=.010$ . Furthermore, THINK verbs (such as *think, believe, mean*) were the least frequent verbs used in reports; however, student writers, with a higher normed figure in native student writings, tend to rely on these verbs more than the expert writers do.

Table 10. Verb Groups across Four Corpora

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
<i>ARGUE</i>	254	93.8	106	69.0	161	104.5	185	149.9
<i>FIND</i>	84	31.0	26	16.9	37	24.0	33	26.7
<i>SHOW*</i>	50	18.5	46	29.9	26	16.9	63	51.0
<i>THINK</i>	2	0.7	6	0.9	16	10.4	6	4.9
Total	390	144.0	184	119.7	240	155.7	287	232.6

\*  $p<.05$

When reference types were analyzed, as seen in Table 11, integral citations were found to be much more commonly used than non-integral citations. When groups were compared, significant differences were found in the distributions of integral citations,  $H(3) = 10.301, p=.016$ , as well as non-integral citations,  $H(3) = 10.735, p=.013$ . Pairwise post-hoc comparisons for integral citations showed a significant difference between NNSC (mean rank=77.68) and NNEC (mean rank=51.92),  $p=.025$ . The post-hoc comparisons for non-integral citations also reported a significant difference between NNSC (mean rank=48.97) and NEC (mean

rank=75.97),  $p=.011$  (see Table 11). General reference was the least preferred type by all groups. While no significant differences were found between the groups, normed figures showed very close frequency in NEC and NNSC, which is also higher than NNEC and NSC.

Table 11. Reference Types

Citation types	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
Integral*	271	100.1	138	89.8	191	123.9	250	202.6
Non-integral*	88	32.5	35	22.8	36	23.4	23	18.6
Citation	359	132.6	173	112.5	227	147.3	273	221.2
General	31	11.4	11	7.2	13	8.4	14	11.3
Total	390	144.0	184	119.7	240	155.7	287	232.6

\*  $p<.05$

Another feature of research reports that this study focused on is the type of subjects in research reports. As examples 1, 2, and 3 shows, three types of subjects were identified.

(1) Human subject: *Chandler (2003)* claimed that he did it in his study with L2 writing students. (NNEC21int.txt)

(2) Non-human subject: *Previous research findings* indicate that, as with the listeners in this study, both the syllable stress pattern and the segments in the strong syllable are important sources of information for native listeners (Bond, 1999; Bond and Small, 1983; Cutler and Butterfield, 1992; Cutler and Clifton, 1999; Liss et al., 1998; Stevens, 2002). (NEC20dsc.txt)

(3) *It* subject: *It* was found that more than two-thirds of the advertisements included English lexical elements. (NNS19lr.txt)

The most common reporting type was found to be the clauses with human subject, which was used far more frequently than the non-human and *it* subjects. The Kruskal-Wallis test showed a significant difference in the human subjects,  $H(3) = 7.886, p = .048$ . Post-hoc pairwise comparisons also reported that there is a statically significant difference between NNEC (mean rank=50.17) and NNSC (mean rank=73.88),  $p = .049$ . While no significant differences were found for the other groups, clauses with non-human subjects were found to have relatively more frequencies in NNSC and NEC. In terms of *it* subjects, while having the lowest frequency in all corpora, they were mostly preferred by non-native writers with a slightly higher proportion in non-native expert writing (see Table 12).

Table 12. Subject Types

Subject type	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
Human*	242	89.4	116	75.5	185	120.0	201	162.9
Non-human	123	45.4	41	26.7	45	29.2	63	51.0
<i>it</i>	25	9.2	27	17.6	10	6.5	23	18.6
Total	390	144.0	184	119.7	240	155.7	287	232.6

\*  $p < .05$

Reference and subject types were also combined to see the clausal patterns of research reports. As Table 13 shows, an integral citation with a human subject is the most frequently used pattern in research reports across all four corpora. The Kruskal-Wallis test also showed that there is significant variation across the corpora,  $H(3) = 8.241, p = .041$ , with a significant pairwise comparison between NNEC (mean rank=51.92), and NNSC (77.68),  $p = .041$ .

The second and third most frequently occurring patterns are integral citations with non-human subjects and non-integral citations with non-human subjects,

respectively in NNEC and NNSC. However, the order is different in NEC and NSC, the second most frequent pattern being non-integral citations with non-human subject followed by integral citations with non-human subjects. Significant differences across the groups were also found for integral citations with non-human subjects,  $H(3) = 8.781, p = .032$ , and non-integral citations with non-human subjects,  $H(3) = 13.311, p = .004$ . Post-hoc comparisons also indicated that NNSC (mean rank=73.00) had significantly more occurrences of integral citations with non-human subjects than NEC (mean rank=50.15),  $p = .031$ . As for non-integral citations with non-human subjects, a significant pairwise difference was reported between NNSC (mean rank=49.92) and NEC (mean rank=78.08),  $p = .03$ .

Table 13. Patterns of Reference and Subject Types

Citation types	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
Integral human*	227	83.8	109	70.9	176	114.2	191	154.8
Integral non-human*	39	14.4	21	13.7	14	9.1	45	36.5
Integral it	5	1.8	8	5.2	1	0.6	14	11.3
Non-integral human	9	3.3	6	3.9	7	4.5	8	6.5
Non-integral non-human*	61	22.5	15	9.8	21	13.6	9	7.3
Non-integral it	18	6.6	14	9.1	8	5.2	6	4.9
General human	6	2.2	1	0.7	2	1.3	2	1.6
General non-human	23	8.5	5	3.3	10	6.5	9	7.3
General it	2	0.7	5	3.3	1	0.6	3	2.4
Total	390	144.0	184	119.7	240	155.7	287	232.6

\*  $p < .05$

#### 4.2 Comparisons based on subject types

This section compares the corpora based on subject types. Distributions of reporting verbs, verb groups, and reference types are reported according to the subject type (human, non-human, *it*) the clauses are used with.

#### 4.2.1 Human subjects

Citations and general references are most frequently used with human subjects, which leads to a great number of clausal patterns and lexico-grammatical diversity in this category. As discussed earlier, texts in all corpora made use of human subjects quite frequently. However, there is also a significant difference across groups,  $H(3) = 7.886, p = .048$ . NNEC (mean rank = 50.17), with the least amount of frequency, differs significantly from NNSC (mean rank = 73.88) with the highest normed figure,  $p = .049$  (see Table 14).

Table 14. Total Number of Human Subjects with Type/Token Ratios (TTR) for Verbs

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
type	32	12.6	39	25.4	41	26.6	38	30.8
token*	242	89.4	116	75.5	185	120.0	201	162.9
TTR	13.2 %		33.6%		22.2%		18.9%	

\*  $p < .05$

A wide range of reporting verbs were also found to be used with human subjects. However, the type/token ratio is different compared to the overall ratio across the groups. While the order of lexical variety across the corpora is the same, all figures show an increase in citations with human subjects.

When looked at the individual reporting verbs across the corpora, we see that six of these verbs (find, suggest, argue, claim, conclude, state) are used in all corpora as the most frequent verbs with human subjects. This is a lower number than of overall distributions, which shows that a greater number of verb types were used with human subjects than with non-human and *it* subjects. As is seen in Table 15, the most frequent 10 verbs make up most of the occurrences. These verbs constitute

82.6% of NEC, 67.2% for NNEC, 69.7% for NSC and 76.1% for NNSC. This order is parallel with the overall distribution of reporting verbs. Consistent with the type/token ratios, NNEC was seen to have employed most number of verb types in integral citations.

Table 15. Top 10 Most Frequent Verbs with Human Subjects

verb	NEC		verb	NNEC		verb	NSC		verb	NNSC	
	AF	NF		AF	NF		AF	NF		AF	NF
find*	48	17.7	find*	16	10.4	argue*	28	18.2	state*	28	22.7
suggest*	37	13.7	state*	15	9.8	find*	18	11.7	argue*	25	20.3
argue*	33	12.2	suggest*	10	6.5	point out	17	11.0	suggest*	23	18.6
claim*	18	6.6	argue*	8	5.2	explain	12	7.8	claim*	19	15.4
report	17	6.3	conclude*	7	4.6	suggest*	13	8.4	conclude*	17	13.8
note	16	5.9	claim*	6	3.9	state*	11	7.1	find*	14	11.3
conclude*	11	4.1	emphasize	4	2.6	believe	9	5.8	point out	9	7.3
state*	11	4.1	indicate	4	2.6	note	9	5.8	report	7	5.7
point out	5	1.8	point out	4	2.6	claim*	6	3.9	assert	6	4.9
indicate	4	1.5	report	4	2.6	conclude*	6	3.9	believe	5	4.1
Total	200	73.9		78	50.7		129	83.7		153	124.0
Proportion to											
overall no. of											
verbs with											
human subjects											
82.6%											
67.2%											
69.7%											
76.1%											

\*overlapping verbs in all corpora

When we look at the distribution of human subjects on the basis of reference types, as seen in Table 16, we see that a great proportion is used with integral human citations in all groups. When the group differences were examined, it was seen that there are significant differences across groups in integral citations with human subjects,  $H(3) = 8.241, p = .041$ , with a significant pairwise comparison between NNEC (mean rank = 51.92) and NNSC (77.68),  $p = .041$ .

The second and third most common reference types are non-integral citations and general references, respectively. However, these types have considerably low occurrences, and no significant difference between groups was reported. Therefore, this section will continue with a detailed discussion of this report type.

Table 16. Reference Types with Human Subjects

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
Integral*	227	83.8	109	70.9	176	114.2	191	154.8
Non-integral	9	3.3	6	3.9	7	4.5	8	6.5
General	6	2.2	1	0.7	2	1.3	3	2.4
Total	242	89.4	116	75.5	185	120.0	200	162.1

\*  $p < .05$

Integral citations are used with human subjects mostly to explicitly report the authors of the source that is cited by the writer. They fulfill several functions of reporting. For example, the verb groups show that all writer groups prefer ARGUE verbs the most with human subjects, which also shows a significantly different distribution across the groups,  $H(3) = 8.916, p = .030$ . The post-hoc comparisons reported a significant difference between NNEC (mean rank=50.92) and NNSC (mean rank=75.97),  $p = .031$ . While the second most preferred verb group in NNEC and NNSC is SHOW in the overall distribution, FIND verbs come second in integral citations with human subjects in all corpora followed by SHOW and THINK verb groups. The normed figures indicate that NEC, NNEC and NNSC have the same order of verbs as ARGUE, FIND, SHOW and THINK with a descending order of frequency. However, NSC has more occurrences of THINK than that of SHOE verbs (see Table 17).

Table 17. Verb Groups in Integral Citations with Human Subjects

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
ARGUE*	164	60.6	80	52.0	133	86.3	153	124.0
FIND	52	19.2	19	12.4	26	16.9	21	17.0
SHOW	10	3.7	8	5.2	7	4.5	13	10.5
THINK	1	0.4	2	1.3	10	6.5	4	3.2
Total	227	83.8	109	70.9	176	114.2	191	154.8

\*  $p < .05$

The predominance of ARGUE verbs in corpora with a great number of both types and tokens show that textual reference to cited research is the most important function conveyed with reporting verbs in integral human citations. Furthermore, as seen in Table 18, a great majority of occurrences are in the top 10 most frequently occurring verbs. Six of these verbs (suggest, argue, claim, state, conclude, point out) were also found to be used highly frequently in all corpora. Except for two less frequent verbs that overlap across the corpora (note, propose), the other less frequent verbs show more variation. As for the proportion of these most frequent verbs to the overall frequencies in the category, they make up 88.4% of NEC, 75.0% of NNEC, 81.2 % of NSC and 87.5% of NNSC.

Although there are significant differences in terms of the frequency and distribution of verbs, the number of types do not show considerable differences. This is an interesting finding in terms of NNSC. While the non-native graduate student writers use ARGUE verbs in integral citations with human subjects significantly more than other groups do, the use of verb types is quite parallel with NNEC and NSC. They rather use the most frequent verbs (state, argue, suggest, conclude, claim) repetitively.



Table 18. Top 10 Most Frequent ARGUE Verbs in Integral Citations with Human Subjects

verb	NEC		verb	NNEC		verb	NSC		verb	NNSC	
	AF	NF		AF	NF		AF	NF		AF	NF
suggest*	34	12.6	state*	13	8.5	argue*	26	16.9	state*	28	22.7
argue*	30	11.1	suggest*	10	6.5	point out*	17	11.0	argue*	25	20.3
claim*	16	5.9	argue*	7	4.6	explain	12	7.8	suggest*	22	17.8
note	16	5.9	conclude*	7	4.6	suggest*	12	7.8	conclude*	16	13.0
report	16	5.9	claim*	6	3.9	state*	11	7.1	claim*	14	11.3
state*	11	4.1	emphasize	4	2.6	note	9	5.8	point out*	9	7.3
conclude*	10	3.7	report	4	2.6	conclude*	6	3.9	report	7	5.7
point out*	5	1.8	maintain	3	2.0	assert	5	3.2	assert	6	4.9
propose	4	1.5	point out*	3	2.0	claim*	5	3.2	explain	3	2.4
hypothesize	3	1.1	stress	3	2.0	say	5	3.2	stress	3	2.4
Total	145	53.6		60	39.0		108	70.1		133	107.8
Proportion to overall no. of verbs in the category	88.4%		75.0%		71.2%		87.5%				

\*Overlapping verbs in all corpora

FIND and SHOW verbs are used with integral human citations to talk about the research procedures and findings of the cited studies with an explicit reference to the researchers. Although they have different functions, they are used to situate the writer's study in the wider context of disciplines by reporting previous research findings (Charles, 2004, 2006a). FIND verbs are used more frequently than SHOW verbs. As Table 19 shows, *find* is the only verb type used by in all corpora in FIND verbs. The highest number of verb types are used in NSC.

Table 19. FIND verbs in Integral Citations with Human Subjects

NEC			NNEC			NSC			NNSC		
verb	AF	NF	verb	AF	NF	verb	AF	NF	verb	AF	NF
find*	48	17.7	find*	15	9.8	find*	18	11.7	find*	14	11.3
discover	2	0.7	discover	2	1.3	observe	3	1.9	find out	5	4.1
observe	2	0.7	identify	1	0.7	recognize	2	1.3	investigate	1	0.8
		19.2	provide evidence	1	0.7	establish	1	0.6	observe	1	0.8
					12.4	identify	1	0.6			
						realize	1	0.6			
Total	52	38.3		19	24.9		26	16.7		21	17

\*Overlapping verbs in all corpora

Table 20 indicates that *show* and *indicate* are the only SHOW verbs that overlap across the corpora. While the former is the most frequent verb in NEC and NSC, the latter is more frequent in NNEC and NNSC.

Table 20. SHOW Verbs in Integral Citations with Human Subjects

NEC			NNEC			NSC			NNSC		
verb	AF	NF	verb	AF	NF	verb	AF	NF	verb	AF	NF
show*	4	1.5	indicate*	3	2.0	show*	5	3.2	indicate*	5	4.1
indicate*	4	1.5	reveal	3	2.0	demonstrate	1	0.6	show*	3	2.4
demonstrate	2	0.7	show*	1	0.7	indicate*	1	0.6	demonstrate	2	1.6
			illustrate	1	0.7				confirm	1	0.8
									declare	1	0.8
									reveal	1	0.8
Total	10	3.7		8	5.4		7	4.4		13	10.5

\*Overlapping verbs in all corpora

However, even the accumulative count of both SHOW and FIND verb groups do not exceed the number of ARGUE verb group, which shows the strong preference for written communication over reporting the details of research methodology and findings.

A closer look at the sentences that make use of integral citations with human subjects makes the distinction between verb groups clearer. As example 4 shows, the first sentence uses an ARGUE verb with an integral citation and a human subject to provide a theoretical basis. Such sentences precede the mention of previous research findings conveyed with the use FIND and SHOW verbs, as in the second example (5), which are given later in text to exemplify the point that has been discussed.

(4)Fraser (1981) asserts that in order for an apology to take place, two conditions must definitely be met... (NNS11r.txt)

(5)For example, Eguchi and Eguchi (2006) found that, while their college students in Japan enjoyed a project-based lesson...(NNSC15resdsc.txt.)

THINK verbs are the least frequently occurring group in all corpora, and the figures decrease further in integral citations with human subjects. There are also qualitative differences in the use of this pattern (see Table 21).

Table 21. THINK Verbs in Integral Citations with Human Subjects

verb	NEC		verb	NNEC		verb	NSC		verb	NNSC	
	AF	NF		AF	NF		AF	NF		AF	NF
believe	1	0.4	believe	1	0.7	believe	7	4.5	think	4	3.2
			think	1	0.7	feel	3	1.9			
Total	1	0.4		2	1.4		10	6.4		4	3.2

While expert writers tend to use THINK verbs with generalizations such as grouping studies on a similar topic, student writers use them to convey the mental activities of researchers, which is seen rarely in published texts:

(6) This position coincides with the views of Bley-Vroman (1989) and advocates of the failed functional features hypothesis, *who believe that* L2 grammars are fundamentally different from native-speaker grammars. (NEC9.lt.txt)

(7)Long and Sato *believe* that questions provide one means by which, in conversation between participants of unequal status, the dominant member exercises and maintains conversation between participants of unequal status, the dominant member exercises and maintains control of interaction. (NNSC17.lrtxt.)

#### 4.2.2 Non-human Subjects

The second subject type is the non-human subjects which are used instead of the names of researchers to mention previous research. They are the second most frequently used type of subjects after human subjects in all corpora. Normed figures indicate that NNSC has the most number of occurrences, whereas NNEC has the least. However, the figures are close, and no significant differences were found between the groups.

When we look at the frequency data, as shown in Table 22, we see that NSC made use of the most diverse number of non-human subjects with a type/token ratio of 46.6%, which is followed by NNEC (39%), NNSC (30.1%) and NEC (24.3%).

Table 22. Total Number of Non-Human Subjects with Type/Token Ratios (TTR) for Verbs

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
Type	30	11.1	16	10.4	21	13.6	19	15.4
Token	123	45.4	41	26.7	45	29.2	63	51.0
TTR	24.3%		39.0%		46.6%		30.1%	

Individual non-human subjects show considerable variation both within and across the corpora possibly due to the fact that the selection is shaped by the topic of the papers. However, as is seen in Table 23, five of these subjects are used in all four corpora: *research*, *studies*, *literature*, *study*, and *results*. The highest number of different subjects were present in NEC as native expert writers have a tendency to

discuss more abstract concepts such as theories more frequently than the other groups do. Students generally use summarizing terms as non-human subjects.

Table 23. The Most Frequent Non-human Subjects

Corpus	Most Frequent non-human subjects
NEC	research, studies, findings, result, study, hypothesis, theory, this
NEC	research, study, studies, data, findings, literature, results, result, analysis
NSC	research, studies, study, literature, results
NNSC	study, results, findings, studies, research, data, hypothesis

Non-human subjects such as *literature* and *research* are mostly used to summarize or give an outline of the research in a specific field, as example (8) shows. However, subjects such as *findings*, *results* do also refer to specific studies for further elaboration as sentences following a human subject. As the example (9) shows, the subject *findings* refers to the results of a specific study about which the details are already given in the preceding sentence:

(8) Although the literature specific to FL teacher development was limited, broader *research* suggested that pedagogical content knowledge would become increasingly complex over time, shifting from student factors (such as behavior or dispositions) to... (NNEC13mtd.txt).

(9) Almarza (1996) examined how 4 ESL pre-service teachers' concepts of teaching developed ... The findings of her study indicate that such concepts are shaped by teachers' past experiences as students. (NEC12int.txt)

Similar to diversity of the subjects, verbs used in non-human reports are also quite varied. There are only three verbs that occur in all four corpora: *suggest*, *show*, *indicate*, all of which are SHOW verbs (see Table 24). Furthermore, a great proportion of the verbs fall into the top 10 most frequent verbs in NEC, NNEC and NSC, while there are only 10 verbs used with non-human subjects in NNSC.

Table 24. Top 10 Most Frequent Verbs Used with Non-human Subjects

verb	NEC		verb	NNEC		verb	NSC		verb	NNSC	
	AF	NF		AF	NF		AF	NF		AF	NF
suggest*	37	13.7	show*	12	7.8	show*	11	7.1	show*	20	16.2
find	23	8.5	reveal	11	7.2	suggest*	7	4.5	suggest*	12	9.7
show*	22	8.1	indicate*	4	2.6	find	6	3.9	indicate*	11	8.9
demonstrate	6	2.2	illustrate	2	1.3	indicate*	3	1.9	reveal	9	7.3
indicate*	6	2.2	support	2	1.3	agree	2	1.3	conclude	2	1.6
propose	4	1.5	argue	1	0.7	discover	2	1.3	find	3	2.4
claim	3	1.1	claim	1	0.7	highlight	2	1.3	claim	2	1.6
posit	3	1.1	confirm	1	0.7	state	2	1.3	demonstrate	2	1.6
reveal	3	1.1	demonstrate	1	0.7	acknowledge	1	0.6	confirm	1	0.8
argue	2	0.7	propose	1	0.7	assume	1	0.6	maintain	1	0.8
Total	109	40.3		36	23.4		37	24.0		63	51.0
Proportion to											
overall no. of	88.6%		87.8%		82.2%		100.0%				
verbs											
in the category											

As can be seen in Table 25, analysis of the verb groups also showed important variations across groups. The normed figures showed that only NEC predominantly used ARGUE verbs with non-human subjects, and NSC had close frequencies for ARGUE and FIND verbs. However, both non-native writer groups were found to use SHOW verbs with non-human subjects the most, and FIND verbs had much lower frequencies in both of the corpora compared to the two native writer corpora. Moreover, THINK verbs were not used at all by the non-native writers, whereas they occurred once in both of the native corpora.

The Kruskal-Wallis test also showed significant differences for ARGUE verbs,  $H(3) = 13.841, p = .003$ ; SHOW verbs,  $H(3) = 8.918, p = .040$ ; and FIND verbs,  $H(3) = 19.750, p = .000$  across groups. The post-hoc tests reported several significant differences in pairwise comparisons as well. For the ARGUE verbs, it was found that

NEC (mean rank=75.97) had significantly more ARGUE verbs than NNEC did (mean rank=46.78),  $p=.002$ . As for SHOW verbs, NNSC (mean rank=70.64) differed significantly from NSC (mean rank=46.73),  $p=.035$ . In the categories of FIND verbs, consistent with the normed figures, NEC (mean rank=77.35) differed significantly from both NNEC (mean rank=50.63),  $p=.000$ , and NNSC (mean rank=53.30),  $p=.002$ .

Table 25. Verb Groups with Non-human Subjects

verb group	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
ARGUE*	58	21.4	7	4.6	17	11.0	18	14.6
SHOW*	39	14.4	32	20.8	18	11.7	43	34.8
FIND*	25	9.2	2	1.3	9	5.8	3	2.4
THINK	1	0.4	0	0.0	1	0.6	0	0.0
Total	123	45.4	41	26.7	45	29.2	64	51.9

\* $p<.05$

These differences are largely due to the fact that these non-human reports are used by non-native writers to summarize previous work in the field and to present it as factual through SHOW verbs while, as the examples from the NEC below show, especially native expert writers use the patterns to talk about the text as well as the findings through FIND verbs:

(10) Concerns-based development theory proposes that these stages follow a hierarchical pattern: Teachers advance through the stages by addressing and resolving perceived problems (NEC131mtd.txt)

(11) Research investigating the effects of reading on vocabulary acquisition has found that both L1 learners (Jenkins et al. 1984; Nagy et al. 1985; Nagy et al. 1987; Shu et al. 1995).

(12) However, research on the curriculum of fourth and fifth grades have shown that the specified goals and objectives of the curriculum were not achieved at the desired level (Büyükduman, 2005; Mersinligil, 2002). (NNEC6int.txt).

Consistent with the frequency counts, as well as the statistical comparisons, ARGUE verbs are seen to predominate in NEC , which is also supported by the amount of different verb types used. Only *suggest* was used in all corpora (see Table 26). While the frequency counts are similar in NSC and NNSC, NNEC was seen to have the lowest frequency of ARGUE verbs ysed with non-human subjects.

Table 26. ARGUE Verbs with Non-human Subjects

NEC			NNEC			NSC			NNSC		
verb	AF	NF	verb	AF	NF	verb	AF	NF	verb	AF	NF
suggest*	37	13.7	support	2	1.3	suggest*	7	4.5	suggest*	12	9.7
propose	4	1.5	state	1	0.7	agree	2	1.3	conclude	3	2.4
claim	3	1.1	propose	1	0.7	highlight	2	1.3	claim	2	1.6
posit	3	1.1	argue	1	0.7	state	2	1.3	maintain	1	0.8
argue	2	0.7	claim	1	0.7	acknowledge	1	0.6			
assert	2	0.7	suggest*	1	0.7	determine	1	0.6			
accept	1	0.4				report	1	0.6			
assume	1	0.4				tell	1	0.6			
explain	1	0.4									
imply	1	0.4									
preclude	1	0.4									
predict	1	0.4									
report	1	0.4									
Total	58	21.6		5	4.8		17	10.8		18	14.5

\*Overlapping verbs in all corpora

FIND verbs in NEC and NSC are much more frequent. They do not show much lexical variety. As Table 27 indicates, a high frequency of the verb *find* is reported.



Table 27. FIND Verbs with Non-Human Subjects

verb	NEC		verb	NNEC		verb	NSC		verb	NNSC	
	AF	NF		AF	NF		AF	NF		AF	NF
find	23	8.5	prove	1	0.7	find	6	3.9	find	3	2.4
establish	1	0.4	realize	1	0.7	discover	2	1.3			
identify	1	0.4				prove	1	0.6			
Total	25	9.3		2	1.4		9	5.8		3	2.4

When individual SHOW verbs with non-human subjects were examined, it was seen that several high frequency verbs found in the overall frequencies are also used quite repetitively here. While NNSC has the highest frequency, it also has the lowest number of verb types. NNEC has a similar normed figure with a greater lexical variety in verb choice (see Table 28).

Table 28. SHOW Verbs with Non-human Subjects

verb	NEC		verb	NNEC		verb	NSC		verb	NNSC	
	AF	NF		AF	NF		AF	NF		AF	NF
show*	22	8.1	show*	12	7.8	show*	11	7.1	show*	20	16.2
demonstrate	6	2.2	reveal*	11	7.2	indicate*	3	1.9	indicate*	11	8.9
indicate*	6	2.2	indicate*	4	2.6	demonstrate	1	0.6	reveal*	9	7.3
reveal*	3	1.1	illustrate	2	1.3	illuminate	1	0.6	demonstrate	2	1.6
confirm	1	0.4	confirm	1	0.7	let	1	0.6	confirm	1	0.8
illustrate	1	0.4	demonstrate	1	0.7	reveal*	1	0.6			
			unearth	1	0.7						
Total	39	14.4		32	21.0		18	11.4		43	34.8

\*Overlapping verbs in all corpora

In addition, THINK verbs were only used once each by NEC and NSC, which did not provide enough information to draw conclusions from (see Table 29). However, it shows that the verb groups is not used with non-human subjects by any group of writers.

Table 29. THINK Verbs with Non-human Subjects

	NEC		NNEC			NSC			NNSC		
verb	AF	NF	verb	AF	NF	verb	AF	NF	verb	AF	NF
mean	1	0.4	-	0	0	assume	1	0.6	-	0	0

Lastly, reference types with non-human subjects were counted and compared (see Table 30). While native writers used non-human subjects mostly with non-integral citations, nonnative expert writers preferred to use them mostly with integral citations, whereas nonnative student writers were found to have the same normed figure for non-integral citations and general references. Significant differences were found in the categories of integral citations,  $H(3) = 8.781, p = .032$ , and non-integral citations,  $H(3) = 13.311, p = .004$ . Post-hoc analyses showed that NNSC (mean rank = 73.00) used integral citations with non-human subjects significantly more than NSC did (mean rank = 50.15),  $p = .031$ . As for non-integral citation with non-human subjects, a significantly more frequent use was reported in NEC (mean rank = 78.08), compared to NNSC (mean rank = 49.92),  $p = .003$ .

Table 30. Reference Types with Non-human Subjects

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
Integral*	39	14.4	21	13.7	14	9.1	45	36.5
Non-integral*	61	22.5	15	9.8	21	13.6	9	7.3
Total citation	100	36.9	36	23.4	35	22.7	54	43.8
General	23	8.5	5	3.3	10	6.5	9	7.3
Total	123	45.4	41	26.7	45	29.2	63	51.0

\* $p < .05$

These findings could be attributed to the observation that non-native writers use non-human reports as follow-on citations after a more explicit report such as an

integral citation, while native writers mention the sources in brackets even when they are mentioned earlier:

(13) In a similar vein, Nelson et al. (2002) investigated the similarities and differences between Arabic and American English refusals...Their findings revealed similar results for both groups in terms of refusal strategies (NNS101r).

(14) Based on the 2000 census, the U.S. Census Bureau states that of the roughly 12 million of the Asian population in the U.S., about 1 million are Korean (as cited in Lippi-Green,2012). (NS5int.txt).

#### 4.2.3 *It* subjects

The third category is research reports with *it* subjects which is identified by Charles (2004) who adapted it from the *it v that* pattern by Francis et al. (1996). It is an important structure where the emphasis is solely on the research not the people who did it (Charles, 2004). This is the subject type that is least frequently used by all writer groups (see Table 31).

When the types and token were examined, we see that the lexical variety increases remarkably with *it* subject, compared to the overall distributions of reporting verbs as well as those of human and non-human subjects. Normed figures show that non-native writers tend to use *it* subjects more than the native writers do both in expert and novice groups. However, no significant difference was found between groups.

Table 31. Total Number of *It* Subjects with Type/Token Ratios (TTR) for Verbs

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
type	12	4.4	19	12.4	8	5.2	13	10.5
token	25	9.2	27	17.6	10	6.5	23	18.6
TTR	48.0%		70.4%		80.0%		56.5%	

When the verbs used with *it* subjects were examined, as seen in Table 32, no verb was used across all corpora, although *argue* was used in NEC, NNEC and NSC, and several pair-wise overlaps such as *accept* and *see* between NEC and NNEC were observed. While NEC AND NNSC have higher frequencies than NEC and NSC,

Table 32. Top 10 Most Frequent Verbs with *It* Subjects

verb	NEC		verb	NNEC		verb	NSC		verb	NNSC	
	AF	NF		AF	NF		AF	NF		AF	NF
argue	9	3.3	state	3	2.0	argue	3	1.9	find	7	5.7
find	3	1.1	reveal	3	2.0	acknowledge	1	0.6	suggest	2	1.6
note	2	0.7	argue	2	1.3	discuss	1	0.6	find out	2	1.6
propose	2	0.7	claim	2	1.3	suggest	1	0.6	reveal	2	1.6
recognize	2	0.7	see	2	1.3	evidence	1	0.6	show	2	1.6
accept	1	0.4	accept	2	1.3	recognize	1	0.6	claim	1	0.8
adopt	1	0.4	acknowledge	1	0.7	assume	1	0.6	discuss	1	0.8
point out	1	0.4	emphasize	1	0.7	believe	1	0.6	recommend	1	0.8
suggest	1	0.4	formulate	1	0.7				state	1	0.8
establish	1	0.4	know	1	0.7				demonstrate	1	0.8
Total	23	8.5		18	11.7		10	6.5		20	16.1
Proportion to											
overall no. of	92%		66.7%		100%		87.0%				
verbs											
in the category											

When looked at the types of research reports used with *it* subjects, it was seen that NEC, NNEC and NSC mostly used it with non-integral citations followed by integral citations, whereas integral citations predominated the use of *it* subjects in NNSC. General reference was the least preferred type with all groups. Furthermore, no significant difference was found in any of the categories (see Table 33).

Table 33. Reference Types with *It* Subjects

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
Integral	5	1.8	8	5.2	1	0.6	13	10.5
Non-integral	18	6.6	14	9.1	8	5.2	7	5.7
Total citation	23	8.5	22	14.3	9	5.8	20	16.2
General	2	0.7	5	3.3	1	0.6	5	4.1
Total	25	9.2	27	17.6	10	6.5	25	20.3

The observation that integral citation is mostly preferred by NNSC could be attributed to the fact that non-native student writers tend to elaborate on single studies a lot more than the other groups do. Example (15) shows an extract from a long paragraph dedicated to reporting one study. While the first sentence summarizes the aim, the second one mentions the assumptions of the study, where the integral *it* subject was used, which is followed by a sentence that summarizes the findings. This is a recurrent pattern in NNSC unlike the other corpora:

(15) ...an experimental research study conducted by Hauptman, Mansu and Tal (2009) aimed at developing academic literacy skills of 10th grade Bedouin students in Southern Israel...It was assumed that this cross-linguistic programme would be effective and improve the scores of the participants. The findings of the study showed that ...(NNS11lr.txt)

The distribution of the verb groups used with *it* subjects indicates that all groups tend to use ARGUE verbs as the first choice (see Table 34). It is followed by FIND verbs, which are used more frequently by non-native writer groups. SHOW and THINK groups have a rather limited frequency. The statistical comparisons across the groups did not report any significant differences.

Table 34. Verb Groups with *It* Subjects

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
ARGUE	18	6.6	15	9.8	6	3.9	6	4.9
SHOW	1	0.4	1	0.7	0	0.0	6	4.9
FIND	6	2.2	7	4.6	2	1.3	9	7.3
THINK	0	0.0	4	2.6	2	1.3	2	1.6
Total	25	9.2	27	17.6	10	6.5	23	18.6

A wide range of ARGUE verbs are used with *it* subjects in both NEC and NNEC compared to the student writers. Similar to the overall distribution of verbs with *it* subjects, no single verb was used commonly in all corpora, except for *argue* occurring in NEC, NNEC and NSC. Despite the limited frequency, as Table 35 shows, both native and non-native expert writers use *it* subjects with ARGUE verbs as another element of the written communication in reporting others' research more frequently than the novice writers do. Considering the finding that NNSC has the highest frequency of *it* subject, this shows that ARGUE verbs are not a frequent choice of use with *it* subjects for non-native student writers.

Table 35. ARGUE Verbs with *It* Subjects

NEC			NNEC			NSC			NNSC		
verb	AF	NF	verb	AF	NF	verb	AF	NF	verb	AF	NF
argue	9	3.3	state	3	2.0	argue	3	1.9	suggest	2	1.6
note	2	0.7	argue	2	1.3	acknowledge	1	0.6	claim	1	0.8
propose	2	0.7	claim	2	1.3	discuss	1	0.6	discuss	1	0.8
accept	1	0.4	accept	2	1.3	suggest	1	0.6	recommend	1	0.8
adopt	1	0.4	acknowledge	1	1.3				state	1	0.8
point out	1	0.4	emphasize	1	0.7						
see	1	0.4	formulate	1	0.7						
suggest	1	0.4	mark	1	0.7						
			pinpoint	1	0.7						
			point out	1	0.7						
Total	25	9.2		15	9.8		6	3.9		6	4.9

FIND verbs are used a lot more frequently with *it* subjects by non-native writers. Although it is the second most frequent choice in NEC, it is the most frequent verb group used in NNSC, and only two verbs (*find*, *find out*) were preferred (see Table 36).

Table 36. FIND Verbs with *It* Subjects

NEC			NNEC			NSC			NNSC		
verb	AF	NF	verb	AF	NF	verb	AF	NF	verb	AF	NF
find	3	1.1	reveal	3	2.0	evidence	1	0.6	find	7	5.7
recognize	2	0.7	see	2	1.3	recognize	1	0.6	find out	2	1.6
establish	1	0.4	exhibit	1	0.7						
			indicate	1	0.7						
Total	6	2.2		7	4.6		2	1.3		9	7.3

*Find out* is a unique verb choice by non-native student writers, which was not seen in any studies or taxonomies of reporting verbs. However, as the example 16 shows, it has a function that is quite similar to the verb *find*:

(16) When data gathered from learners were analyzed, it has been found out that awareness raising with explicit writing instruction helped learners to produce much better samples of writings. (NNS26lr.txt)

SHOW verbs in *it* subjects have very low frequencies with the highest frequency in NNSC (see Table 37). As the examples 17 and 18 shows, non-native students generally use this patterns to present factual information without focusing on the studies themselves instead of researchers:

(17) Therefore, it has been shown that particular speech communities share common detectable patterns of speech and (NNS11r.txt, non-integral citation)

(18) It was detected that English language was mostly used in entertainment advertisements, and it was often used to attract the audience with language colorfulness,...(NNS9lr.txt, integral citation)

However, it is important to note that several of the examples come from the same paper which is the likely reason for the insignificance of the differences.

Table 37. SHOW Verbs with *It* Subjects

NEC			NNEC			NSC			NNSC		
verb	AF	NF	verb	AF	NF	verb	AF	NF	verb	AF	NF
show	1	0.4	recognize	1	0.7		0	0	reveal	2	1.6
									show	2	1.6
									demonstrate	1	0.8
									detect	1	0.8



THINK verbs have the least number of occurrences in NNEC, NSC and NNESC, while no occurrence was reported in NEC. The verb choices are also quite similar in the three corpora (see Table 38).

Table 38. THINK Verbs with *It* Subjects

NEC			NNEC			NSC			NNSC		
verb	AF	NF	verb	AF	NF	verb	AF	NF	verb	AF	NF
0	0	0.0	assume*	1	0.7	assume*	1	0.6	believe*	1	0.8
			believe*	1	0.7	believe*	1	0.6	assume*	1	0.8
			know	2	1.3						
Total				4	2.7		2	1.2		2	1.6

\*Overlapping verbs in all corpora except for NEC

This report type is used to talk about a general assumption generally with no specific citation:

(19) It is well known that education is not only a question of effective teaching or materials (H11conc.txt)

#### 4.3 Use and patterns of tense, voice and aspect in reporting clauses

Another feature of reporting practices is the use of tense, aspect and voice, as well as the relations between them. The distribution of tense use showed that both native and non-native expert writers preferred using the present tense, followed by a lower but close normed frequency of the past tense. The order is the same in native student corpus, but past tense was found to be used much less frequently than the present tense. However, the order is different in NNSC, as non-native student used past tense more frequently than present tense.

In terms of the choice of aspect, the simple aspect was found to be used far more frequently than the perfect aspect. However, no significant differences were

found across the corpora. Normed figures, however, indicate the highest frequency in non-native student corpus.

Significant differences between groups were reported in terms of the use of the perfect aspect,  $H(3) = 12.044, p = .007$ . The post-hoc comparisons showed that NEC (mean rank = 77.52) differed significantly from NSC (mean rank = 51.68),  $p = .010$ , as well as from NNSC (mean rank = 54.63),  $p = .032$ . Although the normed figure showed that NNEC has a closer frequency of the aspect to NSC and NNSC, no significant differences were found.

As Table 39 shows, the only continuous aspect sentence was found in NEC. No other occurrences were reported.

Table 39. Tense, Aspect and Voice in Research Reports

		NEC		NNEC		NSC		NNSC	
		AF	NF	AF	NF	AF	NF	AF	NF
Tense	Past	163	60.2	80	52.0	67	43.5	151	122.4
	Present	227	83.8	104	67.7	173	112.2	136	110.2
Aspect	Simple	326	120.4	168	109.3	225	146.0	271	219.6
	Perfect*	64	23.6	16	10.4	15	9.7	16	13.0
	Continuous	1	0.4	0	0.0	0	0.0	0	0.0
Voice	Active	365	134.8	162	105.4	232	150.5	268	217.2
	Passive	25	9.2	22	14.3	8	5.2	19	15.4
Total		390	144.0	184	119.7	240	155.7	287	232.6

\* $p < .05$

When the combinations of tense, aspect and voice were analyzed, it was seen that there are nine different patterns of relations with the present simple active, the past simple active, and present perfect active being the most frequently used ones. While past simple active and present simple active have very close normed figures in NEC and NNEC, present simple active is used twice as much in NNSC. However,

NNSC had a slightly higher number of the occurrences of the past simple active than the present simple active. In terms of statistical comparisons, no significant differences were observed in the distributions of both present simple active and the past simple passive structures.

One of the significant differences across groups is the present perfect active,  $H(3) = 12.399, p = .006$ . As the pair-wise comparisons showed, NEC (mean rank = 77.50) differed significantly from both NNSC (mean rank = 53.10),  $p = .013$ , as well as NSC (mean rank = 54.03),  $p = .020$ . Another significant difference was observed in the past simple passive pattern which is one of the less frequent patterns,  $H(3) = 8.612, p = .035$ . Post-hoc pairwise comparisons indicated that non-native students (mean rank = 69.40) used the pattern significantly more than native students (mean rank = 54.38),  $p = .020$ . Table 40 shows the distributions of patterns across groups.

Table 40. Patterns of Tense, Aspect and Voice

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
Present simple active	156	57.6	74	48.1	156	101.2	118	95.6
Present perfect active*	50	18.5	12	7.8	12	7.8	10	8.1
Present simple passive	8	3.0	14	9.1	4	2.6	3	2.4
Present perfect passive	12	4.4	4	2.6	1	0.6	5	4.1
Past simple active	158	58.4	76	49.4	64	41.5	139	112.6
Past perfect active	1	0.4	0	0.0	0	0.0	1	0.8
Past simple passive*	4	1.5	4	2.6	1	0.6	11	8.9
Past perfect passive	0	0.0	0	0.0	2	1.3	0	0.0
Present continuous passive	1	0.4	0	0.0	0	0.0	0	0.0
Total	390	144.0	184	119.7	240	155.7	287	232.6

\* $p < .05$

#### 4.4 Sectional variations in reporting practices

Since each section in a research article carries a different function that also shapes the reporting practices in it, this section aimed to focus on these cross-sectional differences in the distributions of reporting clauses and related patterns. However, not every section was present in every paper, so the sections with similar rhetoric purposes were grouped as follows:

- Abstracts (ab)
- Introduction and literature review (intlr)
- Methodology(mtd)
- Results, discussion, and conclusion (resdsconc)

In line with this categorization, the frequency analysis shows that reporting clauses are also subject to sectional distribution, with a remarkably higher frequency in introductions and literature reviews, where a significant difference across the groups was also reported,  $H(3) = 9.051, p = .029$  (see Table 41). However, no post-hoc pairwise differences were found.

Despite having a much smaller figure, results, discussion and conclusions are the sections where the reporting clauses are also used relatively frequently. We see that reporting clauses have rather low frequencies in abstracts and methodologies of NEC and NNSC papers, while we do not see any occurrences in both sections in NNEC, and only in abstracts in NNSC. That no reporting clause was found in some of the corpora lead to significant differences in both abstracts,  $H(3) = 11.597, p = .009$ , and methodology,  $H(3) = 8.001, p = .046$ .

Table 41. Sectional Distributions of Research Reports

	NEC		NNEC		NSC		NNSC	
	AF	NF	AF	NF	AF	NF	AF	NF
Abstract (ab)*	5	1.8	0	0.0	0	0.0	1	0.8
Introduction and literature review (intlr)*	302	111.5	144	93.7	170	110.3	250	202.6
Methodology(mtd)*	12	4.4	0	0.0	7	4.5	7	5.7
Result, discussion, and conclusion(resdsconc)	71	26.2	40	26.0	63	40.9	29	23.5
Total	390	144.0	184	119.7	240	155.7	287	232.6

\* $p < .05$

There are differences in terms of the reporting use in abstracts. As is seen in example 20, there are several examples especially in NEC where authors provide an introductory sentence about the area of research that the article is on. However, NNEC has abstracts that are much shorter with a narrow focus on the summary of the study, which is the reason why no reporting use was found.

(20) Existing research indicates that instructed learners' L2 proficiency and their metalinguistic knowledge are moderately correlated. (NEC2ab.txt)

(21) This study aims to explore the extent to which e-learning journals stimulate learner control over the language learning process ... (NNEC1ab.txt)

As for the low numbers of reporting clauses in abstracts in student writing, it is important to note that many student papers both in NSC and NNSC do not have abstracts. Regarding the methodology sections, we see that NEC did not have any reporting clauses. However, they used different types of referencing such as non-reporting (Swales,1990) to justify their methodology:

(22) Purposeful sampling (Patton, 1990) was employed while choosing the participants for both the first and second cycle of research. (NEC8mtd.txt)

(23) The statements about the content were determined considering the related literature on selection and organization of content in English language courses (Nunan, 1989). (H3mtd.txt)

As can be seen in Table 42, the distribution of reference and subject types also show several variations across the writer groups. The normed figures show that integral human citations have the highest frequency in all sections except for methodology. While a remarkably higher frequency was reported in introduction and literature review sections, a significant difference among the groups was also found,  $H(3) = 10.552, p = .014$ . The post-hoc analysis also reported a significant difference between NNEC (mean rank=49.48), and NNSC (mean rank=77.33),  $p = .011$ . This is also consistent with the overall distribution of the pattern.

While the second most frequently used type is non-integral non-human citation in introductions and literature reviews in NEC and NSC, it is integral non-human citations in introductions and literature reviews in NNEC and NNSC, where there is also a reported significant difference across the groups,  $H(3) = 9.942, p = .019$ . The post-hoc pairwise comparisons indicated that NNSC (mean rank=74.00) had significantly more occurrences than NSC (mean rank=49.30),  $p = .012$

Non-integral non-human citations in introductions and literature reviews come in the third line in NNEC and sixth line in NNSC. The patterns also showed a significantly different distribution,  $H(3) = 10.091, p = .018$ . Post-hoc comparisons showed that NEC (mean rank=75.73) differed significantly from NNSC (mean rank=52.77),  $p = .024$ . This indicates that, although it is third mostly used type in NNEC, and NSC, NEC made use of it patterns more.

While integral human citations are also predominantly used in the results, discussion and conclusion sections, the following types have much lower frequencies

and the rank order shows variations in all corpora. However, there is a reported significant difference across the groups in non-integral citations with non-human subjects,  $H(3) = 16.722, p = .001$ . Post-hoc comparisons also showed that NEC (mean rank = 72.83) differed significantly from NNSC (mean rank = 53.00),  $p = .001$ , NSC (mean rank = 56.97),  $p = .013$  and NNEC (mean rank = 59.20),  $p = .049$ . It is important to note that non-integral citations with non-human subjects are the second most frequent type in NEC, while it has lower frequencies in NNEC and NSC and it did not occur in NNSC. For the other less frequent types, the common pattern is that they are mostly reference types with non-human and *it* subjects.

As for the methodology sections, integral human citations are the norm except for NNEC where no research report use was observed. Furthermore, integral citations with non-human subjects are used with a much lower frequency. However, it is hard to talk about a specific pattern in abstracts due to very low overall frequencies.

Due to low frequencies, it is hard to define a pattern of reference and subject type in the abstracts. However, it was seen that only three type of reference and subject pairings were used in these sections: general references with non-human subjects, integral citations with human subjects, non-integral citations with non-human subjects. Moreover, there is no significant difference across the groups in these patterns.

Table 42. Sectional Distributions of Reference and Subject Type Patterns

		NEC		NNEC		NSC		NNSC	
		AF	NF	AF	NF	AF	NF	AF	NF
General reference human subject	intr	6	2.2	1	0.7	1	0.6	1	0.8
	mtd	0	0.0	0	0.0	0	0.0	1	0.8
	resdsconc	0	0.0	0	0.0	1	0.6	0	0.0
General reference it subject	intr	1	0.4	3	2.0	1	0.6	2	1.6
	resdsconc	1	0.4	2	1.3	0	0.0	1	0.8
General reference non-human subject	ab	2	0.7	0	0.0	0	0.0	1	0.8
	intr	15	5.5	5	3.3	6	3.9	8	6.5
	mtd	1	0.4	0	0.0	0	0.0	0	0.0
	resdsconc	5	1.8	0	0.0	4	2.6	0	0.0
Integral citation human subject	ab	2	0.7	0	0.0	0	0.0	0	0.0
	intr*	181	66.8	79	51.4	120	77.9	161	130.5
	mtd	6	2.2	0	0.0	7	4.5	5	4.1
	resdsconc	38	14.0	30	19.5	49	31.8	25	20.3
Integral citation it subject	intr	5	1.8	8	5.2	1	0.6	14	11.3
Integral citation non-human subject	intr*	31	11.4	20	13.0	12	7.8	42	34.0
	resdsconc	8	3.0	1	0.7	2	1.3	3	2.4
Non-integral citation human subject	intr	8	3.0	6	3.9	6	3.9	8	6.5
	resdsconc	1	0.4	0	0.0	1	0.6	0	0.0
Non-integral citation it subject	intr	14	5.2	10	6.5	4	2.6	6	4.9
	resdsconc	3	1.1	4	2.6	4	2.6	0	0.0
	mtd	1	0.4	0	0.0	0	0.0	0	0.0
Non-integral citation non-human subject	ab	1	0.4	0	0.0	0	0.0	0	0.0
	intr*	41	15.1	12	7.8	19	12.3	8	6.5
	mtd	4	1.5	0	0.0	0	0.0	1	0.8
	resdsconc*	15	5.5	3	2.0	2	1.3	0	0.0
Total		390	144.0	184	119.7	240	155.7	287	232.6

\*  $p < .05$

Verb groups were also analyzed to see their distributions across sections. All verbs groups were mostly used in the introduction and literature review sections, followed by a much lower frequency in the results, discussion, and conclusion



sections. However, ARGUE verbs are used much more in the results, discussions and conclusions than FIND and SHOW verbs are. It is an expected outcome since these verbs talk about research findings which is mostly done in the introduction and literature review sections, whereas ARGUE verbs are mostly used to make textual connections with the cited research, a function that could be used in several sections.

The earlier overall comparison of verb groups showed significance only in SHOW verbs without any section divides. However, the sectional distributions reported two significant differences across the corpora: one in ARGUE verbs used in introductions and literature reviews,  $H(3) = 9.928, p = .019$ ; and another in SHOW verbs in the same sections,  $H(3) = 12.531, p = .004$ . In both groups, post-hoc pairwise significant differences were also found. In terms of the ARGUE verbs, NNEC (mean rank=50.90) was found to differ significantly from NNSC (mean rank=77.07),  $p = .021$ . In line with the significant findings in subject type and report type, it was found that integral citations with human subject and an ARGUE verb is the pattern used the most by the non-native student writers. In terms of SHOW verbs used in introduction and literature review sections, NNSC (mean rank=76.72) exhibits a significantly greater number of occurrence compared to NSC (mean rank=47.17),  $p = .004$ , and NEC (mean rank=53.57),  $p = .044$  (see Table 43).

Table 43. Sectional Distributions of Verb Groups

Verb groups	Sections	NEC		NNEC		NSC		NNSC	
		AF	NF	AF	NF	AF	NF	AF	NF
ARGUE	ab	2	0.7	0	0.0	0	0.0	0	0.0
	intlr*	193	71.3	78	50.7	109	70.7	159	128.8
	mtd	8	3.0	0	0.0	5	3.2	5	4.1
	resdsconcc	51	18.8	28	18.2	47	30.5	20	16.2
FIND	ab	0	0.0	0	0.0	0	0.0	0	0.0
	intlr	72	26.6	23	15.0	30	19.5	27	21.9
	mtd	2	0.7	0	0.0	1	0.6	0	0.0
	resdsconcc	10	3.7	3	2.0	6	3.9	6	4.9
SHOW	ab	3	1.1	0	0.0	0	0.0	1	0.8
	intlr*	35	12.9	39	25.4	20	13.0	58	47.0
	mtd	2	0.7	0	0.0	0	0.0	2	1.6
	resdsconcc	10	3.7	7	4.6	6	3.9	2	1.6
THINK	ab	0	0.0	0	0.0	0	0.0	0	0.0
	intlr	2	0.7	4	2.6	11	7.1	6	4.9
	mtd	0	0.0	0	0.0	1	0.6	0	0.0
	resdsconcc	0	0.0	2	1.3	4	2.6	1	0.8
Total		390	144.0	184	119.7	240	155.7	287	232.6

\* $p < .05$

The sectional distribution of the relations of tense, aspect and voice also showed regularities in some of the patterns, as Table 44 shows. Being one of the most frequently used patterns, the past simple active did not show any significant difference across groups either in the overall distributions or in the sectional distributions. However, normed figures show that it is mostly used in introductions and literature reviews with a very limited use in results and discussions, though with a slightly higher figure in NNSC.

The present perfect active was found to be used in significantly different frequencies in the overall counts. The pattern was also found to have significant differences in the introduction and literature review sections,  $H(3) = 16.116, p = .001$ .

The post-hoc tests showed that NEC (mean rank=78.53) had significantly more occurrences of the pattern than NNEC (mean rank=56.73),  $p=.024$ ; NSC (mean rank=56.73),  $p=.024$  and NNSC (mean rank=50.00),  $p=.001$ .

Although the present simple active is a frequent pattern for which no significant differences across groups were found in overall distributions, it was found to show significant differences across groups in result, discussion, and conclusion sections.  $H(3) = 11.282$ ,  $p=.010$ . As the post-hoc tests showed, non-native students (mean rank=47.38) used the patterns a lot less than native expert writers (mean rank=68.65),  $p=.049$ , and native student writers did (mean rank=70.52),  $p=.024$ .

The past simple passive is another pattern that has shown significant differences across the groups in the overall counts. The sectional distributions also showed that there are significant differences in the use of the patterns in introductions and literature reviews,  $H(3) = 9.256$ ,  $p=.026$ , with a post-hoc pairwise difference between NSC (mean rank=54.00) and NNSC (mean rank=68.57),  $p=.016$ .

Although an insignificant yet relatively higher normed figure was noted for NNEC in the overall distributions, present simple passive was found to differ significantly only in results, discussion and conclusions,  $H(3) = 9.277$ ,  $p=.026$ . The post-hoc analyses showed a significantly higher frequency in NNEC (mean rank=67.17), compared to NNSC (mean rank=57.00),  $p=.031$ .

Table 44. Sectional Distributions of Tense, Aspect and Voice

		NEC		NNEC		NSC		NNSC	
		AF	NF	AF	NF	AF	NF	AF	NF
Past perfect active	mtd	1	0.4	0	0	0	0	0	0
	resdsconc	0	0.0	0	0	0	0	1	0.8
Past perfect passive	intlr	0	0.0	0	0	1	0.6	0	0
	resdsconc	0	0.0	0	0	1	0.6	0	0
Past simple active	intlr	134	49.5	63	41.0	55	35.7	120	97.2
	mtd	3	1.1	0	0	1	0.6	1	0.8
	resdsconc	21	7.8	13	8.5	8	5.2	18	14.6
Past simple passive	intlr*	3	1.1	4	2.6	0	0	10	8.1
	resdsconc	1	0.4	0	0	1	0.6	1	0.8
Present perfect active	ab	3	1.1	0	0	0	0	1	0.8
	intlr*	38	14.0	9	5.9	10	6.5	7	5.7
	mtd	1	0.4	0	0	1	0.6	2	1.6
	resdsconc	8	3.0	3	2.0	1	0.6	0	0
Present perfect passive	intlr	8	3.0	3	2.0	1	0.6	5	4.1
	mtd	1	0.4	0	0	0	0	0	0
	resdsconc	3	1.1	1	0.7	0	0	0	0
Present simple active	ab	2	0.7	0	0	0	0	0	0
	intlr	112	41.4	55	35.8	100	64.9	105	85.1
	mtd	6	2.2	0	0	5	3.2	4	3.2
	resdsconc*	36	13.3	18	11.7	51	33.1	9	7.3
Present simple passive	intlr	7	2.6	10	6.5	3	1.9	3	2.4
	resdsconc*	1	0.4	5	3.3	1	0.6	0	0
Present simple continuous	resdsconc	1	0.4	0	0	0	0	0	0
Total		390	144.0	184	119.7	240	155.7	287	232.6

$p < .05$

The sectional analyses of the patterns in tense, aspect and voice showed several similarities to and differences from the overall distributions. While the present perfect active and the past simple passive were found to differ significantly in the overall distributions, it was seen that this difference exists only in the introduction and literature review sections. Patterns such as the present simple active

and the present simple passive were not found to have overall significant differences, whereas sectional differences were found to be significant in the results, discussion, and conclusion sections for both patterns.

This section summarized the results of the study with quantitative methods, as well as gave example sentences from the corpora. The next section discusses the findings of the study in relation to the research questions, as well as the related literature and implications.



## CHAPTER 5

### DISCUSSION AND CONCLUSION

This section discusses the results of the study in relation to the previous studies on the topic, which is followed by the pedagogical implications of the findings for EAP writing research. Lastly, limitations of the study and suggestions for future studies are given.

#### 5.1 Discussion of findings

The current study aimed to discover the use and distribution of other-sourced research reports in research writing in applied linguistics by writers with different expertise and language backgrounds in relation to the construction of stance. For these purposes, verb-controlling *that* complement clauses were extracted and analyzed in terms of subject types, reference types, verbs, tense, aspect and voice, as well as cross-sectional distributions of these features. In this section, each category of analysis is addressed separately in relation to the research questions as well as previous literature on the topic.

##### 5.1.1 Reporting verbs

The results of the study showed that similar to Hyland's (1999, 2002a) findings, a small group of verb types (such as suggest, argue, state, find, show) are used very repetitively, while many verbs (such as warn, attest, advance) have only a few or single counts in all corpora. Furthermore, expert writers have much lower number of reporting verbs than student writers. Type/token ratios also showed that NNEC has the highest score of lexical variety, while NEC has the lowest. This could be related to the corpus sizes as NEC is the largest, while NNEC is the smallest corpus. The

findings about novice students' writing practices contrasts with Friginal (2013) who showed that undergraduate students use a smaller number of reporting verbs than professional writers do. This could be related to the familiarity of graduate students with disciplinary lexis more than the undergraduate students do.

When the distributions of verb groups were analyzed, it was found that ARGUE verbs were the most frequently used group, which accords with the previous studies on applied linguistics research articles (Hyland, 1999, 2002a; Yeganeh & Boghayeri, 2014). As Hyland (2009a) discussed, these verbs “involve the expression of arguments and allow writers to discursively explore issues while carrying a more evaluative element in reporting others' work” (p. 12). Furthermore, Swales (1990) and Parkinson (2013b) argue that these verbs enable writers to make more tentative claims rather than factual and confirming ones as in *show*, *find*, *indicate*. Hyland (1999, 2000, 2002a) also identifies the frequent use of these verbs as characteristic of soft sciences where applied linguistics can also be classified in as well. The finding that both native and non-native student writers did not show any significant differences from expert writers indicated that the text-based and discursive characteristics of applied linguistics writing were adopted by them.

Similar to Hyland (1999, 2002a), FIND and SHOW verbs follow ARGUE verbs with much lower frequencies. Both non-native expert writers and non-native novice writers were found to use SHOW verbs more frequently than FIND verbs in referring to research findings. This finding partially accords with Ağçam's (2015) finding that Turkish applied linguistics doctoral students tend to use the verb *show* more frequently than their native expert counterparts do. Furthermore, Charles (2004, 2006a) states that both verb groups are similar to research verbs in Hyland's (1999, 2002a) categorizations. However, Hyland (2002a) makes a fine distinction

between research verbs that are factive such as *show, demonstrate, observe* and non-factive such as *find, identify, observe*. Since more factive verbs fall into SHOW verb category, it is reasonable to claim that non-native writers tend to focus on conveying the reported information as more factual than tentative, as opposed to native writers. Of all groups, the greatest difference in this sense occurs between native expert and non-native novice writers. As Akbaş (2012) and Uysal (2012) found in the Turkish academic texts, making such assertive claims could be linked to the local discourse conventions. Since both writer groups are fluent Turkish speakers educated in Turkey, this difference could be linked to their L1 rhetoric and previous writing background.

THINK verbs were found to have rather low frequencies in all corpora with no significant differences across groups. On the other hand, it is important to note that normed figures showed a remarkably higher use of these verbs by native novice writers. For example, while THINK verbs make up 0.5% of all reporting verbs in NEC, this percentage goes up to 6.7% in NSC. Parkinson (2013b) had somewhat similar results from student ESL writers in health sciences and stated that students make “language choices reflecting everyday conversational norms” (p.437). However, the lower frequency for non-native student writers (2.1% of all verbs) could be attributed to two possible factors. First, it is possible that non-native students were taught to sound more objective and academic as in traditional approaches to academic discourse and EAP is built on (Hunston, 1994). As Hyland (2002b) also discusses, many EAP books teach L2 students to write in a distant and impersonal tone. Such an approach could have an effect on the low frequency of THINK verbs, as they are generally seen talking about evidence in a more tentative manner is generally preferred to expressing beliefs and opinions in academic texts.



On the other hand, it could also be about the EFL context in which non-native students have a more formal and less conversational repertoire of English language available to them.

### 5.1.2 Reference types

In terms of reference types, integral citations were used a lot more than non-integral citations and general references in all corpora. In terms of expert writing, this finding is in line with Pickard (1995), while it contrasts with Hyland (1999, 2002a) who reported a higher figure for non-integral citations. However, it is important to note that these studies do not focus specifically on *that* clauses, and these clauses are seen to be commonly used with integral citations and human subjects, as Charles (2004, 2006) claims based on her findings on politics and materials dissertations.

Comparisons across groups also showed that novice writers, especially non-native ones, use integral citations a lot more than both groups of expert writers do, and tend to provide a detailed discussion of each cited source, sometimes with more than one sentence. This finding is parallel with Both Ädel and Garretson's (2006) results on verbal citations, and Parkinson's (2013a) finding on other-sourced *that* complement clauses. Both studies also found that integral citations are remarkably more frequent in novice writing than expert writing. Ädel and Garretson (2006) attributed this difference to the editing processes and the word limit in research articles that expert writers have to take into consideration as well as an indication of "a steep learning curve in the use of non-integral forms" (p. 278), which could account for the underuse of integral citations. Furthermore, Luzón's (2015) analysis of literature reviews of collaborative writing by undergraduate Spanish writers led her to consider this overuse as both a lack of disciplinary knowledge and "a

facilitating step towards writing about the discipline, establishing their own voice, and developing their confidence as members of their disciplinary community” (p.57). Therefore, it is plausible to say that student writers use integral citations more in order to make less assertive claims about their disciplinary knowledge and attribute authority to cited researchers due to their limited disciplinary knowledge. However, such a limited use of citation types should also be seen as an earlier step in learning to report sources before a skillful use of non-integral citations.

The second most frequent type is non-integral citations. This is in line with Pickard (1995)’s analysis of applied linguistics articles where non-integral citations were much less frequent than integral citations. It, however, contrasts with Hyland’s (1999, 2002a) sub-corpus of applied linguistics where majority of citations were found to be non-integral. This could also be due to this study’s narrow focus on *that* complement clauses unlike previous studies that counted all citation types. However, it is also somewhat similar to Hyland’s studies as expert writers used non-integral citations much more frequently than novice writers. This finding also partly accords with previous comparative studies on expert and novice writing (Mansourizade & Ahmad, 2011; Parkinson, 2013a) as well as expert writing (Parkinson, 2013b) from different disciplines. This indicates that expert writers place more emphasis on the studies and the arguments than the researchers (Hyland, 1999; Parkinson, 2013a). It is also a sign of expertise as published writers are able to make a synthesis of previous research as they group and present previous research in accordance with their research more than the novice writers can (Luzón, 2015; Mansourizade & Ahmad, 2011). Besides, it is of vital importance to understand that graduate students write papers on topics they have been introduced to during a semester-long course and produce papers under tight time constraints, while expert writers work on their

expertise area, and generally have more time to write, edit and revise until their text reaches completion. To conclude, overuse of integral citations is not only about lack of disciplinary knowledge, but also about the time needed to read previous literature, write, and revise papers.

General references are the least frequent type of references in research reports with no significant differences across the groups. However, native expert and native novice writers tend to use this type slightly more than non-native writers. Charles's (2004, 2006a) findings on the materials corpus is similar to our findings, while politics dissertations have remarkably more use of this type. This is the type that gives the least prominence to the cited author and often talks about a general area of research and researchers without any explicit references (Charles, 2004). The low frequencies, therefore, tell us that general references have a limited function in manifesting intertextuality by applied linguistics writers in this study regardless of the expertise level or nativeness status. Furthermore, unlike Luzón's (2015) finding on the overuse of general referencing, it is not considered as a problem in the learner writings analyzed in this study, as the student writers use this type of referencing even less than the expert writers do. It is also important to highlight that Luzón analyzed undergraduate writing. Therefore, it is reasonable to expect that graduate writers are more experienced and are able to use citations more skillfully.

### 5.1.3 Subject types

The overall differences across the groups showed several patterns. Human subjects were used a lot more than non-human and *it* subjects, which is similar to Charles's (2004, 2006a) analysis of native corpus of politics dissertations, Hyland's (1999, 2002a) analysis of applied linguistics research articles, and Liu and Zhou's (2004)

analysis of native applied linguistics research articles. This shows the personal nature of the discipline as a social scientific area, as soft scientific fields are known to focus on the researcher, and value textual qualities such as building argument and providing space for discussion unlike hard sciences that prefer to report experiments and fact in a more impersonal tone (Becher & Towler, 2011). Cross-group comparisons showed higher frequencies in novice writing, with the greatest difference found between in non-native expert writers who have the lowest frequency of human subjects, as compared to non-native novice writers who have the highest. The finding for non-native expert writers is dissimilar to the Chinese published applied linguists in Liu and Zhou's (2014) study. However, for the novice writing, Charles (2004) also has a similar finding from her materials dissertation corpus, which she related to the relative importance of giving "explicit credit to other researchers, especially for a candidate member of the field" (p.181). This also signals a weaker writer stance as the argument relies on the voices of other authors with an explicit use of their names.

When reference types and subject types were combined, it was seen that the most frequent pattern is integral citation with a human subject across all corpora. The highest frequencies were found in native and non-native novice writers respectively. When the verb groups were examined, ARGUE verbs were found to be used in integral citations with human subjects predominantly, which is consistent with Charles (2006a), who justifies a similar finding arguing that "since the major source of information about others' research is the cited text, we would expect many citations in both corpora [materials and politics dissertations] to refer to the written account" (p.323). However, the finding that the second most frequent verb group is FIND in all groups contrasts with overall distributions where non-native writers'

second most preferred group is SHOW. This supports Parkinson's (2013a) claim that more tentative verbs are used when the cited author is explicitly mentioned since it is a more face-threatening act. This indicates that non-native writers tend to report less factively when the name of the cited researcher is present in the reporting clause. This claim is also confirmed by the distribution of verb groups with non-human subjects where SHOW verbs are used more frequently by non-native students, and FIND verbs have higher frequencies in native expert writings as opposed to both non-native groups. These findings indicate that non-native writers, especially non-native student writers, tend to report others' research more factively than other groups do when the subject is non-human. However, when the subject is human, there is no difference across the groups as all writers report tentatively. This shows that when the name of the researcher is not used in the reporting clause, writers tend to express their stance more clearly by confirming the findings of previous research.

Frequencies of non-human and *it* subjects are much lower and no significant differences were found across the groups. Nonetheless, normed figures for the non-human subjects show that this subject type was found to have relatively higher frequencies in NNSC and NEC, with a higher proportion in the overall use of reports in NNSC. While it is plausible that native expert writers have a more even distribution of subject types to balance the role of the cited researcher as well as the research in their texts, the finding for NNSC partially conflicts with Charles's (2004) assumption on soft sciences, as non-native student writers also report in a more objective and impersonal manner in some cases. However, it is important to note that the difference could be due to non-native student writers' tendency to elaborate on a single research first using human and then non-human subjects such as *their study*, *the findings*.

As for the *it* subjects, it was seen that this type is the least frequent type, but it was still more frequent than the politics corpus of Charles's (2004, 2006a) study. Although no significant difference was found across the groups, there were more occurrences in non-native writing than in the native groups, with the highest frequency reported in non-native expert corpus. However, together with the lower frequency of integral citations in NNEC, it can be said that non-native expert writers tend to write in a more objective and distant tone than non-native student writers who tend to overuse more definite and personal reporting features. Nevertheless, the finding about NNSC is partly in line with Hewings and Hewings's (2002) finding that non-native graduate writers use the structure more than published writers do.

In terms of references types used with *it* subjects, non-integral citations were the most frequent type used in all corpora except NNSC. However, no writer group used general references more than citations, which is different from Hewings and Hewings (2002) who found that non-native doctoral students tend to use this pattern mostly without attributing sources. This is due to the fact that non-native novice writers in this study tend to use research reports with *it* subjects as they tend to make excessive use of what Shaw (1992) termed as "follow-on sentences", which helps the writers extend citations and elaborate on them (p. 306). In the non-native novice writers' case, generally an integral citation with a human subject is extended with the use of *it* subject.

#### 5.1.4 Tense, voice and aspect

The relations between tense, voice and aspect showed that expert writers preferred the present simple active, and the past simple active the most, with very close frequencies, followed by the present perfect active with a much lower frequency,

which is a finding similar to Pickard' (1995) results. However, there are important differences in the novice corpora. While native novice writer corpus follows the same order, the present simple active has a remarkably higher frequency than the past simple active. On the other hand, non-native novice writers used the past simple active more than the present simple active. Following the predominant use of the present tense in his agricultural and food economics thesis corpus as opposed to agricultural botany, Thompson (2001) said that the use of present tense is “typical of discursive text in which ideas are animated through textual realization” (p. 193). This shows that non-native novice writers employ this textual power of the discipline much less, focusing more on conveying the findings of the research in the past tense instead. This also signals the importance given to reporting findings and specific bits of information rather than integrating them well into the discussion (Malcolm, 1987)

Charles (2006a) found that while ARGUE verbs are generally used with the present tense, FIND and SHOW verbs are used more with the past tense.

Considering the higher use of both the past tense and SHOW verbs, this could also partially hold true for the non-native novice writers in our study. However, a systematic analysis is of vital importance to confirm the existence and the regularity of the pattern.

While the present perfect active is the third most frequent pattern in all corpora, it is used by native expert writers significantly more than both student groups. This is in line with Oster's (1981, cited in Swales, 1990) argument that “the present perfect tense is used to indicate a continued discussion of some of the information in the sentence” (p.152). While expert writers fulfil this function by using the present perfect tense, novice writers use it much less. In line with Swales (1990), more frequent use of past tense in NNSC signals a more objective and distant

reporting of past literature, which is also the most frequent pattern in Shaw's (1992) and Thompson's (2001) results from hard sciences, as well. Nonetheless, several occurrences show that especially non-native student writers also make generalizations, however with the use of the past and the present tenses. A systematic analysis of tense functions is needed to confirm this, though.

In terms of voice, the active voice was found to have a much higher frequency. Although there were no significant differences across the groups, the passive voice was found to be more frequent in non-native corpora. Furthermore, the relations with tense types show that the past simple passive was markedly more frequent in the non-native novice writers' corpus. This could be partly related to the higher frequency of reports with *it* subjects that are used to extend citations. This reference type is mostly used to neutrally report research findings. The relations of tense, aspect and voice shows two relatively less frequent patterns: the present perfect passive and the past simple passive. While the present perfect passive is also a pattern found and discussed in Shaw (1992), the past simple passive is interesting in that it exhibits cross-group differences with a higher frequency in non-native student writing than in the other groups. However, it is reasonable to conclude, as Swales (1990) also argues, that the use of past and passive signals a more distant form of writing. Non-native student writers employ these functions of tense and voice possibly due to an understanding of academic writing as formal and impersonal, which could be the outcome of previous L1 and L2 writing instruction.

#### 5.1.5 Sectional variations

Research reports are heavily used in introductions and literature reviews, which is consistent with Thompson's (2002, 2005) and Mansourizadeh and Ahmad's (2011)



findings. Since these studies report result from different disciplines, it is plausible to say that this is a general pattern in research writing regardless of disciplines.

Abstracts and methodology sections were found to have the lowest counts of research reports. As for the abstracts, this low to no frequency could be attributed to two reasons: (1) Hyland and Tse's (2005) finding that complement clauses are largely used to mention one's own research, and (2) that student papers did not always have abstracts, which led to a non-systematic analysis.

The observation that NNEC used other forms of citation instead of research reports in methodology sections could be related to the Thomas and Hawes's (1994) argument that these are the sections "where citations seemed to have a different form and function" (p.132). This is an expected outcome, as authors generally justify their methodology with non-reporting citations without elaborating on research findings of the studies in methodology sections. Furthermore, justifying a research methodology sometimes require citing studies from different fields such as statistics.

The sectional distributions did not show any remarkable differences across the corpora from the overall counts in terms of the proportion of verb groups. While the predominance of ARGUE verbs in introductions and literature reviews in expert writing is consistent with Yeganeh and Boghayeri (2015), the high frequencies of FIND and SHOW verbs contrast with their findings in terms of both native and non-native Persian Second Language Acquisition (SLA) writers' reporting practices. The difference in native expert writing could be due to the sub-disciplinary focus of their study, while linguistic and cultural factors could come into play in understanding differences between Persian and Turkish writers.

The most frequent reference type in all sections was found to be integral citations with a remarkably higher proportion in introductions and literature reviews,

which contrasts with studies on research articles (Işık-Taş, 2008; Jalilifar, 2012), while it is consistent with the findings on dissertations (Işık-Taş, 2008; Jalilifar & Dabbi, 2013), which analyzed all citation types. Since no study that specifically analyzed *that* clauses in applied linguistics writing was found, the comparisons are not reliable to draw conclusions from.

While the distribution of reference types is more even in expert writing, a slightly higher number of references are used in results, discussion, and conclusion sections by native student writers, whereas non-native student writers make use of a great majority of citations in introductions and literature reviews. This also shows the lower value given to relating one's own research to the wider context by non-native students. It could also signal an inability to discuss one's own findings in relation to those of similar studies.

The two reference types that also have relatively frequent occurrence in results, discussion and conclusion sections are integral citations with human subjects and non-integral citations with nonhuman subjects, respectively. The latter was also reported to be significantly more frequent in NEC than in NNSC where no occurrence of this type was reported, which is consistent with Parkinson (2013b) and Thompson (2005), who found that non-integral citations appear more towards the end of research articles. However, our finding that ARGUE verbs are the ones mostly used in results, discussion, and conclusion sections contrasts with Parkinson's (2013b) finding that authors make more certain and strong claims since ARGUE verbs are mostly used to make more tentative claims. To better answer this question, the corpora should further be analyzed in terms of the sectional distribution of verbs and the functions they carry.

## 5.2 Conclusion

The study provided a great range of findings that could be directly related to academic writing pedagogy such as disciplinary writing in applied linguistics, expert writing, novice writing and non-native writing in academic contexts.

In terms of applied linguistics writing, this study once again confirmed the personal, highly discursive and text-based nature of applied linguistics writing regardless of groups. This highlights the importance of seeing writing as a social activity that is shaped by the communities in which it is produced (Hyland, 2016). Even the novice writers with limited exposure to and expertise in professional writing seem to have grasped the writing conventions of research writing in applied linguistics to a considerable extent. The study also revealed that linguistic realizations of reporting practices are more varied in novice writing and that there are limited differences between native and non-native expert writers. Besides, the existing differences (frequent use of SHOW verbs and *it* subjects) suggest that non-native experts write more factually and impersonally, which, however, does not stop them from getting their manuscripts published. This highlights the immense importance of disciplinary intelligibility, rather than conformity to Standard English (Flowerdew, 2008).

While native student writers are also seen to employ *that* reporting clauses differently from expert writers as evaluative devices and stance expressions, differences became much clearer when the native expert and the non-native student writers were compared. Overuse of integral citations and human subjects were reported in both native and non-native novice writers, which shows an excessive use of attributing claims to outside sources, thus constructing a weaker stance than expert writers. However, more frequent use of past tense and passive voice indicate a more

impersonal and distant stance taking, while frequent use of SHOW verbs, also the case for non-native expert writers, points to the tendency to convey previous research findings in a confirming way to build a well-supported argument. More frequent use of SHOW verbs, past tense, and passive voice could be related to language and culture-related factors such as L1 discourse conventions and previous L2 writing instruction. For example, several studies have shown that making assertive claims is an important aspect of L1 Turkish academic writing, which is a potential source of influence on L2 writing of Turkish speakers (Ağçam, 2015; Akbaş, 2012; Uysal, 2012). The past tense was also found to be used quite frequently in L1 Turkish writing (Uysal, 2012).

In line with previous research, the findings about the non-native novice writers point to the hybrid nature of L2 writing where influences of both local and global English academic discourses could be observed (Mauranen, Prez-Llantada & Swales, 2010; Perez-Llantada, 2014). Such a hybrid language use in academic writing by Turkish writers of English is also reported in Uysal (2008) and Çandarlı et al. (2015) who found that both L1 and L2 rhetorical conventions have effects on the L2 academic texts of Turkish writers in terms of metadiscourse markers and rhetorical patterns. While the high frequencies of integral citations, human subjects and ARGUE verbs show non-native student writers are familiar with the global English discourse and discipline-specific features of reporting, overuse of SHOW verbs, past tense and passive voice could be regarded as potential influences of L1 Turkish rhetoric. This finding also highlights the vital role of “physical and experiential contexts in which writing occurs” (Hyland, 2016, p.122), that is, the impact of Turkish educational context and prior writing instruction in both L1 and L2 may influence a non-native writer. However, since most differences in non-native

novice writing are not observed in non-native expert writing, it is important to value the notion of expertise more in understanding these differences and shaping academic writing pedagogy (Swales, 2004; Römer, 2009).

### 5.3 Implications for EAP writing pedagogy

This study has important implications for teaching reporting and stance taking for novice and non-native writers in disciplinary academic discourses. It is of immense importance for the novice and the non-native writers to approximate their stance taking in reporting practices to that of expert writers. Taking the expert published writer as the model can enable students to develop a repertoire of linguistic resources necessary to position themselves in relation to the reported sources, and create an authentic text without plagiarism issues (Chang & Schleppegrell, 2011; Guerin & Pickard, 2012). Working on both their writing and that of expert writers can help them make more informed selections of reporting structure in accordance with the disciplinary conventions. Although this study is limited to discipline-specific corpora, analysis of which provided support for the disciplinary nature of academic discourses, we are also well aware of the fact that it is not always feasible to expect the EAP students to be given discipline-specific instruction due to several factors such as material selection, lack of collaboration with disciplinary professionals and the limited disciplinary knowledge of the students (Clapham, 2001). However, it could still be achieved through more direct corpus applications in EAP instruction from which especially advanced students gain great benefits and improve their writing accordingly (Römer, 2011). Several successful studies about corpus-based EAP courses showed that students are not only able to provide self-feedback for their

own writing, but also compare their own writing with that of experts in their fields and learn from them (Charles, 2012; Friginal, 2013; Lee & Swales, 2006; Yoon & Hirvela, 2004). Such corpus-based courses or sessions can be designed to draw attention to functions of reporting structures and their role in the construction of stance such as reference and verb types as well as verb groups and tense. Increasing awareness of linguistic and rhetoric functions of each structure might lead to a more even distribution of and informed selection from different types of reporting structures. This could, for example, increase the number of non-integral citations, non-human subjects and the use of the present tense.

In addition, the notion of expertise should not be limited to native speakers, as the successful bilingual speaker could also serve as a model for the students (Alptekin, 2002). Furthermore, although very few in number, there are easily accessible materials about reporting practices such as the website following Bloch's (2009, 2010) studies on reporting verbs in expert and student writing.

Although this study identified several domains where especially non-native students were found to show different reporting behavior than expert writers, these differences were not very large-scale and systematic ones. Similar to Swales's (2014) interpretation of his similar findings, this could be related to contextual factors such as high admission criteria of the program, as well as the university admissions, advanced language level of the students due to the discipline that was studied. Thus, the textual properties of student writing could be subject to change across contexts. A solution to deal with the contextual differences would be an analysis of student texts, even a cursory one, done by teachers at an early stage of an EAP course, which would help them deal with the problem areas more adequately. This could be achieved via assigning an early small-scale writing task to students that require a

brief review of literature and source use. Furthermore, similar to what Bayyurt and Akbaş (2014) did to explore perceptions of graduate writers about metadiscoursal features of academic texts in Turkish and English, activities based on expert writing such as identifying the correct reporting structures and adjusting claims through an appropriate stance taking could be used to diagnose how a certain group of students use linguistic features in their academic writing in English.

As for the Turkish context, there is a need for explicit EAP writing instruction to academic writers. In terms of undergraduate writers, the content of the compulsory academic writing courses could be improved to include the teaching reporting practices by covering not only the mechanics but also the functions and meanings of reporting structures in the wider academic and disciplinary discourses. As for the graduate writers, as Yağız (2009) highlighted, Turkish graduate students are not provided with enough explicit writing instruction from EAP instructors or disciplinary experts. Such a support is vital in guiding graduate students through the difficulties they experience as they try to master their writing skills according to discipline and genre-specific requirements. As Altınmakas (2015) also exemplifies, this support could be in the form of negotiating expectations about assignments, features of discipline-specific texts, and providing feedback.

#### 5.4. Limitations and suggestions for future research

Despite the important findings about the linguistic and phraseological devices of evaluation in reporting clauses, the study has several limitations. The number of texts analyzed (120 in total) is not sufficient to generalize the conclusions to the populations of the study. While we attempted to ensure the representativeness of the research articles corpora, it was not possible for the student writing corpora due to

the different structures of the programs, assessment and assignment types, in addition to the availability of the student papers. Furthermore, similar to Rowley-Jolivet and Carter-Thomas (2014), unedited research articles of non-native writers could be aimed for the dataset of the study to reach better results about non-native expert writing. In terms of analysis, a limitation was that the coding was done only by the researcher. A second coder would be helpful in increasing the reliability of the process.

In terms of the research findings, this study attempted to discuss several culture and language-related factors in explaining the reporting practices of non-native writers that are different from those of native writers. However, as Uysal (2012) also stated, the findings are limited since L1 Turkish articles are not included in this study.

Finally, As Berkenkotter and Huckin (1995) argue, textual analysis is powerful, yet other methodologies such as ethnography and case studies could help us better understand the communicative systems in which members of discourse communities participate. For example, a qualitative dimension such as interviews or case studies with students, expert writers and EAP instructors could give more information about the Turkish context.



## APPENDIX A

### ARTICLES IN NEC

1. Appleby, R. (2013). Desire in translation: White masculinity and TESOL. *TESOL Quarterly*, 47(1), 122-147.
2. Barcroft, J. (2009). Effects of synonym generation on incidental and intentional L2 vocabulary learning during reading. *TESOL Quarterly*, 43(1), 79-103.
3. Borg, S. (2009). English language teachers' conceptions of research. *Applied Linguistics*, 30(3), 358-388.
4. Brown, A. V. (2009). Students' and teachers' perceptions of effective foreign language teaching: A comparison of ideals. *The Modern Language Journal*, 93(1), 46-60.
5. Fordyce, K. (2014). The differential effects of explicit and implicit instruction on EFL learners' use of epistemic stance. *Applied Linguistics*, 35(1), 6-28.
6. Janzen, J. (2007). Preparing teachers of second language reading. *TESOL Quarterly*, 41(4), 707-729.
7. King, J. (2013). Silence in the second language classrooms of Japanese universities. *Applied Linguistics*, 34(3), 325-343.
8. Leeser, M. J. (2007). Learner-based factors in L2 reading comprehension and processing grammatical form: Topic familiarity and working memory. *Language Learning*, 57(2), 229-270.
9. Keating, G. D. (2009). Sensitivity to violations of gender agreement in native and non-native Spanish: An eye-movement investigation. *Language Learning*, 59(3), 503-535.
10. Gilmore, A. (2011). "I prefer not text": Developing Japanese learners' communicative competence with authentic materials. *Language Learning*, 61(3), 786-819.
11. Lamb, M. (2012). A self-system perspective on young adolescents' motivation to learn English in urban and rural settings. *Language learning*, 62(4), 997-1023.
12. Martin-Beltrán, M. (2010). The Two-Way Language Bridge: Co-Constructing Bilingual Language Learning Opportunities. *The Modern Language Journal*, 94(2), 254-277.

13. Menard-Warwick, J. (2008). The cultural and intercultural identities of transnational English teachers: Two case studies from the Americas. *TESOL quarterly*, 42(4), 617-640.
14. Mercer, S. (2011). Language learner self-concept: Complexity, continuity and change. *System*, 39(3), 335-346
15. Miles, S. W. (2014). Spaced vs. massed distribution instruction for L2 grammar learning. *System*, 42, 412-428.
16. Millar, N. (2011). The processing of malformed formulaic language. *Applied Linguistics*, 32(2), 129-148.
17. Mills, N. (2011). Teaching assistants' self-efficacy in teaching literature: Sources, personal assessments, and consequences. *The Modern Language Journal*, 95(1), 61-80.
18. Moore, P. J. (2013). An emergent perspective on the use of the first language in the English-as-a-foreign-language classroom. *The Modern Language Journal*, 97(1), 239-253.
19. Paradis, J. (2010). Bilingual children's acquisition of English verb morphology: Effects of language exposure, structure complexity, and task type. *Language Learning*, 60(3), 651-680.
20. Park, G. (2012). "I am never afraid of being recognized as an NNES": One teacher's journey in claiming and embracing her nonnative-speaker identity. *TESOL Quarterly*, 46(1), 127-151.
21. Plonsky, L. (2014). Study quality in quantitative L2 research (1990–2010): A methodological synthesis and call for reform. *The Modern Language Journal*, 98(1), 450-470.
22. Roehr, K. (2008). Metalinguistic knowledge and language ability in university-level L2 learners. *Applied Linguistics*, 29(2), 173-199.
23. Sampson, A. (2012). Coded and uncoded error feedback: Effects on error frequencies in adult Colombian EFL learners' writing. *System*, 40(4), 494-504.
24. Stam, G. (2015). Changes in thinking for speaking: A longitudinal case study. *The Modern Language Journal*, 99(S1), 83-99.
25. Vercellotti, M. L. (2015). The development of complexity, accuracy, and fluency in second language performance: A longitudinal study. *Applied Linguistics*, 36 (2).
26. Walker, C. (2015). A study of self-concept in reading in a second or foreign language in an academic context. *System*, 49, 73-85.

27. Wagner, E. (2010). Test-takers' interaction with an L2 video listening test. *System*, 38(2), 280-291.
28. Watzke, J. L. (2007). Foreign language pedagogical knowledge: Toward a developmental theory of beginning teacher practices. *The Modern Language Journal*, 91(1), 63-82.
29. Webb, S. (2007). The effects of repetition on vocabulary knowledge. *Applied Linguistics*, 28(1), 46-65.
30. Zielinski, B. W. (2008). The listener: No longer the silent partner in reduced intelligibility. *System*, 36(1), 69-84.



## APPENDIX B

### ARTICLES IN NNEC

1. Akcan, S. (2011). Analysis of teacher candidates' learning experiences in an English teaching methods course. *Education and Science*, 36(162), 247-260.
2. Alagözlü, N. (2013). Aural pragma-linguistic comprehension: A longitudinal study. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 44, 1-14.
3. Altay, I. F. (2010). A suggested syllabus for advanced writing skills at English language teaching departments. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 39, 20-31.
4. Arslan, M. (2014). The effects of structural features of learning Turkish language as a foreign language from learners' perspective: Bosnia and Herzegovina case. *Education and Science*, 39(174), 189-200.
5. Arslan, R. Ş. (2013). An investigation of prospective English language teachers' spoken communication skills: A case from turkey. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 28(1), 27-40.
6. Bektas-Cetinkaya, Y. (2012). Turkish university students' motivation to learn English: integration into international community. *Hacettepe University Journal of Education*, 43, 130-140.
7. Bölükbaş, F. (2013). The effect of language learning strategies on learning vocabulary in teaching Turkish as a foreign language. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 28(3), 55-68.
8. Cephe, P. T. (2010). A study of the factors leading English teachers to burnout. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 38, 25-34.
9. Coşkun, A. (2013). Stress in English language teaching practicum: The views of all stakeholders. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 28(3), 97-110.
10. Çelik, M. (2010). Pre-service EFL teachers' reported concerns and stress for practicum in Turkey. *Education and Science*, 33(150), 97-109.
11. Erkmen, B. (2014). Novice EFL teachers' beliefs about teaching and learning, and their classroom practices. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 29(1), 99-113.
12. Erton, I. (2010). Relations between personality traits, language learning styles and success in foreign language achievement. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 38, 115-126.

13. Genç , B. (2013). Differences in English vocabulary use: Insights from spoken learner corpus and native Speaker Corpus. *Education & Science*, 38(167), 41-49.
14. Genç, Z. (2014). Correcting spoken errors in English language teaching: Preferences of Turkish EFL learners at different proficiency levels. *Education and Science*, 39(174), 259-271.
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## APPENDIX C

### ENGLISH CONSENT E-MAIL FOR NATIVE GRADUATE WRITERS OF ENGLISH

I am Selahattin Yılmaz, a master's student in Foreign Language Education at Boğaziçi University, Istanbul. I'm writing my master's thesis on reporting practices in research articles written by native and non-native expert writers. I am planning to extend it to a comparative analysis of expert vs. novice writers. I would like to see if there are any differences between native and non-native novice writers, as well. So, if you do or have finished your MA in applied linguistics/TESOL/foreign language education and have the first full research paper you wrote for a graduate course (one that includes data collection and analysis), I would be happy if you sent it to me to include in the native novice writer corpus.

Your paper will be analyzed anonymously with the other papers. The study will be shared with you in the end.

Thank you for your cooperation

Selahattin Yılmaz

APPENDIX D  
PAPERS IN NSC

1. A reading and writing test for ESL students.
2. Teaching implications on corpus based discourse organizing lexical bundles.
3. Politeness and power distance: A quantitative analysis of the language in aviation.
4. Culture in Colombian EFL classes.
5. The role of intonation in attitudes toward non-native speech.
6. Origins of attitudinal change: Classroom research on the attitudes of Chinese translation / interpretation students.
7. Investigating links between reading and writing in non-native English speakers
8. The one with the lexical bundles: A phraseological approach to determining a sitcom's role in language learning.
9. ELF experiences at English medium university in Istanbul
10. Baker, J. (ND\*). Reactive tokens at turning points.
11. Brady, C. (2014) An action research investigation into the effectiveness of a teacher's questioning and feedback strategies during a 40-minute low-level young learner EFL class in South Korea.
12. Cockante, M. (2011). Applying the Sinclair and Coulthard model of discourse analysis to a student-centered EFL classroom.
13. Davies, J. D. (2011). Increasing students' L2 usage: An analysis of teacher talk time and student talk time.
14. Duray, J. (2011). Trends in EBP: A comparison of Market Leader's writing tasks to findings in written discourse.
15. Garstang, J. (2013). A data-driven learning approach to collocation and colligation.
16. Griffith, D. (2009). Is there is such a thing as a 'good language learner'? To what extent is it possible for people to become 'better' language learners?
17. Harris, C. (2013). A self-evaluation of changes in attitudes, beliefs and teaching behavior



18. Hinton, T. (2008). Analysis of spoken discourse in a casual conversation and in an English EFL classroom activity.
19. Hougham, D. (2011). Exploring TBLT in a Japanese EFL/ESP context.
20. Jones, S. (2008). Professional development through individual diary writing
21. Kurowski, J. S. (2008). Encouraging problem-solution patterning and co-textual referencing in L2 written discourse
22. Ong, C. (2008). The process approach to writing remediation
23. Peppard, J. (2007). Exploring the relationship between word-association and learners' lexical development.
24. Seymour, S. (2007). In the ear of the beholder and beyond: Some attitudes Korean university students hold towards a variety of English accents.
25. Small, A. (2009) Evaluating one Japanese high school's system of oral communication course evaluation.
26. Siegel, J. (2008). Using Sinclair and Coulthard's Spoken Discourse Model.
27. Thompson, S. (ND\*) Perceptions of gender difference: An analysis of an EFL textbook.
28. Townsend-Cartwright, L. (2015). Analysis of a Newsnight interview using Francis and Hunstons' Model.
29. Vincent, B. (2009). Using a process approach to help student writing based on extracts of their work.
30. Walker, C. (2011) Managing student motivation through teaching performance.

The first 9 papers were collected from graduate students at a state university in Southeast of the US. Since the anonymity of the participants was mentioned in the consent form, their name were not provided here. All papers were written after 2007. University of Birmingham – Bank of Essays requires users to cite the papers as published materials, which is why author names and dates were provided

\* Two papers did not specifically include the date of submission, but there were references later than 2007, which was taken as an indication that the papers were written no earlier than 2007.



## APPENDIX E

### PAPERS IN NNSC

1. A cross-cultural comparison of the speech act of apology by Turkish speakers of English and native speakers of English
2. An analysis of culture bumps in educational settings in Turkey
3. A comparative genre analysis of English and Turkish research article abstracts in education field
4. English language preparation courses for “the preparing future faculty programme” (OYP) in Turkey: practical issues and reflections
5. Online customer complaints: An investigation of cultural effects on online complaint behavior
6. A Contrastive study of compliment responses among Turkish male and female university students
7. Use of address terms in spoken and written language: A case from Turkish university students
8. Language learners' perception about feedback in conversational interaction
9. English language Learners use of the speech act of Apology
10. Investigating complaint and refusal speech acts as realized in two contexts: Tekirdağ, Thrace region & Van, east region, in Turkey
11. “Bilingualism and academic achievement: The linguistic interdependence hypothesis
12. A Study on student attitudes towards keeping a portfolio
13. The Acquisition of Inflectional Morphemes by Adult Turkish EFL Learners
14. Awareness of metacognitive strategies in academic essay writing and its relation to writing success

15. The effects of pictures on reading comprehension of Turkish EFL learners
16. The effects of pre-reading activities on upper-intermediate level students' comprehension of reading texts
17. The relationship between vocabulary learning strategies and vocabulary size
18. Use of the speech act of compliment by nonnative Turkish speakers of English
19. The Use of English in advertisements in Turkey
20. The attitudes of university students towards native and non-native speaking teachers of English in an intensive English preparation programs
21. A descriptive study of English use in Turkish media
22. Culture: The dilemma of English as a lingua franca
23. Attitudes of students towards English-medium instruction and their opinions about the role of English in Turkish context
24. A study of English collocations
25. A learner corpus based study on the use of modality by pre-intermediate level undergraduate learners of English
26. The effects of using visual aids in teaching writing on learners' L2 writing proficiency
27. The use of corrective feedback by native and non-native teachers: a comparative analysis
28. Cross-cultural miscommunication in an EFL university context
29. Tag questions and other pragmatic particles
30. Speech acts; suggestions: The role of proficiency levels of turkish efl learners on their directness levels of suggestions

## APPENDIX F

### TURKISH CONSENT E-MAIL FOR NON-NATIVE GRADUATE WRITERS OF ENGLISH

Merhabalar,

Ben Selahattin, sizler gibi FLED yüksek lisans öğrencisiyim. Yasemin ve Leyla hocanın danışmanlığında derlem dilbilim (corpus linguistics) üzerine yazdığım tezimde, yabancı dil eğitimi alanında lisansüstü öğrencileri ve uzman (yani yayınlanmış çalışmaları olan) yazarların atıfta bulunma alışkanlıklarına incelemeyi hedefliyorum.

Bu sebeple veri gruplarından birinin sizlerin yüksek lisansa kayıtlı olduğunuz ilk dönem derslerinde (özellikle SLA dersinde) veri toplayarak yazdığımız araştırma makaleleri olması gerekmektedir. Bana bu konuda, çalışmalarınızı paylaşarak yardımcı olursanız çok mutlu olurum.

Çalışma katılıp katılmayacağınız bu e-mail'e cevap olarak yazarsanız seviniyorum.

Lütfen göndereceğiniz ödevlerin veri toplama ve analizi içeren araştırma makaleleri olmasına dikkat ediniz.

Göndereceğiniz veriler tamamen anonim bir şekilde ve akademik amaçlı kullanılacak, kişisel bilgileriniz kimseyle paylaşılmayacaktır.

Çok teşekkür ederim. Hepinize iyi çalışmalar.

Selahattin Yılmaz

## APPENDIX G

### OVERALL STATISTICAL ANALYSIS OUTPUTS

<b>Ranks</b>			
	L1	N	Mean Rank
resrep	Native expert corpus	30	58.15
	Nonnative expert corpus	30	52.20
	Native student corpus	30	57.78
	Nonnative student corpus	30	73.87
	Total	120	
ab	Native expert corpus	30	67.42
	Nonnative expert corpus	30	57.50
	Native student corpus	30	57.50
	Nonnative student corpus	30	59.58
	Total	120	
intr	Native expert corpus	30	57.53
	Nonnative expert corpus	30	53.45
	Native student corpus	30	54.20
	Nonnative student corpus	30	76.82
	Total	120	
mtd	Native expert corpus	30	66.17
	Nonnative expert corpus	30	51.00
	Native student corpus	30	62.93
	Nonnative student corpus	30	61.90
	Total	120	
resdsconc	Native expert corpus	30	67.97
	Nonnative expert corpus	30	58.90
	Native student corpus	30	63.53
	Nonnative student corpus	30	51.60
	Total	120	
inthum	Native expert corpus	30	55.27
	Nonnative expert corpus	30	50.05
	Native student corpus	30	62.35
	Nonnative student corpus	30	74.33
	Total	120	
intnonhum	Native expert corpus	30	63.07
	Nonnative expert corpus	30	55.78
	Native student corpus	30	50.15
	Nonnative student corpus	30	73.00
	Total	120	

intit	Native expert corpus	30	59.18
	Nonnative expert corpus	30	60.32
	Native student corpus	30	53.83
	Nonnative student corpus	30	68.67
	Total	120	
noninthum	Native expert corpus	30	62.67
	Nonnative expert corpus	30	59.80
	Native student corpus	30	61.32
	Nonnative student corpus	30	58.22
	Total	120	
nonintnonhum	Native expert corpus	30	78.08
	Nonnative expert corpus	30	57.20
	Native student corpus	30	56.80
	Nonnative student corpus	30	49.92
	Total	120	
nonintit	Native expert corpus	30	64.18
	Nonnative expert corpus	30	67.58
	Native student corpus	30	56.33
	Nonnative student corpus	30	53.90
	Total	120	
genhum	Native expert corpus	30	65.17
	Nonnative expert corpus	30	57.57
	Native student corpus	30	59.50
	Nonnative student corpus	30	59.77
	Total	120	
gennonhum	Native expert corpus	30	67.27
	Nonnative expert corpus	30	54.50
	Native student corpus	30	61.83
	Nonnative student corpus	30	58.40
	Total	120	
genit	Native expert corpus	30	59.77
	Nonnative expert corpus	30	64.10
	Native student corpus	30	57.93
	Nonnative student corpus	30	60.20
	Total	120	
human	Native expert corpus	30	55.32
	Nonnative expert corpus	30	50.17
	Native student corpus	30	62.63
	Nonnative student corpus	30	73.88
	Total	120	

nonhuman	Native expert corpus	30	71.58
	Nonnative expert corpus	30	54.12
	Native student corpus	30	50.53
	Nonnative student corpus	30	65.77
	Total	120	
it	Native expert corpus	30	58.10
	Nonnative expert corpus	30	70.53
	Native student corpus	30	50.77
	Nonnative student corpus	30	62.60
	Total	120	
integral	Native expert corpus	30	54.07
	Nonnative expert corpus	30	51.92
	Native student corpus	30	58.33
	Nonnative student corpus	30	77.68
	Total	120	
nonintegral	Native expert corpus	30	75.97
	Nonnative expert corpus	30	61.78
	Native student corpus	30	55.28
	Nonnative student corpus	30	48.97
	Total	120	
citation	Native expert corpus	30	57.03
	Nonnative expert corpus	30	52.60
	Native student corpus	30	57.65
	Nonnative student corpus	30	74.72
	Total	120	
general	Native expert corpus	30	67.77
	Nonnative expert corpus	30	56.97
	Native student corpus	30	57.47
	Nonnative student corpus	30	59.80
	Total	120	
argue	Native expert corpus	30	59.83
	Nonnative expert corpus	30	49.30
	Native student corpus	30	59.28
	Nonnative student corpus	30	73.58
	Total	120	
show	Native expert corpus	30	55.13
	Nonnative expert corpus	30	66.27
	Native student corpus	30	46.43
	Nonnative student corpus	30	74.17
	Total	120	



find	Native expert corpus	30	72.08
	Nonnative expert corpus	30	51.72
	Native student corpus	30	57.50
	Nonnative student corpus	30	60.70
	Total	120	
think	Native expert corpus	30	54.43
	Nonnative expert corpus	30	60.92
	Native student corpus	30	66.92
	Nonnative student corpus	30	59.73
	Total	120	
past	Native expert corpus	30	61.93
	Nonnative expert corpus	30	55.27
	Native student corpus	30	51.63
	Nonnative student corpus	30	73.17
	Total	120	
present	Native expert corpus	30	60.82
	Nonnative expert corpus	30	51.88
	Native student corpus	30	66.45
	Nonnative student corpus	30	62.85
	Total	120	
simple	Native expert corpus	30	55.33
	Nonnative expert corpus	30	53.02
	Native student corpus	30	58.82
	Nonnative student corpus	30	74.83
	Total	120	
perfect	Native expert corpus	30	77.52
	Nonnative expert corpus	30	58.17
	Native student corpus	30	51.68
	Nonnative student corpus	30	54.63
	Total	120	
Continuous	Native expert corpus	30	62.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	60.00
	Total	120	
active	Native expert corpus	30	59.00
	Nonnative expert corpus	30	50.67
	Native student corpus	30	58.82
	Nonnative student corpus	30	73.52
	Total	120	

passive	Native expert corpus	30	60.72
	Nonnative expert corpus	30	70.30
	Native student corpus	30	50.47
	Nonnative student corpus	30	60.52
	Total	120	
present_simple_active	Native expert corpus	30	56.00
	Nonnative expert corpus	30	50.02
	Native student corpus	30	70.17
	Nonnative student corpus	30	65.82
	Total	120	
present_perfect_active	Native expert corpus	30	77.50
	Nonnative expert corpus	30	57.37
	Native student corpus	30	54.03
	Nonnative student corpus	30	53.10
	Total	120	
present_simple_passive	Native expert corpus	30	58.87
	Nonnative expert corpus	30	69.73
	Native student corpus	30	58.00
	Nonnative student corpus	30	55.40
	Total	120	
present_perfect_passive	Native expert corpus	30	67.70
	Nonnative expert corpus	30	60.77
	Native student corpus	30	54.48
	Nonnative student corpus	30	59.05
	Total	120	
past_simple_active	Native expert corpus	30	61.58
	Nonnative expert corpus	30	55.18
	Native student corpus	30	52.77
	Nonnative student corpus	30	72.47
	Total	120	
past_perfect_active	Native expert corpus	30	61.48
	Nonnative expert corpus	30	59.50
	Native student corpus	30	59.50
	Nonnative student corpus	30	61.52
	Total	120	
past_simple_passive	Native expert corpus	30	59.70
	Nonnative expert corpus	30	58.52
	Native student corpus	30	54.38
	Nonnative student corpus	30	69.40
	Total	120	

past_perfect_passive	Native expert corpus	30	60.97
	Nonnative expert corpus	30	59.00
	Native student corpus	30	63.03
	Nonnative student corpus	30	59.00
	Total	120	
present_continuous_passive	Native expert corpus	30	62.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	60.00
	Total	120	
gen_hum_argue	Native expert corpus	30	66.30
	Nonnative expert corpus	30	58.57
	Native student corpus	30	58.52
	Nonnative student corpus	30	58.62
	Total	120	
gen_hum_show	Native expert corpus	30	60.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	62.00
	Total	120	
gen_hum_think	Native expert corpus	30	60.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	62.00
	Nonnative student corpus	30	60.00
	Total	120	
gen_it_argue	Native expert corpus	30	62.43
	Nonnative expert corpus	30	60.55
	Native student corpus	30	60.52
	Nonnative student corpus	30	58.50
	Total	120	
gen_it_find	Native expert corpus	30	60.50
	Nonnative expert corpus	30	60.50
	Native student corpus	30	60.50
	Nonnative student corpus	30	60.50
	Total	120	
gen_it_show	Native expert corpus	30	59.50
	Nonnative expert corpus	30	61.48
	Native student corpus	30	59.50
	Nonnative student corpus	30	61.52
	Total	120	

gen_it_think	Native expert corpus	30	59.00
	Nonnative expert corpus	30	63.00
	Native student corpus	30	59.00
	Nonnative student corpus	30	61.00
	Total	120	
gen_nonhum_argue	Native expert corpus	30	65.90
	Nonnative expert corpus	30	53.10
	Native student corpus	30	60.83
	Nonnative student corpus	30	62.17
	Total	120	
gen_nonhum_find	Native expert corpus	30	68.93
	Nonnative expert corpus	30	59.07
	Native student corpus	30	57.00
	Nonnative student corpus	30	57.00
	Total	120	
gen_nonhuman_show	Native expert corpus	30	60.48
	Nonnative expert corpus	30	59.25
	Native student corpus	30	62.67
	Nonnative student corpus	30	59.60
	Total	120	
int_hum_argue	Native expert corpus	30	55.43
	Nonnative expert corpus	30	50.92
	Native student corpus	30	59.68
	Nonnative student corpus	30	75.97
	Total	120	
int_hum_find	Native expert corpus	30	68.85
	Nonnative expert corpus	30	54.63
	Native student corpus	30	59.45
	Nonnative student corpus	30	59.07
	Total	120	
int_hum_show	Native expert corpus	30	58.07
	Nonnative expert corpus	30	60.22
	Native student corpus	30	57.32
	Nonnative student corpus	30	66.40
	Total	120	
int_hum_think	Native expert corpus	30	57.35
	Nonnative expert corpus	30	59.37
	Native student corpus	30	63.67
	Nonnative student corpus	30	61.62
	Total	120	

int_it_argue	Native expert corpus	30	61.75
	Nonnative expert corpus	30	61.95
	Native student corpus	30	56.00
	Nonnative student corpus	30	62.30
	Total	120	
int_it_find	Native expert corpus	30	57.35
	Nonnative expert corpus	30	61.35
	Native student corpus	30	57.38
	Nonnative student corpus	30	65.92
	Total	120	
int_it_show	Native expert corpus	30	59.00
	Nonnative expert corpus	30	61.03
	Native student corpus	30	59.00
	Nonnative student corpus	30	62.97
	Total	120	
int_it_think	Native expert corpus	30	60.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	62.00
	Total	120	
int_nonhum_argue	Native expert corpus	30	69.23
	Nonnative expert corpus	30	52.22
	Native student corpus	30	55.92
	Nonnative student corpus	30	64.63
	Total	120	
int_nonhum_find	Native expert corpus	30	65.40
	Nonnative expert corpus	30	54.00
	Native student corpus	30	62.20
	Nonnative student corpus	30	60.40
	Total	120	
int_nonhum_show	Native expert corpus	30	57.42
	Nonnative expert corpus	30	62.57
	Native student corpus	30	49.25
	Nonnative student corpus	30	72.77
	Total	120	
int_nonhum_think	Native expert corpus	30	60.50
	Nonnative expert corpus	30	60.50
	Native student corpus	30	60.50
	Nonnative student corpus	30	60.50
	Total	120	

nonint_hum_argue	Native expert corpus	30	63.55
	Nonnative expert corpus	30	59.95
	Native student corpus	30	58.07
	Nonnative student corpus	30	60.43
	Total	120	
nonint_hum_find	Native expert corpus	30	61.48
	Nonnative expert corpus	30	61.52
	Native student corpus	30	59.50
	Nonnative student corpus	30	59.50
	Total	120	
nonint_hum_show	Native expert corpus	30	59.50
	Nonnative expert corpus	30	61.52
	Native student corpus	30	61.48
	Nonnative student corpus	30	59.50
	Total	120	
nonint_hum_think	Native expert corpus	30	59.00
	Nonnative expert corpus	30	59.00
	Native student corpus	30	62.97
	Nonnative student corpus	30	61.03
	Total	120	
nonint_it_argue	Native expert corpus	30	62.35
	Nonnative expert corpus	30	68.05
	Native student corpus	30	58.17
	Nonnative student corpus	30	53.43
	Total	120	
nonint_it_find	Native expert corpus	30	66.25
	Nonnative expert corpus	30	56.50
	Native student corpus	30	58.55
	Nonnative student corpus	30	60.70
	Total	120	
nonint_it_show	Native expert corpus	30	59.93
	Nonnative expert corpus	30	61.97
	Native student corpus	30	58.00
	Nonnative student corpus	30	62.10
	Total	120	
nonint_it_think	Native expert corpus	30	59.50
	Nonnative expert corpus	30	61.48
	Native student corpus	30	61.52
	Nonnative student corpus	30	59.50
	Total	120	

nonint_nonhum_argue	Native expert corpus	30	75.73
	Nonnative expert corpus	30	56.33
	Native student corpus	30	59.57
	Nonnative student corpus	30	50.37
	Total	120	
nonint_nonhum_find	Native expert corpus	30	70.15
	Nonnative expert corpus	30	56.60
	Native student corpus	30	60.75
	Nonnative student corpus	30	54.50
	Total	120	
nonint_nonhum_show	Native expert corpus	30	68.33
	Nonnative expert corpus	30	61.83
	Native student corpus	30	54.37
	Nonnative student corpus	30	57.47
	Total	120	
nonint_nonhum_think	Native expert corpus	30	61.48
	Nonnative expert corpus	30	59.50
	Native student corpus	30	61.52
	Nonnative student corpus	30	59.50
	Total	120	
ARGUE_ab	Native expert corpus	30	63.50
	Nonnative expert corpus	30	59.50
	Native student corpus	30	59.50
	Nonnative student corpus	30	59.50
	Total	120	
ARGUE_resdsconc	Native expert corpus	30	70.67
	Nonnative expert corpus	30	57.70
	Native student corpus	30	61.53
	Nonnative student corpus	30	52.10
	Total	120	
ARGUE_intr	Native expert corpus	30	58.90
	Nonnative expert corpus	30	50.90
	Native student corpus	30	55.13
	Nonnative student corpus	30	77.07
	Total	120	
ARGUE_mtd	Native expert corpus	30	64.90
	Nonnative expert corpus	30	53.50
	Native student corpus	30	61.53
	Nonnative student corpus	30	62.07
	Total	120	

FIND_ab	Native expert corpus	30	60.50
	Nonnative expert corpus	30	60.50
	Native student corpus	30	60.50
	Nonnative student corpus	30	60.50
	Total	120	
FIND_resdsconc	Native expert corpus	30	65.80
	Nonnative expert corpus	30	55.23
	Native student corpus	30	59.10
	Nonnative student corpus	30	61.87
	Total	120	
FINDintr	Native expert corpus	30	72.27
	Nonnative expert corpus	30	53.77
	Native student corpus	30	57.57
	Nonnative student corpus	30	58.40
	Total	120	
FIND_mtd	Native expert corpus	30	62.97
	Nonnative expert corpus	30	59.00
	Native student corpus	30	61.03
	Nonnative student corpus	30	59.00
	Total	120	
SHOW_ab	Native expert corpus	30	64.45
	Nonnative expert corpus	30	58.50
	Native student corpus	30	58.50
	Nonnative student corpus	30	60.55
	Total	120	
SHOW_resdsconc	Native expert corpus	30	66.83
	Nonnative expert corpus	30	62.20
	Native student corpus	30	59.40
	Nonnative student corpus	30	53.57
	Total	120	
SHOW_intr	Native expert corpus	30	53.57
	Nonnative expert corpus	30	64.55
	Native student corpus	30	47.17
	Nonnative student corpus	30	76.72
	Total	120	
SHOW_mtd	Native expert corpus	30	62.43
	Nonnative expert corpus	30	58.50
	Native student corpus	30	58.50
	Nonnative student corpus	30	62.57
	Total	120	



THINK_ab	Native expert corpus	30	60.50
	Nonnative expert corpus	30	60.50
	Native student corpus	30	60.50
	Nonnative student corpus	30	60.50
	Total	120	
THINK_resdsconc	Native expert corpus	30	57.50
	Nonnative expert corpus	30	61.50
	Native student corpus	30	63.45
	Nonnative student corpus	30	59.55
	Total	120	
THINK_intlr	Native expert corpus	30	56.03
	Nonnative expert corpus	30	60.37
	Native student corpus	30	64.57
	Nonnative student corpus	30	61.03
	Total	120	
THINK_mtd	Native expert corpus	30	60.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	62.00
	Nonnative student corpus	30	60.00
	Total	120	
past_perf_act_mtd	Native expert corpus	30	62.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	60.00
	Total	120	
past_perf_act_resdsconc	Native expert corpus	30	60.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	62.00
	Total	120	
past_perf_pas_intlr	Native expert corpus	30	60.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	62.00
	Nonnative student corpus	30	60.00
	Total	120	
past_perf_pas_resdsconc	Native expert corpus	30	60.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	62.00
	Nonnative student corpus	30	60.00
	Total	120	

past_simple_act_intlr	Native expert corpus	30	61.22
	Nonnative expert corpus	30	53.43
	Native student corpus	30	54.15
	Nonnative student corpus	30	73.20
	Total	120	
past_simple_act_mtd	Native expert corpus	30	62.47
	Nonnative expert corpus	30	58.50
	Native student corpus	30	60.48
	Nonnative student corpus	30	60.55
	Total	120	
past_simple_act_resdsconc	Native expert corpus	30	66.13
	Nonnative expert corpus	30	60.17
	Native student corpus	30	54.30
	Nonnative student corpus	30	61.40
	Total	120	
past_simple_pas_intlr	Native expert corpus	30	59.50
	Nonnative expert corpus	30	59.93
	Native student corpus	30	54.00
	Nonnative student corpus	30	68.57
	Total	120	
past_simple_pas_resdsconc	Native expert corpus	30	60.97
	Nonnative expert corpus	30	59.00
	Native student corpus	30	61.00
	Nonnative student corpus	30	61.03
	Total	120	
pres_perf_act_ab	Native expert corpus	30	64.45
	Nonnative expert corpus	30	58.50
	Native student corpus	30	58.50
	Nonnative student corpus	30	60.55
	Total	120	
pres_perf_act_intlr	Native expert corpus	30	78.53
	Nonnative expert corpus	30	56.73
	Native student corpus	30	56.73
	Nonnative student corpus	30	50.00
	Total	120	
pres_perf_act_mtd	Native expert corpus	30	60.45
	Nonnative expert corpus	30	58.50
	Native student corpus	30	60.48
	Nonnative student corpus	30	62.57
	Total	120	

pres_perf_act_resdsconc	Native expert corpus	30	65.93
	Nonnative expert corpus	30	62.10
	Native student corpus	30	57.97
	Nonnative student corpus	30	56.00
	Total	120	
pres_perf_pas_intlr	Native expert corpus	30	65.47
	Nonnative expert corpus	30	60.10
	Native student corpus	30	55.97
	Nonnative student corpus	30	60.47
	Total	120	
pres_perf_pas_mtd	Native expert corpus	30	62.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	60.00
	Total	120	
pres_perf_pas_resdsconc	Native expert corpus	30	63.00
	Nonnative expert corpus	30	61.00
	Native student corpus	30	59.00
	Nonnative student corpus	30	59.00
	Total	120	
pres_simp_act_ab	Native expert corpus	30	63.50
	Nonnative expert corpus	30	59.50
	Native student corpus	30	59.50
	Nonnative student corpus	30	59.50
	Total	120	
pres_simp_act_intlr	Native expert corpus	30	55.83
	Nonnative expert corpus	30	51.07
	Native student corpus	30	64.27
	Nonnative student corpus	30	70.83
	Total	120	
pres_simp_act_mtd	Native expert corpus	30	63.43
	Nonnative expert corpus	30	54.00
	Native student corpus	30	62.10
	Nonnative student corpus	30	62.47
	Total	120	
pres_simp_act_resdsconc	Native expert corpus	30	68.65
	Nonnative expert corpus	30	55.45
	Native student corpus	30	70.52
	Nonnative student corpus	30	47.38
	Total	120	

pres_simp_pas_intr	Native expert corpus	30	60.50
	Nonnative expert corpus	30	66.68
	Native student corpus	30	57.95
	Nonnative student corpus	30	56.87
	Total	120	
pres_simp_pas_resdsconc	Native expert corpus	30	58.90
	Nonnative expert corpus	30	67.17
	Native student corpus	30	58.93
	Nonnative student corpus	30	57.00
	Total	120	
pres_simp_cont_resdsconc	Native expert corpus	30	62.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	60.00
	Total	120	
gen_hum_intr	Native expert corpus	30	66.32
	Nonnative expert corpus	30	58.55
	Native student corpus	30	58.52
	Nonnative student corpus	30	58.62
	Total	120	
gen_hum_mtd	Native expert corpus	30	60.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	62.00
	Total	120	
gen_hum_resdsc	Native expert corpus	30	60.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	62.00
	Nonnative student corpus	30	60.00
	Total	120	
gen_it_intr	Native expert corpus	30	59.42
	Nonnative expert corpus	30	63.55
	Native student corpus	30	59.45
	Nonnative student corpus	30	59.58
	Total	120	
gen_it_resdsconc	Native expert corpus	30	60.45
	Nonnative expert corpus	30	62.50
	Native student corpus	30	58.50
	Nonnative student corpus	30	60.55
	Total	120	

gen_nonhum_ab	Native expert corpus	30	62.97
	Nonnative expert corpus	30	59.00
	Native student corpus	30	59.00
	Nonnative student corpus	30	61.03
	Total	120	
gen_nonhum_intr	Native expert corpus	30	65.17
	Nonnative expert corpus	30	57.50
	Native student corpus	30	58.50
	Nonnative student corpus	30	60.83
	Total	120	
gen_nonhum_mtd	Native expert corpus	30	62.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	60.00
	Total	120	
gen_nonhum_resdsccconc	Native expert corpus	30	63.07
	Nonnative expert corpus	30	57.00
	Native student corpus	30	64.93
	Nonnative student corpus	30	57.00
	Total	120	
inthum_ab	Native expert corpus	30	63.50
	Nonnative expert corpus	30	59.50
	Native student corpus	30	59.50
	Nonnative student corpus	30	59.50
	Total	120	
inthum_intr	Native expert corpus	30	57.97
	Nonnative expert corpus	30	49.48
	Native student corpus	30	57.22
	Nonnative student corpus	30	77.33
	Total	120	
inthum_mtd	Native expert corpus	30	61.17
	Nonnative expert corpus	30	53.50
	Native student corpus	30	65.27
	Nonnative student corpus	30	62.07
	Total	120	
inthum_resdsccconc	Native expert corpus	30	64.35
	Nonnative expert corpus	30	58.50
	Native student corpus	30	64.67
	Nonnative student corpus	30	54.48
	Total	120	

int_it_intr	Native expert corpus	30	59.20
	Nonnative expert corpus	30	60.30
	Native student corpus	30	53.83
	Nonnative student corpus	30	68.67
	Total	120	
int_nonhum_intr	Native expert corpus	30	61.27
	Nonnative expert corpus	30	57.43
	Native student corpus	30	49.30
	Nonnative student corpus	30	74.00
	Total	120	
int_nonhum_resdsconc	Native expert corpus	30	66.10
	Nonnative expert corpus	30	56.52
	Native student corpus	30	58.43
	Nonnative student corpus	30	60.95
	Total	120	
nonint_hum_intr	Native expert corpus	30	63.23
	Nonnative expert corpus	30	60.20
	Native student corpus	30	59.90
	Nonnative student corpus	30	58.67
	Total	120	
nonint_hum_resdsconc	Native expert corpus	30	61.48
	Nonnative expert corpus	30	59.50
	Native student corpus	30	61.52
	Nonnative student corpus	30	59.50
	Total	120	
nonint_it_intr	Native expert corpus	30	65.63
	Nonnative expert corpus	30	64.57
	Native student corpus	30	55.10
	Nonnative student corpus	30	56.70
	Total	120	
nonint_it_resdsconc	Native expert corpus	30	61.70
	Nonnative expert corpus	30	64.07
	Native student corpus	30	60.23
	Nonnative student corpus	30	56.00
	Total	120	
nonint_it_mtd	Native expert corpus	30	62.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	60.00
	Total	120	

nonint_nonhum_ab	Native expert corpus	30	62.00
	Nonnative expert corpus	30	60.00
	Native student corpus	30	60.00
	Nonnative student corpus	30	60.00
	Total	120	
nonint_nonhum_intlr	Native expert corpus	30	75.73
	Nonnative expert corpus	30	55.70
	Native student corpus	30	57.80
	Nonnative student corpus	30	52.77
	Total	120	
nonint_nonhum_mtd	Native expert corpus	30	64.45
	Nonnative expert corpus	30	58.50
	Native student corpus	30	58.50
	Nonnative student corpus	30	60.55
	Total	120	
nonint_nonhum_resdsconc	Native expert corpus	30	72.83
	Nonnative expert corpus	30	59.20
	Native student corpus	30	56.97
	Nonnative student corpus	30	53.00
	Total	120	
humanargue	Native expert corpus	30	56.02
	Nonnative expert corpus	30	50.83
	Native student corpus	30	59.92
	Nonnative student corpus	30	75.23
	Total	120	
humanfind	Native expert corpus	30	69.57
	Nonnative expert corpus	30	54.92
	Native student corpus	30	59.03
	Nonnative student corpus	30	58.48
	Total	120	
humanshow	Native expert corpus	30	56.90
	Nonnative expert corpus	30	59.52
	Native student corpus	30	58.02
	Nonnative student corpus	30	67.57
	Total	120	
humanthink	Native expert corpus	30	55.80
	Nonnative expert corpus	30	57.90
	Native student corpus	30	66.03
	Nonnative student corpus	30	62.27
	Total	120	

nonhumanargue	Native expert corpus	30	75.97
	Nonnative expert corpus	30	46.78
	Native student corpus	30	56.65
	Nonnative student corpus	30	62.60
	Total	120	
nonhumanfind	Native expert corpus	30	77.35
	Nonnative expert corpus	30	50.63
	Native student corpus	30	60.72
	Nonnative student corpus	30	53.30
	Total	120	
nonhumanshow	Native expert corpus	30	58.12
	Nonnative expert corpus	30	66.52
	Native student corpus	30	46.73
	Nonnative student corpus	30	70.63
	Total	120	
nonhumanthink	Native expert corpus	30	61.48
	Nonnative expert corpus	30	59.50
	Native student corpus	30	61.52
	Nonnative student corpus	30	59.50
	Total	120	
itargue	Native expert corpus	30	61.42
	Nonnative expert corpus	30	69.45
	Native student corpus	30	54.90
	Nonnative student corpus	30	56.23
	Total	120	
itfind	Native expert corpus	30	61.80
	Nonnative expert corpus	30	58.45
	Native student corpus	30	56.30
	Nonnative student corpus	30	65.45
	Total	120	
itshow	Native expert corpus	30	58.38
	Nonnative expert corpus	30	62.45
	Native student corpus	30	56.50
	Nonnative student corpus	30	64.67
	Total	120	
itthink	Native expert corpus	30	57.50
	Nonnative expert corpus	30	63.43
	Native student corpus	30	59.57
	Nonnative student corpus	30	61.50
	Total	120	



## Kruskal-Wallis Outputs

**Test Statistics<sup>a,b</sup>**

	resrep	ab	intr	mtd	resdsconc	inthum	intnonhum
Chi-Square	6.464	11.597	9.051	8.001	3.899	8.241	8.781
df	3	3	3	3	3	3	3
Asymp. Sig.	.091	.009	.029	.046	.273	.041	.032

**Test Statistics<sup>a,b</sup>**

	intit	noninthum	nonintnonhum	nonintit	genhum	gennonhum
Chi-Square	7.616	.711	13.311	5.110	3.445	3.530
df	3	3	3	3	3	3
Asymp. Sig.	.055	.871	.004	.164	.328	.317

**Test Statistics<sup>a,b</sup>**

	genit	human	nonhuman	it	integral	nonintegral	citation
Chi-Square	2.399	7.886	7.371	6.587	10.301	10.735	7.061
df	3	3	3	3	3	3	3
Asymp. Sig.	.494	.048	.061	.086	.016	.013	.070

**Test Statistics<sup>a,b</sup>**

	general	argue	show	find	think	past	present
Chi-Square	2.465	7.425	11.586	5.877	4.836	6.761	2.866
df	3	3	3	3	3	3	3
Asymp. Sig.	.482	.060	.009	.118	.184	.080	.413

**Test Statistics<sup>a,b</sup>**

	simple	perfect	Continuous	active	passive	present_simple_active
Chi-Square	7.220	12.044	3.000	6.730	6.738	6.276
df	3	3	3	3	3	3
Asymp. Sig.	.065	.007	.392	.081	.081	.099

**Test Statistics<sup>a,b</sup>**

	present_perfect_active	present_simple_passive	present_perfect_passive	past_simple_active	past_perfect_active
Chi-Square	12.399	7.388	6.412	5.883	2.017
df	3	3	3	3	3
Asymp. Sig.	.006	.061	.093	.117	.569

**Test Statistics<sup>a,b</sup>**

	past_simple_passive	past_perfect_passive	present_continuous	gen_hum_argue	gen_hum_show
Chi-Square	8.612	3.775	3.000	5.950	3.000
df	3	3	3	3	3
Asymp. Sig.	.035	.287	.392	.114	.392

**Test Statistics<sup>a,b</sup>**

	gen_hum_think	gen_it_argue	gen_it_find	gen_it_show	gen_it_think
Chi-Square	3.000	1.985	.000	2.017	3.729
df	3	3	3	3	3
Asymp. Sig.	.392	.576	1.000	.569	.292

**Test Statistics<sup>a,b</sup>**

	gen_nonhum_argue	gen_nonhum_find	gen_nonhuman_show	int_hum_argue	int_hum_find
Chi-Square	5.334	14.682	.531	8.916	3.196
df	3	3	3	3	3
Asymp. Sig.	.149	.002	.912	.030	.362

**Test Statistics<sup>a,b</sup>**

	int_hum_show	int_hum_think	int_it_argue	int_it_find	int_it_show	int_it_think
Chi-Square	2.242	2.426	3.229	5.364	3.684	3.000
df	3	3	3	3	3	3
Asymp. Sig.	.524	.489	.358	.147	.298	.392

**Test Statistics<sup>a,b</sup>**

	int_nonhum_argue	int_nonhum_find	int_nonhum_show	int_nonhum_think	nonint_hum_argue
Chi-Square	10.349	5.893	10.260	.000	1.323
df	3	3	3	3	3
Asymp. Sig.	.016	.117	.016	1.000	.724

**Test Statistics<sup>a,b</sup>**

	nonint_hum_find	nonint_hum_show	nonint_hum_think	nonint_it_argue	nonint_it_find
Chi-Square	2.017	2.017	3.684	6.090	7.018
df	3	3	3	3	3
Asymp. Sig.	.569	.569	.298	.107	.071

**Test Statistics<sup>a,b</sup>**

	nonint_it_show	nonint_it_think	nonint_nonhum_ar gue	nonint_nonhum_fi nd	nonint_nonhum_sh ow
Chi-Square	2.334	2.017	17.393	13.216	4.325
df	3	3	3	3	3
Asymp. Sig.	.506	.569	.001	.004	.228

**Test Statistics<sup>a,b</sup>**

	nonint_nonhum_thi nk	ARGUE_ab	ARGUE_resdscon c	ARGUE_intlr	ARGUE_mtd
Chi-Square	2.017	6.051	5.151	9.928	5.736
df	3	3	3	3	3
Asymp. Sig.	.569	.109	.161	.019	.125

**Test Statistics<sup>a,b</sup>**

	FIND_ab	FIND_resdscon c	FINDintlr	FIND_mtd	SHOW_ab	SHOW_resdscon c
Chi-Square	.000	3.665	5.581	3.684	6.053	4.856
df	3	3	3	3	3	3
Asymp. Sig.	1.000	.300	.134	.298	.109	.183

**Test Statistics<sup>a,b</sup>**

	SHOW_intlr	SHOW_mtd	THINK_ab	THINK_resdscco nc	THINK_intlr	THINK_mtd
Chi-Square	13.531	4.105	.000	3.408	2.614	3.000
df	3	3	3	3	3	3
Asymp. Sig.	.004	.250	1.000	.333	.455	.392

**Test Statistics<sup>a,b</sup>**

	past_perf_act_mtd	past_perf_act_resd scon	past_perf_pas_intlr	past_perf_pas_resd scon	past_simple_act_in tlr
Chi-Square	3.000	3.000	3.000	3.000	6.494
df	3	3	3	3	3
Asymp. Sig.	.392	.392	.392	.392	.090

**Test Statistics<sup>a,b</sup>**

	past_simple_act_m td	past_simple_act_re sdscon	past_simple_pas_i ntlr	past_simple_pas_r esdscon	pres_perf_act_ab
Chi-Square	2.018	2.736	9.256	1.018	6.053
df	3	3	3	3	3
Asymp. Sig.	.569	.434	.026	.797	.109

**Test Statistics<sup>a,b</sup>**

	pres_perf_act_intlr	pres_perf_act_mtd	pres_perf_act_resd sconce	pres_perf_pas_intlr	pres_perf_pas_mtd
Chi-Square	16.116	2.121	6.985	3.867	3.000
df	3	3	3	3	3
Asymp. Sig.	.001	.548	.072	.276	.392

**Test Statistics<sup>a,b</sup>**

	pres_perf_pas_res dsconce	pres_simp_act_ab	pres_simp_act_intl r	pres_simp_act_mt d	pres_simp_act_res dsconce
Chi-Square	3.729	6.051	5.836	4.881	11.282
df	3	3	3	3	3
Asymp. Sig.	.292	.109	.120	.181	.010

**Test Statistics<sup>a,b</sup>**

	pres_simp_pas_int lr	pres_simp_pas_res dsconce	pres_simp_cont_re sdsconce	gen_hum_intlr	gen_hum_mtd
Chi-Square	4.116	9.277	3.000	5.984	3.000
df	3	3	3	3	3
Asymp. Sig.	.249	.026	.392	.112	.392

**Test Statistics<sup>a,b</sup>**

	gen_hum_resdsc	gen_it_intlr	gen_it_resdscconce	gen_nonhum_ab	gen_nonhum_intlr
Chi-Square	3.000	2.159	2.052	3.684	1.620
df	3	3	3	3	3
Asymp. Sig.	.392	.540	.562	.298	.655

**Test Statistics<sup>a,b</sup>**

	gen_nonhum_mtd	gen_nonhum_resdsc cconce	inthum_ab	inthum_intlr	inthum_mtd
Chi-Square	3.000	7.627	6.051	10.552	5.955
df	3	3	3	3	3
Asymp. Sig.	.392	.054	.109	.014	.114

**Test Statistics<sup>a,b</sup>**

	inthum_resdscconce	int_it_intlr	int_nonhum_intlr	int_nonhum_resdsc conce	nonint_hum_intlr
Chi-Square	2.118	7.613	9.942	4.731	.761
df	3	3	3	3	3
Asymp. Sig.	.548	.055	.019	.193	.859

**Test Statistics<sup>a,b</sup>**

	nonint_hum_resdsc conc	nonint_it_intlr	nonint_it_resdseco nc	nonint_it_mtd	nonint_nonhum_ab
Chi-Square	2.017	4.133	4.100	3.000	3.000
df	3	3	3	3	3
Asymp. Sig.	.569	.248	.251	.392	.392

**Test Statistics<sup>a,b</sup>**

	nonint_nonhum_int lr	nonint_nonhum_mt d	nonint_nonhum_res dscconc	humanargue	humanfind
Chi-Square	10.091	6.052	16.722	8.241	3.531
df	3	3	3	3	3
Asymp. Sig.	.018	.109	.001	.041	.317

**Test Statistics<sup>a,b</sup>**

	humanshow	humanthink	nonhumanargue	nonhumanfind	nonhumanshow
Chi-Square	2.935	5.332	13.841	19.570	8.918
df	3	3	3	3	3
Asymp. Sig.	.402	.149	.003	.000	.030

**Test Statistics<sup>a,b</sup>**

	nonhumanthink	itargue	itfind	itshow	itthink
Chi-Square	2.017	5.473	3.413	5.523	3.386
df	3	3	3	3	3
Asymp. Sig.	.569	.140	.332	.137	.336

a. Kruskal Wallis Test

b. Grouping Variable: L1

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