A corpus-based comparative analysis of metadiscourse in non-native and native English argumentative essays

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IZJAVA O AKADEMSKOJ ČESTITOSTI

Izjavljujem s punom materijalnom i moralnom odgovornošću da sam ovaj rad samostalno napravio/la te da u njemu nema kopiranih ili prepisanih dijelova teksta tuđih radova, a da nisu označeni kao citati s napisanim izvorom odakle su preneseni. Svojim vlastoručnim potpisom potvrđujem da sam suglasan/na da Filozofski fakultet Osijek trajno pohrani i javno objavi ovaj moj rad u internetskoj bazi doktorskih radova knjižnice Filozofskog fakulteta Osijek, knjižnice Sveučilišta Josipa Jurja Strossmayera u Osijeku i Nacionalne i sveučilišne knjižnice u Zagrebu.

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Contents

Abbreviations, Symbols and Font Styles used in the Thesis

NNS	Non-native speakers
NS	Native speakers
L1	First language
L2	Second language or foreign language
ESL	English as a Second Language
EFL	English as a Foreign Language
EAP	English for Academic Purposes
ESP	English for Specific Purposes
CIA	Contrastive Interlanguage Analysis
FM	Frame markers
TTR	Type/token ratio
cf.	confer (Latin for ‘compare’)
i.e.	id est (Latin for ‘that is’)
(…)	signals an omitted section of an example or quotation
vs.	vice versa (Latin for ‘the other way around’)
Bold highlight	highlighted metadiscourse markers in the example sentence
Underline	underlined item in the example sentence referring to a phenomenon external to the text
Italic	example sentences extracted from corpora

List of tables

List of figures

1. INTRODUCTION

The interest in academic writing research has been growing over the past few decades, and the importance of academic writing to both individuals within the academic community and society as a whole has been well articulated (e.g. Hyland, 2000; 2009). Academic texts enable scholars to contribute to knowledge within their respective fields of study (Hyland, 2009). In society, academic discourse became "the language of literacy" (Halliday & Martin, 1993, p. 11), which includes the ability to use language knowledge to form coherent texts. In communicative competence models, this ability is included under the notion of discourse competence (cf. Canale, 1983; Bachman, 1990; Celce-Murcia et al., 1995; Bachman & Palmer, 1996; CEFR, 2001; Celce-Murcia, 2007; Bagarić Medve & Pavičić Takač, 2013a). Discourse competence referred to as the ability to make connections between form and meaning in order to create coherent spoken or written texts, i.e. the ability to compose texts efficiently, is therefore an important aspect of communicative competence. This encompasses more than just knowledge of grammar and vocabulary; it also entails rhetorical skills in forming texts of various types.

The present study is inspired by the contemporary research approach to the use of academic language which challenges the conventional belief that an academic text should present a detached, objective, and impersonal description of scientific phenomena (Hyland, 2005a). This research approach implies that academic discourse offers valuable insights into the social dynamics involved in constructing, negotiating, and persuading academic knowledge. Essentially, it highlights that academic discourse is a type of social interaction where knowledge is built through a collaborative process between writers and readers (Hyland, 2004a; 2009). As academic discourse has attracted an increasing attention in the fields of both language teaching and research, researchers have become more interested in "*how* academics write rather than simply *what* they write about" (Hyland & Salvager-Meyer, 2008, p. 297). In other words, research has primarily focused on the discursive practices of academic writing rather than the subject matter being addressed. Linguistic research on academic writing is therefore particularly interested in how language is utilized to construct arguments and convey perspectives with the aim of producing a text that readers will perceive as persuasive and acknowledge as a valid contribution to the existing body of knowledge (Hyland, 1998b). The term widely used among researchers in current discourse analysis to denote "writing about

writing, whatever does not refer to the subject matter being addressed" (Williams, 1981, p. 211-212) or "text about text" (Ädel, 2006, p. 2) is metadiscourse.

Over the past few decades, metadiscourse, as a linguistic concept, has received much attention in the field of applied linguistics. This attention has been particularly notable in the areas of composition, academic writing, and discourse analysis. If we focus on metadiscourse as a feature of written discourse, a text – apart from the fact that it must fit together logically – must work for both the reader and the writer, i.e. when we write, we use language not just in order to refer to the text and to inform but also to refer to us as writers and our imagined readers. To put it differently, metadiscourse encompasses various strategies used to organize, interpret, comment on, or evaluate the content of a text, aiming to elicit a response from the reader (Vande Kopple, 1985). Consequently, the analysis of metadiscourse is of potential value due to the close connection between discourse competence and metadiscourse markers, which are observable linguistic features in a text. While there is no consensus on how to categorize metadiscourse, metadiscourse markers serve at least two functions. Firstly, they operate at the textual level (referred to as textual or interactive metadiscourse) aiding in establishing coherence and persuasiveness between the ideas presented in the text. Their purpose is to "organize propositional information in ways that a projected audience is likely to find coherent and convincing" (Hyland, 2005a, p. 50). The second function is interpersonal (referred to as interpersonal or interactional metadiscourse), where they reveal the writer's attitude towards the subject matter or the text itself. In essence, metadiscourse is "not a separate or separable set of stylistic devices that can either be included or not without affecting how a text is presented and read" (Hyland, 2005a, p. 23). Instead, it serves as an integral and indispensable feature of a text.

According to Hyland (2005a), metadiscourse is viewed as a means of social interaction that enhances the effectiveness of texts. A number of studies have examined how writers utilize metadiscourse to shape their arguments and meet the expectations of their intended readers (Hyland, 2004b). As a result, metadiscourse has been identified as a feature of effective writing, both among native and non-native writers, facilitating the expression of ideas and engagement with readers (Intraprawat & Steffensen, 1995; Cheng & Steffensen, 1996; Hyland, 2005a). Moreover, research has demonstrated that metadiscourse plays a vital role in academic discourse by enhancing the readability and persuasiveness of academic texts (Crismore & Farnsworth, 1990; Intraprawat & Steffensen, 1995; Cheng & Steffensen, 1996; Hyland, 1998b; 2004a; 2004b; 2005). Since academic discourse encompasses various genres produced by students, such as undergraduate argumentative essays and theses, metadiscourse has gained

prominence in academic writing instruction as it assists both native and non-native writers in effectively expressing their ideas and engaging with their readers (Hyland, 2005a).

Previous research has shown that the way writers use language in constructing their argumentation in academic writing is to a considerable extent disciplinary-specific, and that disciplines have their preferred writing conventions which reflect distinctive disciplinary knowledge domains (Hyland, 2004b). In addition to discipline variables, research into intercultural rhetoric has shown cultural variations in academic writing, i.e. that writing styles of distinctive cultures have their own rhetorical conventions (e.g. Vassileva, 1998; Fløttum et al., 2006; Dueñas, 2001; 2007; Dahl & Kinn, 2006; Zarei & Mansoori, 2010; Hu & Cao, 2011; Mu et al., 2015; Sultan, 2015; etc.).

English has gained great cultural, political, and economic significance, establishing itself as one of the most important languages worldwide. According to Mauranen (2010), it has become "the global language of academia" (p. 15). Consequently, non-Anglophone scholars and students face substantial linguistic and communicative challenges in acquiring proficiency in academic English as they are expected to adhere to the conventions typical of native English-speaking academic discourse. This proficiency goes beyond basic vocabulary and grammar knowledge and requires the mastery of rhetorical skills in creating various types of texts. This includes knowing how to effectively present facts, construct convincing arguments, and manage the visibility of the writer and reader (Ädel, 2006). Therefore, as Ädel (2006) claims, it would be a mistake to assume that "as long as a learner is fluent in the foreign language and masters essential parts of its grammar and vocabulary, writing texts is a straightforward matter" (p. 3). While there are concerns about setting native speakers' language performance as the normative model for English learning (Ellis, 1994), non-native English learners in academic contexts prioritize achieving native-like proficiency in writing (Hyland & Milton, 1997; Hinkel, 2004; Ädel, 2006). Furthermore, a particular attention should be given to linguistic features that native speakers strategically employ to effectively achieve specific communicative purposes, which may differ from those of non-native learners (Park & Oh, 2018). The strengthened role and status of English as the global language of academia have resulted in pressure on academics to publish their work in English (Hamp-Lyons, 2011).

Hence, there has been a notable interest in cross-cultural research focusing on the variation observed in academic texts written in English (e.g. Blagojevic, 2004; Abdollahzadeh, 2011; Murillo, 2012; Povolná, 2013; Golmohammadi et al., 2014, Yagiz & Demir, 2014; etc.). These studies examine how non-native writers from different discourse communities, influenced by their first language (L1) writing habits, attempt to adhere to the academic writing

norms prevalent in the dominant Anglo-American tradition (Povolná, 2013). Consequently, further research is needed, as the findings of these studies can offer valuable insights into the use of metadiscourse devices selected by both non-Anglophone scholars and students. Such insights can enhance their awareness of preferred rhetorical choices in L1 academic writing compared to English, enabling them to improve their rhetorical skills when writing in L2 academic English.

1.1 Present research

The present thesis investigates the use of metadiscourse in student academic writing. It aims to provide a corpus-based systematic account of the way non-native speakers of English use metadiscourse. Their production is compared to native speakers' choices in order to identify similarities and differences in linguistic patterns as well as the dialogic nature of persuasive writing and the author's understanding of the reader. As this study builds on previous work in this line of research, it focuses on the use of metadiscourse as part of the rhetorical conventions in academic writing. The majority of previous research on metadiscourse have primarily focused on analyzing different forms of academic writing; therefore, there is a plethora of existing research on metadiscourse that can be leveraged to gain valuable insights. Within the field of academic writing a significant attention has been given to the use of metadiscourse in a range of academic genres such as textbook (e.g. Kuhi & Behnam, 2011), research articles (e.g. Hyland, 2005b), book reviews (e.g. Tse & Hyland, 2006), theses and dissertations (e.g. Bunton, 1999), student essays (e.g. Ädel, 2006), etc.

This study aims to contribute to the increasing need for a more comprehensive investigation into the use of metadiscourse in argumentative essays written by non-native speakers of English. By focusing on non-native speakers' 'academic' English, the research seeks to more extensively examine the features of metadiscourse use in this context. The main motivation for selecting argumentative essays in this research is the importance of the text type in L2 English composition (Ädel, 2006), the importance of the genre for academic success (Kuteeva, 2011), as well as the fact that it is one of the most common academic genres students come across (Johns, 1993; 1995; Hyland, 1998b; 2009; Wu, 2006; Ädel, 2008; Lee & Deakin, 2016). Moreover, this type of writing may be especially more challenging for non-native English writers, since it is considered a highly social practice which requires positioning ones' claims carefully for the readers in the community or expressing disagreement on previous views and voices (Swales, 1990). Finally, it typically calls for the use of metadiscourse, as it is

rather predominant in argumentative writing, since "authors refer quite frequently to the state of the argument, to the reader's understanding of it, or to the author's understanding of his own argument" (Crismore, 1989, as cited in Ädel, 2006, p. 5). Thus, metadiscourse markers were chosen as the target language structure for this research because of their important role in academic discourse. Moreover, the acquisition of metadiscourse markers is a complex process that encompasses multiple dimensions. It entails not only knowledge and understanding of the genre, which involves engaging with the readers (Hyland, 2004a; 2004b; 2005), but also necessitates the writer's understanding of the readers' expectations regarding the presentation of ideas (Kuteeva, 2011). Additionally, it requires a strong command of the linguistic resources employed to convey meaning (Morgan, 2011).

The empirical research into argumentative essays in English as a foreign language in Croatian context is, to the best of my knowledge, generally limited. Aimed to fill this research gap on the use of metadiscourse by L1 Croatian speakers writing in English, the present study can be regarded as an attempt to provide a systematic account of the way non-native writers use metadiscourse in writing. In addition to advancing the knowledge on an aspect of student academic writing in the Croatian context, the cross-linguistic perspective of the present study extends its relevance to the domain of inter-cultural rhetoric. In particular, it is expected that the findings of the current study may add to the existing body of knowledge on the cross-cultural academic writing conventions characterizing student discourse and may contribute to a more in-depth understanding of how non-native speakers of English shape argumentative texts and interact with readers, as well as whether they apply the Anglophone academic discourse norms. The findings may be especially relevant for Croatian students who may benefit from an insight into the culturally-specific patterns in the use of metadiscourse in argumentative essays and may be used for academic writing teaching practice in order to improve students' rhetorical skills when writing in L2 academic English.

1.2 Research aims

A crucial aspect of second language (L2) learners' communicative competence is the ability to establish meaningful connections between the form and meaning in order to produce coherent and meaningful spoken or written texts, known as discourse competence. In various models of communicative competence, the component of discourse competence encompasses the notions of cohesion and coherence (cf. Canale, 1983; Bachman, 1990; Celce-Murcia et al., 1995; Bachman & Palmer, 1996; CEFR, 2001; Celce-Murcia, 2007; Bagarić Medve & Pavičić Takač,

2013a). Based on the assumption that constructing a coherent text necessitates the effective use of metadiscourse (which includes various cohesive and interpersonal features that connect a text to its context), the main objective of this study is to examine students' discourse competence, specifically their utilization of these rhetorical devices in argumentative essays. In other words, the aim of this research is to analyze and determine the characteristics of the use of metadiscourse in argumentative essays written by students of English as a foreign language and to compare them with those written by English native speakers. By contextualizing the present study in previous research, it is plausible to expect that the use of metadiscourse in non-native and native speakers' texts might show variation. Specifically, this study hopes to address the following research questions:

1. What is the frequency of metadiscourse markers in argumentative essays by Croatian non-native users of English compared to native English users?

2. What is/are the most salient category/categories and subcategory/subcategories of metadiscourse markers, i.e. what are the metadiscourse features in the non-native speakers' argumentative essays in relation to native speakers' argumentative essays?

3. How is the frequency of metadiscourse markers distributed in the distinctive parts of argumentative essays by non-native speakers of English in relation to native speakers of English?

The study adopts the definition of metadiscourse as proposed by Hyland (2005a) and broadly follows his classification scheme of metadiscourse, i.e. his Interpersonal Model of Metadiscourse (Hyland, 2005a, p. 49), which is considered to be one of the most elaborate models of metadiscourse in academic writing. The methodological framework of the present study is based on a partial (or one-way) Contrastive Interlanguage Analysis (CIA)[1] (see Granger, 1993) that is conducted so that frequency and statistical comparisons are made only for those items identified in the non-native speakers' corpus.

The present study is a corpus-based study. In applied linguistics, a corpus-based investigation aims for hypothesis-testing where the researcher checks his/her own intuitions

[1] The term Contrastive Interlanguage Analysis (CIA) was introduced by Granger (1993, p. 43) to differentiate it from classical Comparative Analysis (CA). Unlike CA, which systematically compares different levels of linguistic systems between two or more languages, CIA focuses on comparing native and learner varieties of the same language. CIA investigates the differences between what non-native and native speakers of a language do in similar situations with the goal of identifying the characteristics of a specific interlanguage (Ädel, 2006, p. 8).

about the language use against corpus data. In other words, a corpus-based approach uses a corpus as a method for explaining an existing theory or a hypothesis (McEnery & Hardy, 2012). While large corpora, such as the British National Corpus (BNC), have been built for general or academic purposes, a growing number of corpus-based studies have utilized small-scale, specialized corpora in investigating academic writing (Feng, 2014). The present corpus consists of two comparable corpora, each consisting of a similar number of words. The native speakers (NS) corpus (65 025 words) was drawn from the Louvain Corpus of Native English Essays (LOCNESS)[2] (cf. Granger, 1993), consisting of argumentative essays written by L1 British and American university students. The non-native speakers (NNS) corpus (64 228 words), compiled by the author of the present thesis for the purposes of the comparable analysis, consists of the texts written in English by Croatian university MA students of English. The total size of the corpus is 129 253 words.

The study combines corpus linguistic and qualitative methodology (Sanderson, 2008). The former involves the identification of metadiscourse markers from the corpus by the means of the corpus query tool SketchEngine (http://www.sketchengine.eu). The quantitative analysis involves a comparison of the relative frequencies (n/1000) of the data. It aims to reveal the preferred choices of the metadiscourse markers characterizing the cross-cultural writing under study. The qualitative methodology employed in this study involves analyzing the contextualized use of metadiscourse markers to address the potential issue of multifunctionality associated with these items. Subsequently, the examination focuses on identifying where in the text metadiscourse appears, exploring any patterns of distribution that may exist across the corpora. Through this analysis, valuable insights can be gained regarding the tendencies for particular types of metadiscourse to occur in specific positions within the text. For instance, the findings may reveal evidence indicating that certain parts in the structure of the argumentative essays serve as particularly suitable areas for enhancing the visibility of the writer and/or engaging the reader. Through the adoption of multiple methodological approaches, this study aims to offer a comprehensive analysis of the specific linguistic structures under investigation and their metadiscourse functions within the chosen cross-cultural argumentative writing context. However, it is important to emphasize that the analysis presented in this study is based on a single student academic genre. Given this limitation, as well as other constraints elaborated on in the Methodological framework, it is important to note

[2] International corpus project that offers a comparable corpus of native-speaker material, referred to by the acronym LOCNESS (the Louvain Corpus of Native English Essays; see Granger 1993).

that this study does not claim to capture the overall characteristics of student argumentative writing or student discourse in both L1 and L2 English. Therefore, the interpretation of the findings should be understood as applicable only to the corpus used in this study.

1.3 Structure of the thesis

The current thesis is organized as follows. This Chapter provides an overview of the thesis along with its major objectives. Chapter 2 examines the theoretical framework, which is divided into four sub-chapters. The first sub-chapter discusses the common characteristics of academic discourse and highlights the social constructionist perspective as the underlying framework for contemporary studies on academic discourse. It emphasizes the understanding of discourse communities and genres, with a specific focus on the rhetorical structure of argumentative essays as a key genre in this research. Furthermore, it explores the role of metadiscourse markers in academic discourse, which is the primary focus of this study. The second sub-chapter of Chapter 2 presents a general account of metadiscourse. It introduces the concept of metadiscourse, including its definition and categorization, followed by a description of Hyland's (2005a) Interpersonal Model of Metadiscourse and its linguistic expressions. The Interpersonal Model of Metadiscourse is compared to other models of metadiscourse, with a particular attention given to conceptual issues related to metadiscourse. The third sub-chapter of Chapter 2 examines previous research and empirical findings on metadiscourse in academic discourse. It also explores the investigation of metadiscourse features in student academic writing relevant to this study, as well as the examination of metadiscourse features in the context of teaching academic discourse.

Chapter 3 presents a comprehensive outline of the methodological framework, with a specific emphasis on describing the *tertia comparationis* established for the comparative analysis in this study, as well as providing an overview of the taxonomy of the metadiscourse markers used. Chapter 4 is the analytical section of the thesis and consists of three sub-chapters dedicated to the quantitative analysis of the metadiscourse markers under investigation. Additionally, one sub-chapter focuses on the distribution patterns of metadiscourse markers throughout individual essays, the entire essay structure and individual paragraphs. It examines how specific metadiscursive expressions are distributed within texts. The analytical part concludes by examining the distribution of individual metadiscourse markers.

Chapter 5 engages in a comprehensive discussion of the obtained results. Chapter 6 outlines the conclusion of the present study including limitations, implications, and

recommendations for future research. The final part of the thesis includes references, appendices, summary and biography.

2. THEORETICAL FRAMEWORK

2.1 Introduction

The following chapter serves the purpose of presenting the overall framework against which metadiscourse is approached in the present study. The focus of the research is to explore the interpersonal dimension, specifically the use of metadiscourse, in argumentative essays as one of the key written genres in student academic discourse. In line with this major objective, the chapter also provides a broad characterization of academic discourse, highlighting the aspects that are relevant to the study's objectives. Academic texts, being more than just a collection of propositional content, involve social and communicative engagement. Hence, discourse analysis in this study centers on metadiscourse as a key element, which offers insights into patterns of interaction (Vande & Kopple, 1985; Crismore et al., 1993; Hyland, 2000; 2005a). The concept of a discourse community is outlined as well as the genre-based approach to the study of academic discourse. A special attention is given to the genre of the argumentative essay, narrowing down its focus to the rhetorical structure of the argumentative essay as the key focus of the present study. The focus then narrows to metadiscourse as one of the genre specific conventions. The discussion continues with the general characterization of metadiscourse, its defining properties, as well as important issues concerning the analytical approaches to classifying metadiscourse. Finally, metadiscourse is discussed within a well-established model of metadiscourse adopted in the present study, i.e. Hyland's (2005a) model of metadiscourse and its interactive and interactional dimensions. The types of metadiscourse and their respective linguistic realizations are addressed. In the closing section of this chapter, an overview of the relevant empirical studies on the use and different features of metadiscourse in academic discourse analysis is presented.

2.2 Academic discourse

As far as the terminology is concerned, the use of academic language has been studied under different labels, such as scientific discourse primarily used to discuss the language of 'hard' sciences. However, the term academic discourse has gradually become more preferred in Anglo-Saxon literature (Suomela-Salmi & Dervin, 2008). As mentioned in Chapter 1, over time, the perception of academic writing has shifted from being seen as an objective and impersonal form of discourse to one that involves interaction between the writer and readers (Hyland, 2005a). This change is connected to the idea of the social construction of knowledge, which forms the conceptual foundation for contemporary research on academic discourse. As

a result, there is now a significantly different understanding of the purpose of academic writing (Hyland, 2004a). This evolving perspective acknowledges that rhetoric plays a role in academic discourse and emphasizes that discussing results and theories is not about revealing absolute truth, but rather about engaging in specific forms of persuasion (Hyland, 2005a; 2005b).

In other words, the social constructivist approach to academic writing views it as a form of writing that is socially rooted and primarily focused on persuasion. Academic writing, like any other form of writing, is influenced by specific social and rhetorical contexts. One important concept in academic writing is the idea of a "discourse community" which consists of individuals who share common goals, engage in collaborative processes, and follow specific discourse conventions (Swales, 1990, p. 24). Within a discourse community, members tend to produce texts that display certain similarities because the community itself plays a significant role in shaping their rhetorical styles and patterns (Hyland, 2000; 2009).

Broadly speaking, academic discourse refers to the "ways of thinking and using language" within academic settings, forming the foundation of all social activities related to academic life (Hyland, 2009, p. 1). Along these lines, Hyland (2011) suggests several key characteristics of academic discourse, which can be summarized as follows. Firstly, academic writers aim to convince readers to agree with their presented arguments. Additionally, these arguments are typically presented according to the norms specific to their respective fields of study. Apart from disciplinary differences, culture also influences how ideas and thoughts are expressed. Lastly, when presenting academic arguments, there needs to be a negotiation between the writer and the reader as the writer must consider the reader's perspective to ensure the effective communication of the message.

2.2.1 *Academic genres*

The academic community encompasses different groups engaged in a range of activities and tasks, which has resulted in a wide variety of academic genres that correspond to specific purposes and rhetorical situations of writing (Swales, 2004; Hyland, 2009). In academic discourse, genre is often defined as "a distinctive category of discourse of any type, spoken or written" (Swales, 1990, p. 33) that serves as "responses by speakers or writers to the demands of a social context" (as cited in Cheng, 2007; Johns, 2002, p. 3).

According to Hyland (2004a), genres encompass established patterns and conventions, but their interpretation is flexible, allowing for adaptation and negotiation. While linguistic and textual aspects are acknowledged as important components of genres, the social dimension of

communication and the relationship between genres and their social context hold greater significance. This perspective is based on the idea that community members often recognize commonalities in the texts they encounter regularly, drawing upon their past experiences to interpret the writer's intended meaning.

Therefore, the concept of genre is important as it provides a valuable and effective framework to research in various aspects of writing. In that sense and with respect to the main focus of this study, academic discourse also includes students' genres, such as undergraduate and graduate essays, postgraduate theses, etc., collectively labeled as student discourses. For the reasons accounted for here, in this study the term academic discourse is adopted. The study is based on the idea of a language use as a form of social practice (Fairclough, 1993).

2.2.1.1 *The genre of the argumentative essay*

As mentioned in Chapter 1, to focus on argumentative texts in the present study was motivated by their significance and prevalence in academic writing. Additionally, argumentative writing, which requires careful positioning of claims for readers within the academic community, is known to employ specific rhetorical features, such as metadiscourse (Crismore & Farnsworth, 1998; Hyland, 1998b; 2005; Ädel, 2006; Anwardeen et al., 2013; etc.). Furthermore, considering that academic writing is a highly social practice, managing such interaction can be particularly challenging for non-native English writers (Wingate, 2012). Given the significance of metadiscourse in academic contexts and the common struggles faced by university students when writing argumentative texts, there has been an increased focus on research in composition, rhetoric, and text structure. Metadiscourse has emerged as a characteristic of good writing among both native and non-native writer student writers (Intaraprawat & Steffensen, 1995; Cheng & Steffensen, 1996). Therefore, the decision to focus on argumentative essays is also driven by the aim to contribute to the understanding of cross-cultural academic writing conventions in student discourse and to develop evidence-based materials for academic writing instruction in order to enhance students' rhetorical skills when writing in L2 academic English.

This study adopts the perspective of genre as social action, as proposed by Hyland (2004a). According to Hyland (2004a), genre-based writing is a situated social action that goes beyond focusing solely on the textual and linguistic aspects of writing. It considers the context in which texts are produced, the writer's purpose, and eventually views writing as a means of communicating with the audience (Chala & Chapetón, 2012). In Hyland's view (1990), common student genres have identifiable structures that allow students to shape their work

according to genre conventions. Genre analysis emphasizes examining texts based on their purpose rather than their content. For instance, Hyland (1990) describes the structure of the argumentative essay genre as consisting of functional units that contribute to the discourse. The purpose of an argumentative essay is to persuade the reader of the validity of a central statement. This is accomplished through effectively presenting arguments, which are recognized based on shared knowledge of how a coherently organized text should be. The argumentative essay follows a typical sequence of information expected in that particular text type. Consequently, if this formal structure is not employed, communication is impaired, and the reader may become confused or unconvinced.

Additionally, according to Hyland (1990), the argumentative essay is a text type that follows a three-stage structure which serves as the organizing principles of the genre – Thesis, Argument, and Conclusion. Each stage has its own structure expressed in terms of moves, which are not relevant to the current study and will not be further discussed here. Generally, the thesis stage introduces the proposition to be argued, the argument stage presents grounds or evidence supporting the thesis, and the conclusion stage consolidates the discourse and reinforces the communicated message. This description of the argumentative essay emphasizes that the structure of a text significantly contributes to the meanings it conveys, and understanding this structure can be a valuable pedagogical resource. The purpose of an argumentative essay is to convince, gain agreement, justify a particular perspective on facts, challenge interpretations of an event, or persuade the reader to reconsider their opinion on a subject (Chala & Chapetón, 2012). Along these lines, argumentative writing in the present study is defined as a genre that addresses controversial topics, where a writer states a claim on a controversial issue and supports it with evidence to persuade the audience (Wood, 2001; Wingate, 2012).

Essay model is characterized by a three-part argumentative structure – introductory paragraph, body paragraph, and concluding paragraph. According to Chala and Chapetón (2012), the introductory paragraph presents the topic and prepares the audience favorably so that they accept the thesis. Here, the writer can use different resources such as appealing to a precedent fact or event on which the thesis is based, adducing shared values or values made out of tradition, resorting to authority or resorting to the emotions of the audience. The general statements provide background information about the topic of the essay and the thesis statement introduces the main idea. The body is composed of two or more paragraphs each supporting the thesis statement. Each paragraph includes a topic sentence (the main idea of the paragraph), supporting sentences, and sometimes a concluding sentence. To support the topic sentences,

the writer can present facts, so that the reader knows the defined thesis and positions him/herself in the writer's favor, and arguments that the writer considers are in favor of his/her thesis and that can be used to refute counterarguments. The concluding paragraph reminds the reader of the most important aspects that were presented and implies a reinforcement of the arguments that were used. In addition, it leaves the reader with the writer's final thoughts on the subject. The view presented here sees writing as a social practice in combination with a genre-based perspective allowing students to present their ideas and feelings with textual and rhetorical conventions that this genre imposes.

2.2.1.2 *Metadiscourse as a genre-specific convention*

The changing perspective on academic discourse suggests that discussing results and theories involves employing specific persuasive techniques. According to Hyland (2005a), when academics aim to convince their audience of the validity of their arguments, they must make linguistic choices that are recognized as persuasive within the conventions of that particular audience. This entails using the established disciplinary and genre-specific conventions. One way in which genres differ, both internally and in relation to other genres, is through their use of distinct rhetorical elements, known as metadiscourse. Metadiscourse plays a significant role in academic writing as it is context-dependent and influences how writers respond to and shape the language used in various genres (Hyland, 2000; 2005a). In academic genres, the function of metadiscourse is closely linked to the use of metadiscourse devices, which allow writers to articulate and establish interactions between themselves and their readers. These devices help determine the level and type of elaboration, clarification, guidance, and interaction that the writer deems necessary (Hyland, 2005a). In other words, metadiscourse can be seen as a form of social engagement that reflects how writers position themselves within their discourse, guiding their readers and expressing their attitude towards the content and audience of the text (Hyland, 2000; 2005a).

Interest in metadiscoursal aspects of genre has been encouraged by a growing interest in the interpersonal aspects of academic writing (Hyland, 2005a). In line with its main focus, the current study follows contemporary approaches to analyzing academic discourse, specifically those that emphasize the interpersonal dimension present in academic texts. Previous studies in this area have explored interaction within academic texts from various perspectives. In this respect, one commonly utilized method for investigating written texts and examining interaction in academic writing is through the lens of metadiscourse (Hyland, 2017).

While these studies may have used different labels and classifications, they all examined elements that serve metadiscursive functions.

2.2.2 *Summary*

In order to situate the current research in the context of discourse analysis approaches to the study on academic discourse, the primary purpose of the preceding section has been to outline the broad concept of academic discourse in English relevant to the purpose of the present study. It primarily relates to the social construction of scientific knowledge which underlies the conceptualization of academic discourse as a form of a socially-situated practice shaped by the specifics of a particular discourse community (Swales, 1990; Hyland, 2004a; 2004b; 2005).

Next, the section has informed on the concepts of a discourse community as well as of a genre in the study of academic language. Discourse communities may exhibit different conventions in constructing and formulating knowledge (Hyland, 2006a). Genres, on the other hand, are characterized as texts sharing similar communicative purposes, audiences, structural layouts, which enable discourse communities to accomplish communicatively their goals (Swales, 1990). The section then discussed the genre of argumentative essay, as one of the key student academic genres, and its conventional three-part rhetorical structure.

The final section addressed the use of metadiscourse markers to enhance persuasiveness creating a convincing reader-environment, which involves deploying disciplinary and genre-specific conventions (Hyland, 2005a).

2.3 The concept of metadiscourse: definitions and issues

Metadiscourse has become a widely recognized concept in the fields of discourse analysis, pragmatics, and language teaching which pertains to the various ways writers and speakers engage with their audience through language. It was originally introduced by the linguist Zelig Harris in 1959 and has since gained a significant attention in applied linguistics. Notable contributions to the study of metadiscourse include pioneer works by Williams (1981), Vande Kopple (1985), and Crismore (1989). Over the past four decades, the interest in metadiscourse has steadily grown, driven by a desire to understand the relationship between language and its contextual usage and to employ this knowledge to enhance language and literacy education (Hyland, 2017).

Despite its established status, attested by the many studies dedicated to it, the central problem in the study of metadiscourse is vagueness in defining and inconsistency in classifying

metadiscourse (Hyland, 2005a). In other words, it is still difficult to pinpoint what metadiscourse is, as one of the major issues in the study of metadiscourse has to do with the definition itself. It is often understood in different ways and used to refer to different aspects of language use. It may also be realized by various linguistic forms and may fulfil a number of pragmatic functions in the text.

2.3.1 *Definition of metadiscourse*

Over the decades, scholars who have explored the role of metadiscourse have provided their own definitions. In contrast to earlier perspectives that regarded language as "merely propositional and expository mode of representation" (Hyland, 2010, p. 127), metadiscourse has been defined as "writing about writing" (Williams, 1981, p. 40), "communication about communication" (Vande Kopple, 1985, p. 83), or "discourse about discourse" (Hyland, 1998, p. 437). According to Vande Kopple (1985) and Crismore et al. (1993), metadiscourse serves as linguistic material within texts, indicating the presence of the writer without necessarily adding new propositional information. Crismore et al. (1993) further suggest that metadiscourse aids readers in organizing, interpreting, and evaluating the provided information. In a similar vein, Hyland and Tse (2004) view metadiscourse as writing devices employed by authors to structure their discourse and convey their stance towards the text or the reader. More recently, Williams (2007) commented that metadiscourse refers to the language used not to express the substance of ideas but to refer to oneself, the reader or the act of writing.

Despite the difficulties in pinpointing a precise definition of metadiscourse, according to Mauranen (2010), there seems to be a broad agreement on its core conceptualization. Metadiscourse is essentially 'discourse about discourse' in a sense that all researchers include it in their definitions and interpretations of the object of the study. In the current discourse analysis, the term 'metadiscourse' is used as an umbrella term and includes various cohesive and interpersonal features which help relate a text to its context. In other words, rhetoricians, applied linguists and composition theorists generally agree on using metadiscourse in a broad sense, i.e. that it refers to various linguistic features used to guide a reader through a text so both the text and the writer's stance is understood (Hyland, 2017). The common thread in definitions on metadiscourse is the fact that as a kind of a comment on the current text, that is usually distinct from the content or subject matter, it concerns meanings other than propositional ones (Williams, 1981; Crismore, 1983; Vande Kopple, 1985; Hyland, 2005a;

Ädel, 2006). The central concept is that language serves not only to convey information about the world but also to refer to itself, providing tools for readers to structure, understand, and assess the content. This perspective draws on foundational ideas in linguistic research, such as Jakobson's notion of the "metalinguistic function" (1980), which pertains to language that directs attention to the text itself. Additionally, Halliday's concept of "metaphenomena" (1985, p. 271) is relevant as it describes the categories of the language rather than the real world (Hyland, 2017).

The majority of metadiscourse researchers have embraced the widely accepted three-part model of language functions proposed by Halliday (1994) as their framework. This model views language as serving three key functions: exchange (interpersonal), message (textual), and representation (ideational). Within this framework, metadiscourse fulfills two primary functions. Firstly, it serves the interpersonal function by allowing the speaker or writer to establish their presence in the discourse through the expression of personal emotions, attitudes, or interactions with the audience. Secondly, it serves the textual function by enabling the speaker or writer to intervene in the text itself, organizing the content, providing reminders, enumerating points or indicating forthcoming information within the discourse.

However, Ädel (2006) argues that this classification creates a dichotomy between metadiscourse and propositional material limiting its accuracy in describing metadiscourse as a discourse phenomenon. To address these issues, as an alternative to the predominant Hallidayan model, she introduces the reflexive model, which incorporates Jakobson's functional model of language. This model identifies three functions of language: metalinguistic, expressive, and directive. Each function corresponds to a component of the speech event: text/code, writer, and reader. Metadiscourse in this model focuses on one or more of these components, with the metalinguistic function being essential. In short, the reflexive model emphasizes the visibility of the writer and the reader in the writing process in addition to the text itself. It highlights their roles and signals their presence as part of the communicative situation and focuses on reflexivity as a key feature providing more precise descriptions of metadiscourse (Ädel, 2006). These different views in the study of metadiscourse are often presented as a dichotomy between 'integrative' (Mauranen, 1993) or the 'interactive model' (Ädel, 2010) and 'non-integrative' (Mauranen, 1993) or the 'reflexive model' (Ädel, 2006; 2010), which will be discussed in more detail in Section 2.3.4.

However, definitions of this kind still do not explain the inconsistencies associated with the concept of metadiscourse in the sense of what it is or what it includes, and this is where the general agreement ends. There are considerable disagreements among metadiscourse theorists

over issues such as what the boundary and relationship between non-propositional and propositional discourse is, as well as how to identify and classify metadiscourse. Hyland (2005a; 2017) refers to these inconsistencies as aspects of fuzziness in the concept of metadiscourse. Overall, he argues that the metadiscourse is 'fuzzy' in the sense that the concept itself lacks definite boundaries and that drawing clear boundaries between what qualifies as metadiscursive and what does not is a challenging task. These issues will be discussed in more detail in Section 2.3.3.

With respect to the ambiguities related to the term metadiscourse, at this point, it is necessary to lay out a clear definition adopted in the present study. The present understanding of metadiscourse is based on the notion that "metadiscourse is the cover term for the self-reflective expressions used to negotiate interactional meanings in a text, assisting the writer (or speaker) to express a viewpoint and engage with readers as members of a particular community" (Hyland, 2005a, p. 37). Metadiscourse is seen here as an open-ended set of language items that can realize different meanings which are recognized only in actual instances of realization.

Hyland's definition of metadiscourse encompasses three key principles. The first principle states that metadiscourse is separate from the propositional aspects of discourse. In order for something to be considered metadiscourse, there must be elements that are not metadiscourse, typically associated with propositional content (Hyland, 2017). The second principle focuses on the aspects of the text that embody interactions between the writer and reader. Hyland argues against the traditional division of textual and interpersonal functions in metadiscourse literature (Hyland & Tse, 2004; Hyland, 2005a). Instead, he suggests that all metadiscourse is inherently interpersonal, taking into account the reader's knowledge, experiences with texts, and processing needs and that it provides writers with rhetorical resources to facilitate this interaction. In doing so, Hyland (2005a) distinguishes between interactive resources that signal text arrangement based on the reader's likely knowledge and understandings, and interactional resources that involve the reader collaboratively in the text's development. In brief, he suggests that all metadiscourse refers to interactions between the writer and reader (Hyland, 2005a). Finally, the third key feature of metadiscourse involves the differentiation between 'internal' and 'external' reference. An internal relation pertains to organizing the discourse and is purely communicative while an external relation refers to activities and situations outside the text. Hyland (2005a) argues that it is important to distinguish metadiscourse from propositional content as metadiscourse primarily concerns relations internal to the discourse and encompasses the interactional aspects of discourse. In

short, Hyland's definition of metadiscourse includes the distinction from propositional content, the emphasis on writer-reader interactions, and the differentiation between internal and external reference within the discourse.

The previous section has suggested that uncertainty about what features to include when analyzing metadiscourse and how to categorize them resulted from the conflicting definitions and vagueness of the concept itself. The next section briefly outlines the categorization schemes proposed in the literature leading to Hyland's (2005a) Interpersonal Model of Metadiscourse adopted in the present study (Section 2.3.2.1).

2.3.2 *Classification of metadiscourse and metadiscourse models*

Since the initial interest in metadiscourse, several taxonomies of metadiscourse elements have been proposed by various researchers (Vande Kopple, 1985; Crismore, 1989; Crismore et al., 1993; Hyland, 2005a; Ädel, 2006). These taxonomies primarily focus on two aspects – distinguishing metadiscourse items from propositional content and categorizing metadiscourse based on its textual function in organizing coherent discourse or its interpersonal function in conveying attitudes towards propositional content of texts. Most of these classifications, such as those by Crismore et al. (1993), Hyland (1998b; 2000), and Vande Kopple (1985), draw on Halliday's (1994) three-part conception of metafunctions, which differentiates between the ideational elements (how we encode our experiences of the world) and the textual and interpersonal functions of a text (Hyland, 2004b).

Vande Kopple (1985) specifically adopts this tripartite distinction arguing that metadiscourse serves the textual and interpersonal dimensions of language but not the ideational dimension. Vande Kopple (1985) categorizes metadiscourse into two main domains – textual and interpersonal (Table 1). The textual domain assists writers in connecting their propositions cohesively while the interpersonal domain enables writers to express their feelings towards the presented propositions. Within the textual domain, he further categorizes metadiscourse into four types – text connectives, code glosses, validity markers, and narrators. In the interpersonal domain, three types are identified – illocution markers, attitude markers, and commentaries.

Table 1 Vande Kopple's (1985) classification system for metadiscourse (Hyland, 2005a, p. 32)

Textual metadiscourse
Text connectives - used to help show how parts of a text are connected to one another. Includes sequencers *(first, next, in the second place),* reminders (as / *mentioned in Chapter 2),* and topicalizers, which focus attention on the topic of a text segment *(with regard to, in connection with).*
Code glosses - used to help readers to grasp the writer's intended meaning. Based on the writer's assessment of the reader's knowledge, these devices reword, explain, define or clarify the sense of a usage, sometimes putting the reformulation in parentheses or marking it as an example, etc.
Validity markers - used to express the writer's commitment to the probability or truth of a statement. These include hedges *(perhaps, might, may),* emphatics *(clearly, undoubtedly),* and attributors which enhance a position by claiming the support of a credible other *(according to Einstein).*
Narrators - used to inform readers of the source of the information presented - who said or wrote something *(according to Smith, the Prime Minister announced that).*
Interpersonal metadiscourse
Illocution markers - used to make explicit the discourse act the writer is performing at certain points (to *conclude, I hypothesize, to sum up, we predict!).*
Attitude markers - used to express the writer's attitudes to the propositional material he or she presents *(unfortunately, interestingly, I wish that, how awful that).*
Commentaries - used to address readers directly, drawing them into an implicit dialogue by commenting on the reader's probable mood or possible reaction to the text *(you will certainly agree that, you might want to read the third chapter first).*

Crismore (1989) and other scholars (Crismore & Farnsworth, 1990; Crismore et al., 1993) have made significant contributions to the field of metadiscourse. Their work, which builds upon earlier taxonomies, introduced a revised model based on pragmatic functions. While maintaining the distinction between the two main domains, Crismore et al. (1993) further subdivided textual metadiscourse into textual markers and interpretative markers. These new categories aim to capture the role of metadiscourse in organizing the discourse and helping readers in interpreting and understanding the writer's intended meaning and writing strategies (Crismore et al., 1993).

Table 2 Crismore et al.'s categorization of metadiscourse (1993, p. 47-54) (Hyland, 2005a, p. 34)

Category	Function	Examples
Textual metadiscourse		
1. Textual markers		
Logical connectives	Show connections between ideas	*therefore; so; in addition; and*
Sequencers	Indicate sequence/ordering of material	*first; next; finally; 1, 2, 3*
Reminders	Refer to earlier text material	*as we saw in Chapter one*
Topicalizers	Indicate a shift in topic	*well; now I will discuss ...*
2. Interpretive markers		
Code glosses	Explain text material	*for example; that is*
lllocution markers	Name the act performed	*to conclude; in sum; I predict*
Announcements	Announce upcoming material	*in the next section ...*
Interpersonal metadiscourse		
Hedges	Show uncertainty to truth of assertion	*might; possible; likely*
Certainty markers	Express full commitment to assertion	*certainly; know; shows*
Attributors	Give source/support of information	*Smith claims that ...*
Attitude markers	Display writer's affective values	*I hope/agree; surprisingly*
Commentary	Build relationship with reader	*you may not agree that ..*

However, due to inherent limitations of categorization schemes, the above-mentioned taxonomies have undergone revisions and modifications. In recent years, there has been a growing interest in metadiscourse but with little emphasis on traditional theoretical assumptions that distinguish between textual and interpersonal metadiscourse. Some metadiscourse analysts have challenged these assumptions and advocated for a reconsideration of metadiscourse in semantic and pragmatic terms. They argue that the distinction between textual and interpersonal metadiscourse is unclear and that all metadiscourse markers are inherently interpersonal, as they take into account the readers' knowledge, textual experiences, and processing needs while providing authors with rhetorical means to achieve this (Moreno, 1998; Hyland & Tse, 2004; Hyland, 2004a; 2004b; 2005b; 2017).

The most substantial revision of previous taxonomies has been proposed by Hyland (2005a). Not only does his Interpersonal Model of Metadiscourse update the taxonomies used by Vande Kopple (1985), Crismore et al. (1993) and others in the 1980s, but it also provides better clarity and distinction among the various features of metadiscourse (Anwerdeen et al., 2013). Hyland's model has gained widespread use in the field of L2 academic writing research. In the Interpersonal Model, metadiscourse is viewed as devices used by writers to explicitly organize their texts, engage readers, and signal their attitudes towards both the subject matter and the audience (Hyland, 2005a). In an effort to address the limitations and drawbacks of previous models, Hyland consolidated, separated, and reorganized the existing categories of metadiscourse. For instance, he considered Crismore et al.'s (1993) division of textual metadiscourse into textual and interpretive markers unnecessary as organizational features

clearly contribute to text coherence and help readers in interpreting it (Hyland, 2005a). He further pointed to the lack of clarity within these categories by drawing attention to the following examples: reminders, which refer to material earlier in the text, are seen as textual, whereas announcements, which refer to material appearing later, are seen as interpretive markers. He also pointed to problems within the class of logical connectives and identifying items within the class syntactically rather than functionally. This is related to concerns whether metadiscourse is a syntactic or functional category, with some analysts even adopting both approaches simultaneously (e.g. Crismore et al., 1993). While a functional approach to classifying metadiscourse markers has been adopted by most researchers (e.g. Lautamatti, 1978; Williams, 1981), categorizations sometimes confuse functional with syntactic criteria. Hyland (2005a) claims that although it is reasonable to establish boundaries for metadiscourse as laying outside the propositional matter, using syntactic criteria to do this seems unclear. In other words, he claims that the constraint that they can perform either a metadiscoursal or a syntactic function is rather unclear as the same grammatical choices can work metadiscoursally and create well-formed sentences. What is here important is not whether a sentence becomes ungrammatical if an item is removed but the function that the item is performing in the sentence. What Hyland (2019) evidently emphasizes is that metadiscourse studies must begin with functional classifications and analyses of texts. He further claims that the term functional in metadiscourse studies refers to how language works to achieve certain communicative purposes for users. So, when considering any item as metadiscourse, the emphasis is on meanings in context, how language is used, i.e. on the function of the item or, in other words, what the item is doing at a certain point in the text. Therefore, an item functions as metadiscourse only in relation to another part of the text meaning that what may be regarded as metadiscourse in one rhetorical context could be expressing propositional material in another. Consequently, analysts need to assess each item individually to ascertain its function (Hyland, 2005a, p. 24).

In short, Hyland (2005a) suggests a functional model of metadiscourse asserting that rhetorical features of metadiscourse are closely connected to the context in which they occur. By looking at metadiscourse as functional, Hyland sees it as a "social act through which people carry on a discourse about their own discourse for particular rhetorical purposes" (Hyland, 2019, p. 29). In other words, in the analysis of metadiscourse, the related context and community practices should be considered. This functional framework views writers as the conductors of the interaction with interlocutors. He excludes the textual function of metadiscourse mentioned in the previous taxonomies by arguing that metadiscourse is about

interaction. This pertains to what metadiscourse actually accomplishes within a text. Hyland argues that metadiscourse can be understood in different ways. Some limit the term to what the author expresses about the unfolding text through self-referential acts like labeling text stages or previewing upcoming material. Others include in their analysis the ways writers intervene to comment on propositional information or establish a connection with readers (Hyland, 2017). Hyland's contention is that all metadiscourse, whether seemingly focused on text organization or addressing the reader, is inherently linked to interaction. This forms the basis for Hyland's (2005a) labeling of his framework as an interpersonal model of metadiscourse. According to Hyland, even so-called textual metadiscourse is chosen by the writer to guide readers' understanding and steer them toward the writer's intended interpretations. Therefore, all metadiscourse reveals the writer's awareness of the imagined readers' need for elaboration, clarification, and interaction. In essence, Hyland's model (2005a) criticizes the tendency to view textual, interpersonal, and propositional elements of the text as distinct and separable. Instead, he argues that the creation of a text serves the purpose of generating both interpersonal and ideational meanings, and textual features cannot be seen as isolated ends in themselves. He proposes a more robust interpersonal perspective on metadiscourse that aims to capture the interactive nature of communication. He sees interactive and interactional resources as closely connected, meaning that metadiscourse is seen as a coherent set of choices that utilize both organizational and evaluative elements (Hyland, 2017). In conclusion, the interpersonal model presents a dynamic and inclusive understanding of metadiscourse based on the notion that a finalized text is the result of the reader's awareness. Therefore, taking into account the reader's knowledge, textual experiences, and processing needs, metadiscourse provides writers with the necessary rhetorical functions to fulfill their purpose (Alipour et al., 2015). Early studies on metadiscourse (e.g. Williams, 1981; Crismore, 1983; Vande Koppel, 1985) primarily focused on identifying linguistic forms that convey non-propositional content. However, contemporary researchers view metadiscourse as a functional concept that is not necessarily tied to specific linguistic items. In this pragmatic and rhetorical approach, the utilization of metadiscourse by writers (and its identification by analysts) is closely linked to the writing context (Hyland, 1998b; 2004a; 2004b; 2005a).

2.3.2.1 *Hyland's Interpersonal Model of Metadiscourse*

With respect to the foregoing discussion, this section describes the framework against which metadiscourse and its relevant dimensions, that is its classification scheme, and their respective

linguistic realizations, are approached in the present study. As previously mentioned, the present study is based on Hyland's (2005a) Interpersonal Model of Metadiscourse, acknowledging thus the distinction between interactive and interactional dimension of metadiscourse.

Hyland's (2005a) classification scheme encompasses the key principles of metadiscourse discussed in Section 2.3.1. It adopts a functional perspective that views metadiscourse as the means by which writers refer to the text, the writer or the reader. The classification scheme acknowledges the contextual nature of metadiscourse and, with subtlety, utilizes the aforementioned distinction between interactive and interactional resources to recognize the organizational and evaluative aspects of interaction (Hyland, 2001a; Hyland & Tse, 2004; Hyland, 2005a). The model comprises two primary categories, namely interactive and interactional, which are further subdivided into various subcategories. The interactive and interactional categories represent the fundamental characteristics of any communication and are expressed through a range of rhetorical elements that serve more specific purposes. The interactive category focuses on organizing discourse to anticipate the readers' knowledge and reflect the writer's assessment of what needs to be explicitly stated in order to guide and constrain the reader's interpretation of the text (Hyland, 2010). It revolves around the writer's awareness of the audience and aims to assist readers in navigating the text by organizing discourse with their needs in mind. The use of interactive features reveals the extent to which the text is constructed with the readers' requirements in consideration. These interactive features not only organize the text but also stem from the "writer's assessment of the reader's assumed comprehension capacities, understandings of related texts, and the need for interpretive guidance, as well as the relationship between the writer and reader" (Hyland, 2005a, p. 50). On the other hand, the interactional category pertains to the writer's endeavors to control the level of personal engagement in the text and establish a suitable relationship with the data, arguments, and audience. It encompasses elements such as the degree of intimacy, expression of attitude, communication of commitments, and the extent of reader involvement (Hyland, 2010). These macro-purposes are realized through a heterogeneous array of features as shown in Table 3 and elaborated below.

Table 3 An Interpersonal model of metadiscourse (Hyland, 2005a, p. 49)

Category	Function	Examples
Interactive	**Help to guide the reader through the text**	**Resources**
Transitions	express relations between main clauses	*in addition; but; thus; and*
Frame markers	refer to discourse acts, sequences or stages	*finally; to conclude; my purpose is*
Endophoric markers	refer to information in other parts of the text	*noted above; see Fig; in section 2*
Evidentials	refer to information from other texts	*according to X; Z states*
Code glosses	elaborate propositional meanings	*namely; e.g.; such as; in other words*
Interactional	**Involve the reader in the text**	**Resources**
Hedges	withhold commitment and open dialogue	*might; perhaps; possible; about*
Boosters	emphasize certainty or close dialogue	*in fact; definitely; it is clear that*
Attitude markers	express writer's attitude to proposition	*unfortunately; I agree; surprisingly*
Self-mentions	explicit reference to author(s)	*I; we; my; me; our*
Engagement markers	explicitly build relationship with reader	*consider; note; you can see that*

As Hyland (2010) claims, these categories will be familiar to those who know the work of Crismore (1983) and Vande Kopple (1985), since he has borrowed some of their labels, but the conceptual premises are very different. Essentially, his classification sees discourse as propositional and metadiscoursal. “If we recognize that a large proportion of every text is not concerned with things in the world but with the internal argument of the text and its readers, then we can see that metadiscourse is one means by which propositional content is made coherent, intelligible and persuasive to a particular audience” (Hyland, 2010, p. 132). With his classification, Hyland tries to avoid the confusion caused by, as he puts it, erroneously using Halliday’s (1994) interpersonal and textual labels. According to Hyland (2010), following Crismore (1983) and others in the use of this distinction to classify metadiscourse is misleading for two reasons. Firstly, it disregards Halliday’s (1994) emphasis that these functions are distributed throughout the clause rather than being associated with specific words, and secondly, it overlooks the challenges of distinguishing a purely textual role for metadiscourse. Additionally, the author concludes that unlike propositional and interpersonal meanings, which relate to non-linguistic phenomena, the textual function is inherent to language and serves to integrate both propositional and interpersonal aspects of texts into a coherent whole (see Hyland & Tse, 2004; Hyland, 2005a; 2010). In other words, as previously mentioned, his classification emphasizes the interpersonal function of metadiscourse by taking into account the reader’s knowledge, textual experiences, and processing needs. It offers writers a range of rhetorical strategies to achieve this objective (Hyland & Tse, 2004). It refers to the linguistic devices employed by writers to tailor their arguments to meet the needs and expectations of their intended readers (Hyland, 2010).

2.3.2.1.1 *The interactive dimension*

Interactive metadiscourse plays a central role in organizing any text, particularly in argumentative writing, as it generates a communicative necessity for writers to heavily rely on textual metadiscourse to construct a text with the reader's needs in mind (cf. Crismore, 1989; Granger & Tyson, 1996; Hyland, 2005; Ädel, 2006). The use of textual metadiscourse encompasses the strategies writers employ to guide readers and shape a text in a coherent and persuasive manner, ensuring the readers' understanding of their ideas (Hyland, 2005a). According to Hyland (2005a), the distinction lies not in whether these elements contribute to syntactic coordination or subordination but in their internal role within the discourse, aiding the reader in interpreting connections between ideas rather than referencing external phenomena. This category focuses on the writer's awareness of the audience and the necessary adjustments to accommodate their probable knowledge, interest, rhetorical expectations, and comprehension abilities. Thus, the markers within this category address discourse organization strategies rather than subjective experiences. In other words, interactive resources center around organizing the text based on the writer's assessment of the audience. The interactive dimension of metadiscourse markers encompasses five categories: transitions, frame markers, endophoric markers, evidentials, and code glosses.

Transition markers primarily consist of conjunctions and adverbial phrases that assist readers in understanding the pragmatic links between various stages or steps within an argument. As shown in Table 4, they signal additive, causative, and contrastive relations, i.e. interactions of the writer's thoughts. The key point of transition markers is that they must complete links between ideas that are internal to the text versus those external to the text, such as the addition of new information. For example, transition markers add elements to an argument and potentially consist of items such as *and, furthermore, moreover, by the way,* etc. They mark arguments as either similar, e.g. *similarly, likewise, equally, in the same way, correspondingly,* etc., or different, e.g. *in contrast, however, but, on the contrary, on the other hand,* etc., expressing relationships between different sections of discourse. Lastly, they can convey a consequence relation by signaling that a conclusion is being drawn or justified, e.g. *thus, therefore, consequently, in conclusion,* etc., or demonstrate counterarguments being presented, e.g. *admittedly, nevertheless, anyway, in any way, of course*, etc. (Hyland, 2005a, p. 50).

Table 4 Different roles for internal and external transitions (Hyland, 2005a, p. 51)

Relation	External	Internal
Addition	adding activities	adding arguments
Comparison	comparing and contrasting events, things and qualities	comparing and contrasting arguments and evidence
Consequence	explaining why and how things happen	drawing conclusions or countering arguments

The examples signaling different meanings of interactive metadiscourse provided in what follows are extracted from the present corpus, i.e. corpus of non-native speakers' essays. In example (1), *and* is used to add an element to the argument and is therefore considered a transition marker.

1) *It truly can be argued that we as humans have reached our peak in terms of technological advancement, **and** that really we cannot invent anything new and groundbreaking, but rather live in a certain stalemate and be content with what we have undoubtedly achieved so far.* (E40 NNS body paragraph)

Frame markers (FM) indicate text boundaries or textural structures. As with transition markers, frame markers are internal to the text. Frame markers serve the purpose of identifying or organizing arguments within the text, rather than indicating chronological events. They are characterized as linguistic elements that offer contextual information about specific elements within the discourse and function to sequence, label, predict and shift arguments making the discourse clear to readers or listeners. There are four subcategories of frame markers – sequencing, label stages, announce goals and shift topic. Frame markers can therefore be used to sequence parts of the text or to internally order an argument, often acting as more explicit additive relations (e.g. *first, then, at the same time, next,* etc.), they can explicitly label text stages (e.g. *to summarize, in sum,* etc.), announce discourse goals (e.g. *I argue here, my purpose is, there are several reasons why,* etc.) and indicate topic shifts *(well, right, OK, now, let us return to,* etc.) (Hyland, 2005a, p. 51).

2) ***Next**, in some cultures, such as American, earning money is connected with hard work and success.* (E71 NNS body paragraph)

In example (2), the word *next* prepares the reader of the order of the information that will be presented rather than elements in time and therefore is used as a frame marker.

Endophoric markers are phrases that refer to other parts of the text. These markers help make additional propositional information more understandable to the reader. Endophoric markers are expressions (e.g. *see Figure 2, refer to the next section, as noted above,* etc.) which help readers in understanding the writer's intended message better and to strengthen their arguments by making references to previous or upcoming material. Endophoric markers help direct the reader toward the writer's preferred interpretation of information (Hyland, 2005a, p. 51).

3) *Moreover, there are many wealthy people who do not possess the* ***aforementioned*** *bad traits.* (E16 NNS body paragraph)

The endophoric marker *aforementioned,* presented in example (3), assists the reader in locating material appearing earlier in order to more fully comprehend the subject matter.

Evidentials (e.g. *according to X, Z states,* etc.) direct and influence how readers interpret a text while establishing the writer's authority on the subject. This can be achieved by citing reliable sources, incorporating hearsay or offering evidence to support arguments. Evidentials demonstrate who is responsible for a position and must be distinguished from the writer's stance towards the view, which is coded as an interpersonal feature (Hyland, 2005a, p. 51-52).

4) ***According to*** *the scientific research, every person has a certain type of intelligence more developed than the other.* (E55 NNS body paragraph)

In example (4), the statement about the negative side effects of too much screen time for children is supported by journalistic authority and therefore indicates use of an evidential marker.

Code glosses serve to provide extra information by restating, clarifying or elaborating upon what has already been expressed. Their purpose is to guarantee that readers can grasp the writer's intended meaning. Code glosses are based on the writer's assumptions about the reader's existing knowledge and understanding and are introduced by phrases such as *this is called, in other words, that is, this can be defined as, for example,* etc. (Hyland, 2005a, p. 52).

5) ***In other words**, a university degree does not mean one knows how to work, and is therefore of no significance.* (E68 NNS body paragraph)

Example (5) uses the code gloss *in other words* to give the reader additional information about what has been said about the university degree.

2.3.2.1.2 *The interactional dimension*

Hyland (2005a) states that interactional metadiscourse markers primarily serve to highlight how writers engage in interaction by interjecting and commenting on their message. This is often referred to as the writer's 'voice' or personality. These metadiscourse markers are characterized as evaluative and engaging. The purpose of these markers is to establish a sense of unity between the constructed text and the reader. In this context, metadiscourse reveals the extent to which the writer collaboratively constructs the text with the readers. The interactional features actively involve readers and create opportunities for them to contribute to the discourse by providing insights into the author's perspective on both the propositional information and the readers themselves. There are five general subcategories for interactional dimension of metadiscourse markers – hedges, boosters, attitude markers, self-mentions, and engagement markers.

Hedges are devices such as e.g. *possible*, *might* and *perhaps* employed to highlight the subjective nature of a stance. They are utilized to avoid fully committing to a presented proposition by presenting information as an opinion rather than a fact. This openness allows the position to be subject to negotiation. Hedges indicate the writer's acknowledgement of alternative voices and perspectives, thereby refraining from complete commitment to a proposition. Consequently, hedges imply that a statement is derived from the writer's plausible reasoning rather than absolute certainty. They are employed to guide the reader towards the writer's preferred conclusion or reasoning (Hyland, 2005a, p. 52).

The examples signaling different meanings of interactional metadiscourse provided in what follows continue on the examples from the previous section and are also extracted from the corpus of non-native speakers' essays.

6) *This **may** be due to the fact that people differently value and grade what is and isn't considered to be "equal".* (E 53 NNS body paragraph)

Example (6) uses the hedge *may* to steer the reader toward considering the possibility of a conclusion about the meaning of what it means to be equal without presenting a complete commitment to the position.

Boosters, on the other hand, are words such as e.g. *clearly, obviously, demonstrate,* etc. that enable writers to dismiss alternative perspectives, preempt conflicting views, and express their certainty in their statements. By closing down potential alternatives, boosters emphasize certainty and establish a connection by demonstrating engagement with the subject matter and solidarity with the audience, jointly aligning against opposing voices (Hyland, 1999a). They can be employed to reinforce an argument by implying that the reader should arrive at the same conclusions as the writer. The balance between hedges and boosters in a text indicates the extent to which the writer is willing to consider alternative viewpoints, thus playing a crucial role in conveying commitment to the content and showing respect for readers (Hyland, 2005a, p. 52-53).

7) *Despite that, this is still a theoretical knowledge, which is* ***undeniably*** *important, but future doctors do not face everyday problems until they actually start to work somewhere, i.e. until specialization.* (E83 NNS conclusion paragraph)

The author of example (7) is evidently guiding the reader towards reaching the same significant conclusion that the author has selected by using the word *undeniably* as a booster marker.

Attitude markers indicate the writer's emotional or subjective stance toward propositions, rather than their knowledge-based stance. While attitude can be expressed through subordination, comparisons, progressive particles, punctuation, text location, and other means, it is most explicitly signaled metadiscoursally by attitude verbs (e.g. *agree, prefer*, etc.), sentence adverbs (e.g. *unfortunately, hopefully,* etc.) and adjectives (e.g. *appropriate, logical, remarkable*, etc.). Instead of commenting on the status, relevance, reliability or truth of information, attitude markers express emotions such as surprise, agreement, importance, obligation, frustration, and so on (Hyland, 2005a, p. 53). In other words, attitude markers demonstrate surprise, frustration or obligation, based on the writer's intended mood as demonstrated in example (8).

8) *To conclude, even though human beings are in theory equal,* ***unfortunately*** *the modern world has shown otherwise.* (E52 NNS conclusion paragraph)

Self-mention refers to the extent to which the author's presence is explicitly evident in the text, as indicated by the frequency of first-person pronouns and possessive adjectives (e.g. *I, me, mine,* exclusive *we, our, ours,* etc.). Writers inevitably convey an impression of themselves and their position in relation to their arguments, community, and readers. Writing always conveys information about the author but the use of personal pronouns forcefully inserts the writer into the text. "The decision to include or exclude explicit references to the author is typically a conscious choice made by writers to adopt a specific stance and a contextually situated authorial identity" (Hyland, 2001b, as cited in Hyland, 2005a, p. 53).

9) *It is hard to say whether a degree is practical in other countries, although* ***my*** *opinion is that the government is trying to keep the knowledge away from people in every part of the globe.* (E28 NNS conclusion paragraph)

In example (9), the author uses *my,* a self-mention marker, to provide a clear signal to the reader regarding the perspective from which the statement should be understood.

Engagement markers (e.g. *consider, note, you can see that,* etc.) are devices that explicitly address readers either to direct their attention or involve them as active participants in the discourse. In other words, engagement markers are items that focus the reader's attention by directly engaging with them. Alongside the use of hedges, boosters, self-mentions, and attitude markers to create an impression of authority, integrity, and credibility, writers can highlight or downplay the presence of their readers in the text (Hyland, 2005a, p. 53). Due to the relational implications of affective devices, it can be challenging to differentiate between attitude markers and engagement markers in practice. The latter specifically aim to facilitate reader participation and serve two main purposes:

1. The first purpose acknowledges the importance of meeting readers' expectations by including them as active participants in the argument employing reader pronouns (*you, your*, inclusive *we)* and interjections *(by the way, you may notice).*
2. The second purpose involves strategically positioning the audience drawing readers into the discourse at crucial points, anticipating possible objections, and guiding them towards specific interpretations. These functions are primarily fulfilled by questions, directives (mainly imperatives such as *see, note* and *consider* and obligation modals such as *should, must, have to,* etc.) and references to shared knowledge (Hyland, 2005a, p. 54).

Hyland (2005a) asserts that in any form of communication, it is crucial to have a reader-oriented approach to achieve social and rhetorical objectives. Metadiscourse serves as a means to accomplish this by drawing on rhetorical resources. Readers always have the option to interpret propositional information differently and reject the writer's viewpoint, necessitating writers to anticipate and address potential objections to their views. Interactive resources cater for readers' expectations that an argument will adhere to conventional text patterns and predictable directions, enabling them to process the text in a manner that they find appropriate and convincing. Interactional resources directly focus on the participants in the interaction, with the writer assuming a persona that is acceptable and aligns with the norms of the community. In academic writing, interactional resources primarily involve establishing a balanced approach of tentativeness and assertion, as defined by the discipline, and maintaining a suitable relationship with one's data, arguments, and audience (Hyland, 2005a).

10) ***We*** *need to be careful not to be too idealistic about money in any sense so we can judge our own character and our actions as objectively as we are capable to.* (E19 NNS conclusion paragraph)

In example (10), the author uses inclusive *we*, an engagement marker, to include the readers as active participants in the argument.

2.3.3 *Aspects of fuzziness in the concept of metadiscourse*

As already mentioned in Section 2.3.1, the disagreements among metadiscourse theorists over the concept of metadiscourse are referred to by Hyland (2005a, 2017, 2019) as aspects of fuzziness in the concept of metadiscourse, which will be discussed in more detail in what follows. The first aspect is related to what metadiscourse is or, in other words, for there to be something called metadiscourse, there needs to be something which is not metadiscourse (see Sections 2.3.1 and 2.3.2). The meaning of a text is the result of two elements, propositional material and metadiscourse, working together. This suggests that both propositional and metadiscoursal elements coexist in texts, each expressing their own content. One is concerned with the world and the other with the text and its reception, and both elements are essential for coherence and meaning (Hyland & Tse, 2004). As a result, metadiscourse, similar to propositional discourse, is considered an integral part of the communication process rather than just a commentary on propositions. However, it is challenging to consistently differentiate between the two in practice as items identified as metadiscourse can often function as

metadiscourse by, for example, connecting steps in an argument or work 'propositionally' to connect events in the world outside the text (Hyland, 2017).

According to Hyland (2005a), the lack of systematicity in defining and classifying metadiscourse, and difficulty to pin it down in practice results from the lack of clarity in the literature concerning what counts as metadiscourse as well as lack of simple linguistic criteria for identifying metadiscourse. Thus, he sees metadiscourse as "an open category to which writers are able to add new items according to the needs of the context" (Hyland, 2019, p. 32). Since there is this potentially huge range of linguistic items which might realize metadiscourse functions, explicitness is an important criterion of metadiscourse. In other words, metadiscourse studies focus on explicit textual devices, that is, items which can be clearly identified in the text. While metadiscourse concerns the presence of an author, only those relationships between parts of the text and between the author and the text which are observable can be included. Therefore, Hyland claims, explicitness is an important criterion of metadiscourse not only for the practical purposes of identification but also because it is this explicit presence which is textually and rhetorically interesting.

The second aspect of fuzziness in the concept of metadiscourse results from the fact that metadiscourse, i.e. explicit textual devices, can be realized in a variety of ways and by units of varied length; from individual words to whole clauses or sentences. Explicit textual devices range from individual words which, for example, act to signal the writer's stance or how he or she wants links between textual matter to be understood (a); whole clauses which can, for example, direct the reader to some action or preview the upcoming text (b); and sequences of several sentences (c) (Hyland, 2005a, p. 29-30):

a) *There is an outward show of greater choice because of the wide variety of channels, but this might be an illusion because the channels will come to resemble each other in many respects.* (GCE Social Studies paper)

b) *You should note that the relations of Eq. 1-3 imply that stress is linearly related to load.* (Physics textbook)

c) *The organization of this paper will be as follows. Chapter 2 is a review of Hong Kong air cargo industry. Chapter 3 is a literature review. Chapter 4 is a model measuring the multiplier effects brought by the air cargo industry to the Hong Kong labour market. Chapter 5 concerns the drivers and constraints for future growth of this industry and the last Chapter offers conclusions and recommendations.* (PhD dissertation)

The size of the linguistic unit is a relevant factor as longer units may encompass smaller units. For instance, ‘our conclusion’ could be considered an instance of interactive metadiscourse, signaling a forthcoming segment of the text. Alternatively, it could be seen as two separate units, with ‘our’ categorized as interactional metadiscourse. As Hyland (2017) explains, identifying individual cases is challenging and can vary among different analysts. Consequently, Hyland (2019) regards metadiscourse as an explicit and open-ended set of language items that can also perform non-metadiscourse functions; therefore, the actual markers can only be identified through careful analysis of the text.

While providing several examples of linguistic resources that can potentially realize each metadiscourse function, he strongly emphasizes the necessity of considering context when identifying a function. For instance, he presents a list of linguistic items that can serve a particular function but highlights two important points. Firstly, these items may not always serve that specific function, and secondly, there may be other items not included in the list that can realize the same metadiscoursal function. Ädel (2006) agrees with this perspective and underscores the significance of context in labeling metadiscourse items, stating that “even though some forms are essentially metalinguistic, we cannot classify a linguistic form as metadiscourse without taking the context of each specific instance into account” (p.25). Some features can be used to fulfill different functions leading to inevitable overlaps that pose challenges in categorizing metadiscourse.

For that reason, the third aspect of fuzziness in the concept of metadiscourse relates to its formal diversity. This means that functions can be fulfilled in various ways, and a single linguistic item can simultaneously realize multiple metadiscourse functions. In other words, the same forms can convey different metadiscoursal categories. For instance, he clarifies that the word ‘quite’ can act as both a hedge (quite good) and a booster (quite extraordinary). Similarly, the term ‘possible’ can serve as metadiscourse by hedging a statement or implying the speaker’s attitude (it’s possible that he was drunk) or it can refer to a likelihood in the real world (it’s possible to catch a bus here) (Hyland, 2017, p. 18). He concludes that while such category overlap is a known phenomenon in discourse analysis, and perhaps a consequence of the multi-functionality of language itself, it underscores rather than resolves the issue of polypragmatic meanings within metadiscourse. This further emphasizes the importance of employing discourse-analytic methodologies that involve examining the context to determine potential metadiscourse items (Hyland, 2017).

In essence, Hyland (2019) argues that due to these issues, it may not be feasible to capture every interpersonal aspect or writer's intention through a coding scheme and that any list of metadiscourse markers can only offer a partial representation and cannot achieve a comprehensive description. This is because taxonomies provide explicit surface features that can be identified in a text, but they can "only approximate the complexity of natural language use" (Hyland, 2019, p. 70). Hyland (2017) highlights that metadiscourse is not solely a quantitative method of identifying and counting features from a predefined list. To possess descriptive and explanatory power, metadiscourse must be viewed as a rhetorical and pragmatic property of texts, rather than a formal one. In other words, we cannot simply identify linguistic features as metadiscourse; instead, we need to recognize the strategies employed by writers when producing those features within specific points in their discourse.

2.3.4 *A continuum of metadiscourse*

Besides the fuzzy nature of metadiscourse, there is another issue related to how it functions within a text. As a result, two distinct perspectives have emerged in the study of metadiscourse, representing opposite ends of a continuum (cf. Mauranen, 1993; Ädel, 2006; Ädel & Mauranen, 2010). These perspectives are often viewed as a dichotomy between a narrow text-centered view and a broad interpersonal one (Mauranen, 1993). The former approach is referred to as the 'integrative' or 'interactive model' (Mauranen, 1993; Ädel, 2010), while the latter is labeled as the 'non-integrative' or 'reflexive model' (Mauranen, 1993; Ädel, 2006; 2010). Essentially, the broad definition views textual interaction as essential to the concept of metadiscourse, whereas the narrow definition considers reflexivity as fundamental, i.e. that metadiscourse should refer only to features of textual organization regarding metadiscourse as metatext or text reflexivity (Mauranen, 1993).

According to Hyland (2005a), in the non-integrative or the reflexive approach, metadiscourse is understood as the writer's explicit recognition of the text itself, rather than of the reader, and excludes evaluation and interpersonal features form the concept of metadiscourse (for example, while connectives and hedges are labeled as metadiscourse in the interactive model, neither category is considered metadiscursive in the reflexive model) in order to clarify and sharpen the concept as well as to avoid the difficulties when distinguishing metadiscoursal from non-metadiscoursal material by including only text-referential matter. Hyland argues against the arbitrary division that separates metadiscourse from the writer's awareness of the readers and their need for elaboration, clarification, guidance, and interaction.

According to Hyland (2017), this perspective simplifies the concept by reducing it to its basic elements of text-related references, potentially eliminating many valuable aspects that make metadiscourse a powerful analytical tool. Moving along the continuum, other theories and studies, such as, for example, Ädel (2006), extend the 'reflexive' view of metadiscourse to include not only how writers refer to their texts but also references to the writer and the intended reader of the text. These are labeled as 'writer-oriented' and 'reader-oriented' respectively, where metadiscourse encompasses features related to writer presence, text presentation, and reader guidance. However, as Hyland (2017) contends, Ädel's (2006) inclusion of authorial self-reference and relational markers, like the inclusive 'we', pushes metadiscourse away from a purely metatextual interpretation.

At the opposite end of the cline, metadiscourse is conceptualized as an encompassing term that encompasses a diverse range of features assisting readers in connecting and organizing material, while also interpreting it in alignment with the writer's preferences and the understandings and values of a specific discourse community (Hyland, 2017). Although some researchers, such as Ädel and Mauranen (2010), argue that this broad interpretation dilutes the term by including too much, Hyland (2017) maintains that it is a natural and logical extension of a concept that seeks to gather the linguistic devices used by speakers and writers to shape their messages for specific audiences. What is evident, as he further claims, is that metadiscourse cannot be confined solely to elements of text organization. The use of discourse to manage social relationships is equally important and inseparable from its role in organizing texts. Hyland (2017) asserts that effective communication in a text occurs when the writer accurately assesses both the reader's ability to interpret it and their likely response to it. Therefore, arbitrarily excluding an entire area of relevant rhetorical activity hinders a complete understanding of this process.

Hyland criticizes this characterization arguing that it leads to problematic evaluative comparisons where one view is pitted against the other (e.g. Ädel & Mauranen, 2010). Instead, he suggests that conceptualizations of metadiscourse should be viewed as contributing different aspects to our comprehension of discourse, occupying various positions along a continuum rather than being seen as opposing positions. The categorization and features that should be considered as metadiscourse are still a subject of controversy, and there are valid reasons for clearly distinguishing the two ends of the continuum with different terms to denote text management and interaction management (Hyland, 2017).

2.3.5 *Methods of identifying and categorizing metadiscourse*

In addition to the issue of broad versus narrow definition, according to Ädel and Mauranen (2010), there are two main types of approach to the study of metadiscourse generally corresponding to the two definitional traditions. The two approaches include different methods of identifying and categorizing metadiscourse and are referred to as the 'thin' and the 'thick' approach (Ädel & Mauranen, 2010, p. 2). Not all studies, however, adopt a pure line in applying one of the approaches, in fact, some studies combine the two. Historically, Ädel and Mauranen (2010) claim that the study of metadiscourse began with the thin approach (c.f. Vande Kopple, 1985; Crismore & Farnsworth, 1990; Crismore, et al. 1993; see also Hyland (2005a) who, according to Ädel and Mauranen (2010), represents a more recent and prominent representative of this tradition), while the thick approach represents a later development (c.f. Vassileva, 1998; Mauranen, 2001; 2003; Ädel, 2006) (Ädel & Mauranen, 2010). With respect to the method, they place the thin approach to a purely quantitative and the thick approach to a more qualitative end.

Ädel and Mauranen (2010) argue that the 'thin approach' is data-oriented and functions by retrieving all occurrences of a pre-defined list of categorized items which are typically not further examined. They contend that when researchers aim to compare different languages or genres, they often utilize corpus-based approaches that rely heavily on predefined sets of lexical items. However, they argue that this approach imposes limitations as it assumes that the overall function of each searched form will remain constant and fails to account for potential variations. They furthermore state that this method enables the retrieval of items in an automated manner, facilitating the comparison of frequency and distribution patterns across a substantial amount of data. It provides a comprehensive understanding of the occurrences and distribution of metadiscourse, allowing for swift comparisons across different genres, registers, and contexts of use. They compare this quantitative method, unfavorably, as Hyland (2017) claims, with their own 'qualitative' approach, which also includes the counting of features but considers the metadiscursive unit to be larger than the search term. According to Ädel and Mauranen (2010), the 'thick approach' is discourse-analytical, where occurrences are examined in context, it relies on linguist's intuition and functions by retrieving possible items, excluding the irrelevant ones, and analyzing extended units of metadiscursive meaning (Ädel & Mauranen, 2010).

Hyland (2017) further criticizes Ädel and Mauranen's (2010) distinction, arguing that it lacks decisiveness. He asserts that identifying smaller units does not lead to the exclusion of longer units nor does it inaccurately represent the extent of metadiscourse in a text if analysts

are transparent in their judgments and consistent in their coding. He counters their criticism that corpus studies excessively focus on form, noting that this assumption is flawed as corpus studies not only prioritize surface features but also analyze the discourse function rather than the formal realization of metadiscourse. While he acknowledges that corpus studies may initially begin with lists of potential metadiscourse items, he justifies these lists as a mere starting point for the analysis. They indicate high-frequency items commonly associated with metadiscourse, serving as suggestions for further exploration as additional items are incorporated in subsequent analyses of the corpus. Furthermore, he highlights the pragmatic nature of metadiscourse as a category, emphasizing the need to examine all items within their sentential contexts to ensure they perform metadiscursive functions and underscores the importance of reading concordance lines, which provide contextual information, over solely recording frequency counts (Hyland, 2017).

Hyland (2017) argues that at its core, metadiscourse aims to capture the interactive nature of communication. It acknowledges the distinction between propositional content and reader-oriented material, suggesting that these features are context-dependent and vary across genres and languages. Essentially, he states that due to the broad range of features and functions encompassed by metadiscourse, which may appear contradictory, the concept itself allows for multiple interpretations and remains a somewhat fuzzy category.

2.3.6 *Summary*

The purpose of this chapter was to account for the role of metadiscourse in academic writing, in particular, argumentative essays as one of the key student academic genres. It discusses the concept of metadiscourse, its definitions, issues, and classifications, and outlines the model of metadiscourse adopted in the present study. Although there is a general consensus that metadiscourse encompasses elements that surpass the subject matter to indicate the author's presence, there exists some degree of ambiguity and lack of precision in defining the term. However, metadiscourse is here understood as a broad term for all interpersonal features of academic writing that run against the traditional conceptualization of academic discourse as an impersonal, faceless report of the scientific truth (Hyland, 2019). As has been demonstrated, a range of interactive and interactional metadiscourse markers lend support to the characterization of academic writing as a socially situated process in which knowledge is not conceptualized as given but rather as constructed through the negotiation between writers and readers (Hyland, 2004a; 2004b; Sanderson, 2008).

Overall, metadiscourse models include a range of linguistic devices which writers use to organize their texts and convey their personal attitudes both to the subject matter and to the readers in an attempt to get their message across as effectively as possible (Crismore et al., 1993). Consequently, metadiscourse is closely connected to the norms and anticipations of specific communities as writers strive to provide sufficient cues to ensure the reader's comprehension and acceptance of the content. At the heart of this understanding of metadiscourse is the notion that it must be situated within the settings that shape its usage and grant it significance (Hyland, 2005a). Against this background, two fundamental interactive dimensions of metadiscourse are recognized; the textual, which encompasses the devices used to navigate the reader through the text, and the interpersonal comprising devices used to evaluate the text and signal a writer's stance towards it. According to Hyland (2005a), when writing and speaking, we do not only wish to convey the information in a logically structured way but we use the communication acts to achieve certain goals (e.g. gaining acceptance, persuading, etc.) with respect to our audience. This means that the interactive dimension of language is always present in writing and the concept of metadiscourse provides a framework to explore the ways it is achieved. Related to it is the notion that textual and interpersonal functions of metadiscourse are not to be conceived of as separate functions, as suggested by previous accounts on metadiscourse (e.g. Vande Kopple, 1985), but work simultaneously in real language use. Hyland's model (2005a) of academic metadiscourse is functionally based and it draws on the distinction between interactive and interactional dimension of interaction. Interactive dimension deals with those aspects of written texts which concern the organization of the discourse to produce a text which a reader will find coherent, meaningful, and persuasive. On the other hand, the interactional dimension concerns the way writers evaluate or comment on their messages, engaging the readers to become implicit participants in the unfolding text.

2.4 Previous research on metadiscourse in academic discourse

A lack of uniform analytical methods is generally considered to be one of the major drawbacks of research into academic discourse and research on the use of metadiscourse markers is not an exception in that respect (Hyland, 2005a; Sanderson, 2008). Investigation of the use of metadiscourse markers in academic writing is not a clear-cut task. First, the use of metadiscourse is linked to various models. Furthermore, even within these models, studies frequently adopt diverse methodological approaches, employ different resources, and use

markers with varying labels that serve different functions. Consequently, these variations often impede the integration of research findings.

This sub-chapter aims to provide an overview of the selected empirical studies on the use of metadiscourse in academic contexts related to the present study. A number of studies investigating rhetorical differences in academic texts written by different L1 groups have shown that metadiscourse is as an essential component of a range of genres and disciplines. Based on the understanding that rhetorical conventions governing the use of metadiscourse differ across cultural, linguistic, and disciplinary communities, a considerable amount of research has focused on investigating the variations in metadiscourse usage in academic texts. These studies have examined both professional and student writers from diverse cultural and linguistic backgrounds (e.g. Crismore et al., 1993; Mauranen, 1993; Ädel, 2001; Hyland, 2004b; Zarei & Mansoori, 2007; Hu & Cao, 2011; Mur-Dueñas, 2011; Letsoela, 2013; Mirshamsi & Allami, 2013; Alipour et al., 2015; Kobayashi, 2016; Povolná, 2016; Ho & Li, 2018; Park & Oh, 2018; etc.). Given the substantial variation in research focus among the studies, no attempt is made here to go into detailed discussions of their research designs and findings. Instead, any pertinent references to these studies are made in the discussion of the corpus findings when appropriate.

2.4.1 *Disciplinary and cross-cultural variation in the use of metadiscourse in academic discourse*

The question of the role of culture in academic writing has attracted a substantial research interest in academic discourse analysis and various features of metadiscourse use have not been exception in that respect. While the studies may have examined items with different labels and classifications, their common focus was on analyzing items that serve metadiscursive functions. According to Hyland (2004b), it has been suggested that the way writers use language to construct arguments in academic writing is significantly influenced by the specific disciplines they belong to. Each discipline, based on its unique focus on knowledge and corresponding research methodologies, has established standardized formats for rhetorical structure, argument patterns, citation styles, and other elements (Hyland, 2006a). Numerous studies have indeed identified variations in the use of different metadiscourse strategies across different disciplines (Hyland, 2006a).

Studies examining disciplinary variation on the use of interpersonal metadiscourse features (e.g. Hyland, 2004b; 2007; Fløttum et al., 2006; etc.) discovered noticeable variations

between authors from English-speaking cultures and those from other national cultures, suggesting that the manifestation of academic identities is more closely linked to the discipline rather than the author's language (Fløttum et al., 2006). For example, Dahl (2004) conducted a study comparing research articles in English, French, and Norwegian across three disciplines: economics, linguistics, and medicine. The findings indicated that both English and Norwegian academic writing in economics and linguistics employed significantly more metatext, while all three languages exhibited minimal use of metatext in the field of medicine. She concluded that culturally influenced conventions played a more significant role in disciplines that rely on argumentation to generate their findings, such as economics and linguistics. The studies also demonstrated differences between distinctive disciplines in the manner of presenting arguments and engaging with the intended readers. Hyland (2004b) analyzed the corpus consisting of masters and doctoral dissertations from six academic disciplines – electronic engineering, computer science, business studies, biology, applied linguistics, and public administration – and explored how second language writers employ metadiscourse to represent themselves and their work across various academic fields. The findings revealed substantial discrepancies in the use of metadiscourse among disciplinary communities. In general, social science disciplines, characterized by explicit interpretations and less reliable criteria for establishing evidence, employed a higher overall amount of metadiscourse. Based on the results of his study, Hyland (2004b) concluded that there exists a strong connection between discourse practices and the social structure of disciplinary communities, which, in turn, influences the typical modes of engagement between writers and their readers. The results of the study by Hyland (2007), based on research articles in eight disciplines comprising mechanical engineering, electrical engineering, marketing, philosophy, sociology, applied linguistics, physics, and microbiology, also demonstrated preferences that indicated variances in how these disciplines shape knowledge and engage with their intended readership. For instance, Malášková (2012) conducted a comparative analysis of hedging expressions in research articles from applied linguistics and literary criticism. The findings revealed significant disparities in both the types and frequency of hedges used in the two disciplines, implying a correlation between specific types of hedges and variations in argumentation style and writer-reader engagement. Overall, the results indicated distinctions in the type of argumentation and interaction with readers between natural (hard) sciences and social (soft) sciences, highlighting the importance of using metadiscourse to effectively present an argument that is comprehended and accepted by readers. Hence, as evidenced by the studies

cited here, the construction of arguments by writers is largely influenced by the nature of their respective disciplines.

However, in addition to discipline variables, previous research has suggested that the way the rhetorical means are employed in academic writing may be constrained by the culturally specific rhetorical conventions (e.g. Mauranen, 1993; Vassileva, 1998). If we think about academic writing in terms of the academic genres as its representatives, it may be argued that they exhibit both universally generic and culturally specific features. While the formal surface structure of the disciplinary academic genres, such as a research article, could be considered as culturally independent, academic writing itself seems to be a cultural product as the rhetorical conventions seem to be shaped by the cultural specifics (Mauranen, 1993; Sanderson, 2008). As an example, Vassileva (1998) conducted a study examining authorial presence by comparing the usage of personal pronouns in linguistics articles across English, German, French, Bulgarian, and Russian. The findings revealed a significant contrast in the usage of personal pronouns between English and Slavic languages, with English writing exhibiting a much higher frequency of personal pronouns compared to Slavic languages, which tended to favor impersonal constructions. A similar trend was observed in Yakhotonova's (2006) study comparing personal pronoun usage in English and Slavic (Ukrainian and Russian) conference abstracts. These findings indicated that English authors often employed a personal perspective to emphasize the significance of their research objectives and demonstrate a strong commitment to their study. In contrast, Slavic authors tended to use passive or impersonal constructions downplaying their own presence. The variation in personalization cannot be solely attributed to linguistic differences, but rather to the specific rhetorical conventions embedded in different cultural contexts, reflecting wider sociocultural influences on academic writing (Sanderson, 2008; Vassileva, 2008). This observation supports the notion that cultural factors play a crucial role in shaping our background knowledge, significantly impacting how we write, organize our writing, and respond to different communicative contexts (Hyland, 2005a). A substantial amount of research has further supported this idea, particularly in exploring cultural variations in the use of metadiscourse strategies among diverse language communities.

2.4.2 *Intercultural rhetoric research in academic discourse*

In the context of academic discourse, cross-cultural research on various aspects of academic writing has been largely associated with the field of intercultural rhetoric, previously known as

contrastive rhetoric (Connor, 1996). Intercultural rhetoric defined as "the study of written discourse between and among individuals with different cultural backgrounds" (Connor & Rozycki, 2013, p. 427) identifies features of particular types of discourse and examines the use of language in social interaction (Connor, 2004). Put simply, it sets out to examine how writers using language A utilize linguistic resources to engage with the text and readers, contrasting it with the practices of writers using language B. Additionally, it explores how the prevalent rhetorical conventions in language A may impact writing in language B, potentially leading to distinct rhetorical conventions. In essence, it investigates how one's first language and culture influence writing in a second language or how a shared language is employed within diverse cultural contexts. In cross-cultural studies of academic discourse, scholars have examined how cultural disparities manifest in the rhetorical organization of written texts across various languages. However, it is noteworthy that the majority of research in this area has predominantly focused on English as language B. This emphasis on English is justified by its global status as the lingua franca for academic and research activities (cf. Dewey, 2007; Mauranen, 2010; Fiedler, 2011; Connor & Rozycki, 2013), as well as the influence of the dominant Anglo-American writing model on the discourse conventions of other languages.

2.4.2.1 *Intercultural rhetoric research of metadiscourse features in academic discourse*

Regarding cross-cultural research in the field of intercultural rhetoric, two primary domains of the study can be identified. The first domain focuses on cross-cultural investigations that aim to examine the same concept in disciplinary writing across different cultures, particularly in comparison to English (Hyland, 2005a). The results of previous studies support the notion that languages and disciplines employ distinct patterns of metadiscourse use to effectively communicate and engage with their respective readerships. Previous research has pointed out that different cultures exhibit specific rhetorical preferences in the use of metadiscourse. For instance, the culturally-specific rhetorical conventions were observed in Zarei and Mansoori's (2010) study investigating English and Persian applied linguistics and computer engineering research articles. The corpus used in this study was analyzed based on Hyland and Tse's (2004) taxonomy of metadiscourse markers. The results revealed that English authors generally displayed a lesser reliance on metadiscourse resources, while Persian authors placed more value on interactive metadiscourse and utilized reader involvement in their texts to a lesser extent compared to English authors. The investigation also highlighted the differing priorities of metadiscourse categories between the two languages. Thus, as a case in point, Zarei and Mansoori (2010) concluded that Persian writers of academic articles addressing English

readers, particularly native English readers, may need to reduce their excessive use of interactive metadiscourse elements and increase their use of interactional metadiscourse elements to achieve a balanced approach aligned with the communication standards of the target native audience.

Similar results were observed in the study by Sultan (2015) which analyzed metadiscourse devices to understand the cultural differences between English and Arabic-speaking discussion sections of research articles within the field of linguistics. The author used Hyland's (2004b) taxonomy of metadiscourse markers as a model of analysis. The findings revealed that metadiscourse markers play a significant role in linguistics research articles in both English and Arabic. A detailed look into the subcategories of interactive and interactional metadiscourse revealed interesting cross-linguistic differences. The difference between the two languages was particularly noticeable in the use of interactive markers, indicating that Arabic tended to put more emphasis on establishing textual coherence and providing additional guidance for the reader to understand the text's purpose. In general, it was found that Arab writers tended to overuse metadiscourse devices, which was found as justifiable in that Arab writers usually pay as excessive attention to the formal aspects of the text as to the content.

Similar underlying cultural differences were identified when examining the usage of metadiscourse features in English and Chinese research articles (e.g. Hu & Cao, 2011; Mu et al., 2015). These studies also highlighted significant disparities between the languages, attributed to different culturally favored rhetorical strategies in English and Chinese writing. One of the common findings is that academic English is characterized by a greater tendency to express writer's caution and a reduced degree of commitment in presenting scientific claims as compared to other languages (e.g. Hu & Cao, 2011). Hu and Cao's (2011) study, for example, examined the use of hedges and boosters as metadiscourse markers in the genre of the academic article abstract in a single discipline and revealed important cross-cultural and cross-linguistic differences. They developed a taxonomy of English and Chinese hedges and boosters on the basis of previous research (e.g. Vande Kopple, 1985; Holmes, 1988; Crismore et al., 1993; Hyland & Tse, 2004; Hyland, 2005a). One of the study's findings indicated that, first, the abstracts published in the English-medium journals used hedges significantly more frequently than those published in the Chinese-medium counterparts. They attributed this to rhetorical norms of Anglo-American cultures to question ideas and beliefs and engage in debate and argumentation. Furthermore, it was observed that Chinese abstracts in Chinese-medium journals employed a significantly higher number of boosters compared to their corresponding English versions published in the same journals. This difference was attributed to Chinese

cultural practices that emphasize respect for authoritative knowledge and give less attention to potential counterarguments in contrast to Anglo-American practices. Interestingly, this study also identified another cross-linguistic difference that is not culturally based. Specifically, English abstracts in Chinese-medium journals used significantly fewer boosters than their matching Chinese abstracts but there was no statistical difference when compared to abstracts in English-medium journals. The authors explained this by Chinese applied linguists' awareness of the rhetorical norms preferred by the international community, leading them to adopt more tentative authorial stances in order to conform to these norms. In conclusion, these variations can largely be attributed to culturally influenced rhetorical conventions and persuasion styles prevailing in the broader sociocultural contexts in which English- and Chinese-medium academic journals are situated.

Mu et al. (2015) conducted a study comparing the use of metadiscourse in English and Chinese research articles. The analysis involved a small corpus of 20 research articles in English and another 20 in Chinese from applied linguistics journals. Following Hyland's (2005a) framework of metadiscourse markers, the study investigated how metadiscourse contributes to knowledge construction in research articles. In general, the findings revealed that the English sub-corpus contained more metadiscourse features compared to the Chinese sub-corpus. Although both sub-corpora employed a significantly higher number of interactive resources compared to interactional metadiscourse resources, the English sub-corpus exhibited a significantly greater use of interactional metadiscourse features to convey the writers' attitudes and stances towards themselves, the text, and the readers than the Chinese sub-corpus. Overall, the authors concluded that the distinct patterns of metadiscourse usage reflect divergent rhetorical preferences between English and Chinese, and that Chinese writers do not employ rhetorical devices that align with the rules and norms of the Anglophone academic discourse community.

Mur-Dueñas (2011) conducted a study examining 24 business management research articles written in English by scholars based at North American institutions and published in international journals, as well as research articles written in Spanish by Spanish scholars and published in national journals. The objective of the study was to conduct a cross-cultural analysis of metadiscourse features and analyze the extent to which different contexts influence their usage within a single discipline. The results indicated significant differences in the overall frequency of metadiscourse features as well as in the frequencies of specific categories between the two sub-corpora. Metadiscourse features were more commonly found in English research articles compared to Spanish ones. Both English and Spanish scholars utilized interactional

metadiscourse features more frequently than interactive ones, suggesting a stronger interaction between the writer and the reader within this discipline. However, the English sub-corpus exhibited a notably higher presence of both interactive and, especially, interactional metadiscourse features compared to the Spanish sub-corpus. In general, the author concluded that the specific linguistic and cultural contexts of publication appear to influence scholars' rhetorical choices when composing their research articles.

Croatian academic discourse studies include a number of contrastive studies which have focused on comparing Croatian and English academic discourse, most notably Beljo and Miškulin Saletović (2015) and Varga (2016) investigating the usage of hedges, Bašić (2020) exploring reporting verbs as evidentiality carriers, and Bašić and Veselica Majhut (2017) focusing on explicit author reference. Although these studies analyzed differently labeled items, they analyzed items that perform metadiscursive function. In line with previous research, they generally point to different culturally preferred rhetorical strategies in English and Croatian. Varga (2016) investigated the preferred choices of epistemic markers in the corpora of the Croatian and English research articles in psychology. The overall results pointed to the higher frequency of epistemic devices used in the English corpus as compared to the Croatian corpus. The findings revealed both similarities and differences in the usage of epistemic devices between Croatian and English. Although the frequencies of individual categories differed, both Croatian and English writers exhibited similar inclinations towards using modal and epistemic verbs. The main distinction in the distributional patterns of epistemic devices across the two corpora was that English modals were the most prominent category in the English sub-corpus, whereas no single category of epistemic devices stood out prominently in the Croatian sub-corpus. Regarding the distribution of epistemic devices, the results demonstrated similar tendencies as the Discussion section had the highest density of epistemic devices in both corpora followed by the Introduction section.

The results of the study by Beljo and Miškulin Saletović (2015) seem to corroborate with the previously presented findings. The study compared communication practices in research articles in the field of humanities written by native speakers of American English and Croatian in the usage of hedges. First, the types and frequency of hedges were determined. Then, American and Croatian sub-corpora were compared in terms of type and frequency of hedges, and possible explanations were provided for the determined similarities and differences. The results showed differences in the frequency of hedges as well as the frequency of particular types of hedges; however, the authors reported that difference in the general tone of conclusions seemed to be the most striking difference between the two sub-corpora.

Although, there were both similarities and differences between the English and Croatian research articles in the use of hedges, the results of the analysis by Varga (2016) and Beljo and Miškulin Saletović (2015) seem to suggest that conventions for using hedges in academic writing differ in English and Croatian academic communities. Broadly speaking, their findings showed that hedging was more widely used as a strategy in research articles by English writers. This generally corroborates previous cross-cultural findings pointing to the more salient use of the hedges and their status of a rhetorical norm in the Anglo-American writing as compared to the academic writing in other languages examined (Varga, 2016).

The study by Bašić and Veselica Majhut (2017) examined linguistic patterns of direct author reference in research papers in linguistics in a corpus of English and Croatian research articles. The authors analyzed the use of the first-person singular and plural pronouns as a direct signal of writer presence in research articles. The results of the quantitative analysis revealed disparities between the two corpora in terms of the frequency of the first-person singular pronoun usage, which was significantly lower in the Croatian corpus compared to the English corpus. Regarding the use of the first-person plural pronouns and their inclusive and exclusive references, no differences were found in the Croatian corpus. However, in the English corpus, a clear preference for inclusive references was observed. Additionally, the findings indicated that members of the Croatian scientific community exhibit a strong preference for employing impersonal forms (such as the passive voice or the pronoun *one*). This preference is justified by the belief that impersonal forms are perceived as 'more objective' and align with the conventions of academic writing in Croatia. Bašić (2020) investigated a corpus of research articles in nine research disciplines (computer engineering, mechanical engineering, physics, chemistry, biomedicine, psychology, sociology, linguistics, and literature) in two languages – English and Croatian. She examined how verbs of visual perception are used as a rhetorical means of constructing credibility and gaining acceptance for the author's claims. The findings of this study showed that both Croatian and English authors of research articles used verbs of visual perception to rhetorically construct credibility in research articles in all nine disciplines. However, as the primary focus of the study was to present a qualitative analysis of verbs of visual perception in research, the author pointed to a lack of quantitative data as an obvious limitation of the study, and concluded that future research in that respect is needed to gather data on the frequency of use of these verbs to provide a fuller picture of these verbs as a conventional way of reporting in particular disciplines.

While there are studies which have examined metadiscourse variation across languages, far more research on metadiscourse has been done on texts written in English by writers from

different cultural background. The other strand of research thus refers to the studies examining interferences of L1 rhetorical conventions with those in English (e.g. Mauranen, 1993; Abdollahzadeh, 2011; Yagiz & Demir, 2014; Chen & Zhang, 2017; etc.). This line of research is grounded in the idea that due to variations in the use of certain features, such as metadiscourse, between L1 and L2 writing, L2 writers may inadvertently deviate from the discourse norms of English by incorporating elements of their L1 rhetorical conventions in their academic texts (Hyland, 2005a; Sanderson, 2008). In essence, the study of academic writing has shown particular interest in comparing the rhetorical conventions between native and non-native speakers' academic writing outputs. A plethora of these studies have focused on analyzing metadiscourse features and have been based on the assumption that metadiscourse choices reflect underlying cultural differences even within the same genre. It is argued that these "rhetorical habits" (Hyland, 2017, p. 25) are evident in English texts written by L2 writers (Hyland, 2017).

Some researchers concluded that Anglophone writers appear to be more oriented towards the reader and involvement of the reader in the text, i.e. stronger interaction between the writer and the reader, by more closely guiding their readers through their arguments (e.g. Mauranen, 1993; Yagiz & Demir, 2014). For instance, Mauranen (1993) conducted research to investigate the preferred rhetorical practices, specifically the variations in the use of textual metadiscourse, between Anglo-American and Finnish scholars when writing academic articles in English. The results indicated that L1 English articles employed a significantly higher number of metatextual devices compared to L2 English articles. Mauranen (1993) suggested that this disparity might indicate a writer-responsible writing style in L1 English, where authors guide readers in interpreting the text. On the other hand, a lower frequency of metatextual devices in L2 English articles may reflect a reader-responsible style encouraging active reader engagement. Moreover, the study revealed that both L1 and L2 texts employed different persuasive strategies. L1 texts tended to be explicit and stated the main point early, while L2 texts were more implicit and delayed the presentation of the main point until the end. The researcher concluded that these observed differences stemmed from varying cultural conventions related to politeness. Anglo-American style emphasized explicit guidance for the reader, while Finnish style aimed to avoid intruding upon the reader. Overall, the study demonstrated how non-native writers may transfer their native language's rhetorical conventions when writing in English, which could be considered rhetorically inappropriate and negatively evaluated by English readers familiar with different conventions (Hyland, 2005a). Other studies that investigated preferred rhetorical conventions yielded similar findings. These

studies explored, for example, significant differences in the use of hedging strategies in published articles between native and non-native speakers of English. Yagiz and Demir (2014) conducted a study where they examined 100 English articles, divided equally between non-native writers (L2 writers with Turkish as their first language) and native English writers, to analyze the function of hedges employed by both groups. The results revealed that the disparities lied not so much in the quantity but in the manner in which hedges were used. The study provided insights about the hedging tendencies and differences of each group, and the authors concluded that, in many instances, L2 writers did not employ hedging structures in line with the conventions and norms of the Anglophone academic discourse community.

However, the comparison between native and non-native research articles in English also found that non-native writers employ metadiscourse more or less in tune with the rules and norms of Anglophone academic discourse community. The presence of similar patterns in the use of metadiscourse across different languages can be attributed to the general inclination of writers from diverse first language backgrounds to follow the principles set by Anglophone writers (e.g. Povolná, 2016; Chen & Zhang, 2017.; etc.). Studies have examined the presence/absence and overuse/underuse of metadiscourse items and found that the use of certain rhetorical features in L2 English conforms to the conventions in L1 English. As a way of illustration, Povolná (2016) examined research articles from two journals: one represented academic discourse written by native English speakers (*Applied Linguistics*), while the other represented academic texts written in English by Czech and Slovak scholars (*Discourse and Interaction*). Minor differences were observed between Slavonic (Czech and Slovak) and Anglophone writers, which the researcher attributed to either the writers' personal style or the general tendency of Slavonic writers to adhere to the conventions of the Anglophone style in academic writing. The findings suggested that L2 writers made efforts to adopt the academic style conventions typical of the dominant Anglophone discourse community, particularly in terms of the linear organization of the text and the use of guiding signals on form and content, such as appropriate text-organizing techniques. Chen and Zhang (2017) compared the metadiscourse features in applied linguistics articles written in English by Chinese and Anglophone writers, revealing differences in the frequency and number of linguistic expressions between the two groups. The results indicated that, on the whole, native English writers used more hedges compared to their Chinese counterparts. However, there were no statistically significant differences in the frequency of using most categories of hedges between L1 and L2 writers, and both groups exhibited similar patterns in the selection of different categories of hedges. The similarities in hedging strategies employed by the two groups were

attributed to Chinese writers attempting to adapt to the rhetorical and stylistic norms of English academic discourse. This adaptation results from their need to improve their pragmatic competence in their L2 and make the necessary rhetorical and stylistic adjustments to publish their academic work in English-medium journals.

Abdollahzadeh (2011) conducted a comparative analysis of metadiscourse subcategories, specifically hedges, emphatics, and attitude markers in the conclusion sections of applied linguistics research articles written in English by Anglo-American and Iranian academic writers. The findings indicated that the English writers exhibited a higher degree of certainty and expressed their attitudes more prominently compared to their Iranian counterparts. However, when comparing native English writers and L2 writers with Arabic as their L1, there were no significant differences in their use of hedges. For both groups of writers, employing hedges in their arguments served as a strategic approach to gain acceptance within the academic community and establish solidarity with readers. Blagojevic (2004) carried out a contrastive study of academic articles written in English by English and Norwegian native speakers. The articles comprised three disciplines: sociology, psychology and philosophy. She investigated the use of textual and interpersonal metadiscourse. According to the obtained data, Norwegian writers, when writing in English, used metadiscourse more frequently than English native speakers. While there were no differences in the use of interpersonal metadiscourse between the two groups, English native speakers used textual metadiscourse more frequently than non-native speakers. Overall, the results showed that while there were variations in the usage of metadiscourse between English and Norwegian writers, and occasional preferences were observed, the metadiscourse model employed by Norwegian writers did not differ significantly from that of native English speakers.

Although research on intercultural rhetoric has yielded the above-mentioned conflicting findings regarding metadiscourse features, comparative studies suggest that the use of metadiscourse is not consistent across languages, disciplines, and genres. This supports the notion that writers employ different metadiscourse markers based on social and cultural contexts (Yüksel & Kavanoz, 2018). The understanding that cultural differences can influence the use of metadiscourse resources is widely acknowledged (Hyland, 2002). The findings from intercultural rhetoric research, which explore preferred rhetorical conventions between academic English and other languages, can help raise awareness of cross-cultural differences in academic writing styles. This awareness of rhetorical variations between native and non-native English writers is particularly relevant for non-native writers when striving to publish their articles in English. As the present study aims to compare rhetorical conventions between

native and non-native speakers' academic writing, the following section outlines some empirical findings on the variations in the use of metadiscourse in student academic writing.

2.4.2.2 *Intercultural rhetoric research of metadiscourse features in student academic discourse*

As metadiscourse is concerned with how academic writers effectively communicate their ideas by selecting language choices within social contexts influenced by readers, prior experiences, and existing texts, scholars have increasingly explored the use of metadiscourse in L2 students' argumentative writing compared to that of native speakers (e.g. Milton & Tsang, 1993; Granger & Tyson, 1996; Altenberg & Tapper, 1998; Ädel, 2001; Narita et al., 2004; Vogel, 2008; Huh & Lee, 2016; Kobayashi, 2016; Ho & Li, 2018; Pavičić Takač & Vakanjac Ivezić, 2019; Pavičić Takač, et al., 2020; etc.). This exploration aims to determine if cross-cultural differences result in varying patterns of metadiscourse use. These studies analyzed items that perform metadiscursive functions, which may have been differently labeled or classified, and attempted to explore L2 learners' metadiscourse use addressing the differences between the learners and native speakers in this regard. These studies explained to what extent the learners struggle when processing their arguments in a coherent and reader-friendly manner in L2 text. Irrespective of the participants' L1, the study's specific context, the register and genre of texts examined, and the L1 reference corpus employed (such as published L1 academic writing or a corpus comprising essays by native speaker students), the findings consistently suggest that L2 learners tend to exhibit tendencies of overuse, underuse or improper use of metadiscourse elements, or alternatively, they employ a restricted range of unvaried metadiscourse items. Researchers have argued that L2 writers face particular difficulties in effectively managing interaction within their writing (Cadman, 1997; Hu, 2005; Hyland, 2005a; Gao, 2007; Hu & Cao, 2011; Min et al., 2019). One of the reasons may be that L2 writers may have a different understanding of appropriate formality, directness, politeness and so on as a result of different practices which operate in their own culture, and which may hinder them when writing in English. Another reason could be that the use of metadiscursive resources by L2 writers demands an advanced level of proficiency in the language, encompassing not only syntactic knowledge and vocabulary, but also a higher level of pragmatic competence (Hu & Cao, 2011).

To illustrate, there is substantial evidence indicating that non-native speakers often exhibit overuse or underuse of certain interactive metadiscourse markers, leading to a negative impact on the coherence of their written work. In other words, the use of these resources by non-native speakers is ineffective and fails to enhance the overall coherence of their texts. For

example, Granger and Tyson (1996) investigated the usage of connectors in student argumentative essays by comparing the French sub-corpus of the International Corpus of Learner English (ICLE) with the Louvain Corpus of Native Essay Writing (LOCNESS) (cf. Granger, 1993). The LOCNESS corpus consisted of argumentative essays written by university students, with half being native speakers of the American English (AmE) and the other half being native speakers of the British English (BrE). While the initial hypothesis that L2 learners overuse connectors in their essays was not supported by the quantitative analysis, a more detailed qualitative analysis revealed that L2 learners tended to overuse connectors that illustrate or emphasize propositions while underusing adversative connectors. A similar study conducted by Altenberg and Tapper (1998) compared essays from the Swedish component of ICLE (SWICLE) with a corpus of essays written by British university students, showing that advanced L2 learners exhibited both overuse and underuse of individual connectors, but generally underused conjuncts. Ädel (2006) observed similar patterns when comparing the SWICLE subcorpus with the LOCNESS corpus, where all investigated metadiscourse markers were found to be overused by L2 writers, indicating a deficiency in communicative competence. Vogel's (2008) examination that compared the usage of intersentential cohesive devices in essays written by Czech students studying English and academic papers written by native English speakers validated the anticipated higher occurrence of sentence linkers in the L2 writing samples. Based on this analysis, the author concluded that the abundance of metadiscourse markers, specifically sentence linkers in this case, could be one of the stylistic attributes that differentiate texts composed by L1 and L2 writers.

Numerous studies conducted in the Asian context have yielded comparable findings. Milton and Tsang (1993) conducted a comparison between the Hong Kong L2 student corpus and two L1 corpora, namely the American Brown Corpus and its British counterpart, the LOB Corpus, along with the Hong Kong University of Science and Technology Corpus, which consisted of extracts from Computer Science textbooks. The results revealed a distinct pattern of overuse of various logical connectors in students' writing. Furthermore, a qualitative analysis of two specific connectors, *moreover* and *therefore*, demonstrated that learners either misused these connectors, leading to misleading usage, or employed them redundantly, where their usage was unnecessary and did not contribute to the overall coherence of the text (Milton & Tsang, 1993). In a comprehensive study examining the interlanguage of Chinese L2 learners, Milton (2001) also observed a tendency to overuse specific adverbial connectors, particularly those indicating sequencing or transitions, especially when placed at the beginning of sentences, regardless of the learners' proficiency level. Research conducted by Narita et al.

(2004) investigated the usage of logical connectors in essays written by advanced Japanese university students. The study compared these essays not only with native English writings but also with those composed by advanced French, Swedish, and Chinese L2 learners. While the findings revealed a common preference for the most frequently used connectors among the sub-corpora, Japanese L2 learners exhibited significant tendencies of either overusing or underusing specific connectors. Moreover, they displayed a notable inclination to employ logical connectors at the beginning of sentences.

Studies in the Croatian context revealed similar results as well. The findings of a study (Bagarić Medve & Pavičić Takač, 2013b) examining the usage of cohesive devices by Croatian learners of English and German revealed that their compositions exhibited a predominant and inadequate use of simple cohesive devices. More recently, a comprehensive investigation has been initiated within KohPiTekst project[3]. In a preliminary study, it was observed that early undergraduate L2 English writers tended to overuse sentence-initial metadiscourse devices and had a tendency to rely on a limited range of metadiscourse items (cf. Pavičić Takač, 2018). The study by Pavičić Takač and Vakanjac Ivezić (2019) investigated the distinctive characteristics and patterns of frame marker usage among early undergraduate L2 English learners in comparison to the choices made by native speakers. Additionally, the relationship between the frame marker usage and coherence, as well as overall text quality in L2 texts was examined. The findings indicated that L2 learners exhibited a tendency to select and overuse a specific set of frame markers. This suggests that one characteristic of L2 writers' usage of frame markers is their adoption of certain items that they consistently use to express particular functions (cf. Pavičić Takač, 2018). The analysis also revealed statistically significant differences in the relative frequencies of all frame markers between native and non-native speakers. The study by Pavičić Takač et al. (2020) investigating the non-native speakers' use of metadiscourse markers showed that non-native students of English tended to overuse or misuse certain connectors in their argumentative essays as well as use them with limited variability. Consequently, these results provide further insights into the features of L2 writers' metadiscourse usage, consistent with the observations made in the aforementioned studies.

Moreover, many studies attempted to better understand how students construct persuasive arguments by investigating how both interactive and interactional metadiscourse markers are used by native and non-native speakers indicating differences in the use of metadiscourse as well as providing evidence for the universality of metadiscourse. For

[3] The project supported by the Croatian Science Foundation under lP-2016-06- 5736: Textual Coherence in Foreign Language Writing (KohPiTekst).

example, Mirshamsi and Allami (2013) investigated differences and similarities in the use of metadiscourse in the Discussion and Conclusion sections of the master theses of three categories: native English speakers, native Persian speakers, and non-native English speakers. The study followed Hyland's (2005a) taxonomy of metadiscourse. Overall, the results showed that native English writers used more interactive and interactional metadiscourse than native Persian and non-native English speakers. The results of this study also revealed that non-native English theses lay in between native English and native Persian theses in the use of metadiscourse markers, in that they used more metadiscourse than native Persian writers. Similarly, Alipour et al. (2015) examined three corpora of university students' argumentative writing samples. The corpora included the CEENAS corpus of English native speaker writing samples, Persian argumentative essays written by Iranian university students, and finally English argumentative essays written by Iranian university students. The collected samples were classified based on the Hyland's (2005) metadiscourse framework. The findings indicated a notable distinction in the use of interactive and interactional metadiscourse between essays written in Persian and English by Iranian university students. The same was observed between essays written in Persian by Iranian university students and essays written in English by native English speakers. However, there was no significant difference in the use of metadiscourse markers between Iranian students' essays in English and native English speakers' essays. The authors attributed this to differing cultural practices and the influence of education. Overall, the fact that non-native English texts were more similar to native English texts as opposed to native Persian texts was attributed to Persian writers' adhering to the principles of the Anglophone style they have been exposed to during their education when writing in English. Interestingly, Kobayashi (2016) investigated differences in rhetorical preferences in L2 English writings among different L1 groups. He also analyzed interactive and interactional metadiscourse based on Hyland's (2005a) model. The findings indicated that multiple aspects of L2 writing, such as the use of metadiscourse markers, were affected by conventions of the L1. Moreover, it was feasible to differentiate between different groups of Asian non-native writers based on their use of typical metadiscursive elements.

Hinkel (2005) compared academic essays written by native English speaking university students and those by non-native English ones (Chinese, Japanese, Korean, Indonesian, Vietnamese, and Arabic). She compared the frequencies of various types of hedging devices and intensifiers. It was found that L2 writers used fewer hedging devices than the native speakers. However, the findings suggested that non-native speakers had a tendency to engage in exaggerations and overstatements. This was evident from the higher occurrence rates of three

specific types of intensifiers associated with exaggeration and inflating the actual state of affairs, which were used significantly more frequently by non-native speakers compared to native speakers. A thorough analysis of metadiscourse markers in academic essays written by native speakers and non-native speakers revealed that L2 writers employed a limited range of hedging devices, primarily associated with conversational discourse and informal spoken interactions. These findings were further supported by the prevalence of conversational intensifiers and overstatements in L2 writing, which are typically found in informal speech but are uncommon in formal written prose. Ädel (2001) compared the use of metadiscourse by Swedish advanced learners' writing in English to the writing of native speakers of the British and American English (LOCNESS) within the framework of the International Corpus of Learner English (Granger, 1993). The focus of the study was on a subcategory within the broader field of metadiscourse which was referred to as 'metatext'. She attributed the observed differences between native and non-native speakers with regard to writer visibility and use of metatext to different cultural conventions in Swedish and English. Additionally, she observed the same differences between the two varieties of English in the native speaker corpus. Her findings indicated that the three groups differed both quantitatively and qualitatively in their use of metatext as well as in their overall use of first-person pronouns. For example, there was a clear dissimilarity in the use of *I* in the American and British English essays (43 versus 9 occurrences per 10.000 words). Ädel (2001) concluded that there may be cultural differences involved, and the division of the LOCNESS corpus into two parts made for her investigation was affirmed.

On the other hand, the study conducted by Crismore et al. (1993) examined argumentative essays written by university students from the United States and Finland aiming to explore the use of metadiscourse markers and investigated potential cultural and gender variations. The findings revealed both similarities and differences in metadiscourse usage, offering partial evidence for the universality of metadiscourse. The researchers categorized metadiscourse into textual metadiscourse and interpersonal metadiscourse and sought to determine whether American and Finnish writers employed similar amounts and types of metadiscourse markers, as well as whether gender played a role. The analysis demonstrated that students from both countries used all categories and subcategories of metadiscourse but there were cultural and gender distinctions in terms of the quantities and types used. Finnish students and male students employed more metadiscourse compared to American students and female students. Additionally, both groups of students employed significantly more interpersonal metadiscourse than textual metadiscourse, with the Finnish males using the

highest amount and the American males the lowest. The findings of the study done by Lofti et al. (2019), along with a number of relevant studies mentioned here, support the existence of cross-cultural variations in the use of metadiscourse. Nevertheless, the results also presented partial evidence suggesting the universality of metadiscourse. Lofti et al. (2019) aimed to compare the usage of interactional metadiscourse markers, as outlined in Hyland's (2004b) model, in argumentative essays written by Iranian and Chinese university students. The researchers explored the influence of the students' L1 on the use of rhetorical patterns in these distinct cultural contexts, focusing on the students' L2 English writing. The results demonstrated that learners from different cultural backgrounds and with different first languages exhibited diverse approaches in writing argumentative essays. The study revealed notable differences between Iranian and Chinese students in their usage of metadiscourse markers across all categories, except one. Specifically, Iranian and Chinese students displayed contrasting patterns in their use of boosters, attitude markers, engagement markers, and self-mentions, while their usage of hedges showed similarities. Overall, the research provided further support for the notion of cross-cultural disparities in metadiscourse usage. However, it also indicated that there were aspects of universality of metadiscourse, highlighting the importance of further investigations into its usage and emphasizing its significance in composition instruction.

As can be seen from the studies cited here is that academic genres are one of the primary areas of interest in the use of metadiscourse. The studies mostly compared the use of metadiscourse across disciplines, more often; however, researchers compared the use of metadiscourse in texts in one language (almost always English) with those in another language or between native and non-native texts. The role of metadiscourse in the writing of L2 English students was explored and compared with native speakers' writing or the writing of L2 English students with different mother tongues. The studies revealed distinct variations in the use of metadiscourse among different groups, highlighting how L2 writers incorporate diverse rhetorical conventions into their English texts. These contrastive studies predominantly employed corpus methods, analyzing both the frequency and diversity of metadiscourse usage. The outcomes frequently generated conflicting findings concerning metadiscourse features. However, these findings were consistently discussed in the context of culturally favored rhetorical strategies, indicating the influence of cultural differences on metadiscourse usage.

2.4.2.3 *Intercultural rhetoric research of metadiscourse features in the context of teaching academic discourse*

The final broad category of research to which metadiscourse has made a considerable contribution is the teaching context. It is not surprising that research in intercultural rhetoric and its findings, such as insights from metadiscourse use, are closely connected with their application in the teaching context, particularly the instruction which occurs within academic writing classes (Hyland, 2017). The empirical findings of these studies, when viewed as a framework for informing English language teaching, provide valuable perspectives on the preferred rhetorical conventions in academic English compared to other languages. This assists teachers and their L2 students in developing an understanding of the cross-cultural differences in academic writing style, thereby contributing to the development of L2 academic literacy (Li, 2008). Many of the studies have a pedagogical purpose as the most prominent one, focusing on student needs and competences, often stressing that the findings may be used to help non-native speakers of English in their publishing efforts as well to provide an insight into what the students must acquire to become fully socialized into their research community (Dahl, 2004). In such contexts, the ability to become part of these communities is perceived as relying on an individual's awareness of and proficiency in the writing conventions specific to the discourse community in question (Hyland & Hamp-Lyons, 2002).

Secondly, some scholars have tried to find the relation between metadiscourse and writing quality. One of the crucial questions in the field of L2 writing instruction revolves around the impact of metadiscourse on the quality of writing. Numerous studies have explored this question, but the results have been inconsistent. While an early study by Wolfe-Quintero et al. (1998) found no correlation between essay quality and the use of linking words, other studies have provided evidence suggesting that the usage of metadiscourse elements can differentiate between different levels of L2 writing proficiency. For instance, Grant and Ginther (2000) discovered that the number of conjuncts used in essays increased in proportion to the writers' proficiency levels. Jafarpur (1991) observed significant correlations between cohesive devices and essay quality, concluding that the analysis of cohesive devices can distinguish between different levels of writing proficiency. According to Hellermann and Vergun (2007), there is a correlation between learners' proficiency levels and the appropriate use of metadiscourse markers. In other words, they argue that more proficient learners utilize metadiscourse markers more extensively in their writings to enhance coherence and cohesion.

Intaraprawat and Steffensen (1995) concluded that skilled writers' use of metadiscourse in argumentative essays was characterized by both greater density and range. They argue that

proficient writers possess an understanding of their readers' needs and can employ strategies that make their texts more thoughtful and comprehensible to the reader. In contrast, poor writers lack the capability to produce considerate texts (Intaraprawat & Steffensen, 1995). Likewise, both frequency and diversity of metadiscourse features were identified as predictors of students' English persuasive writing in Huh and Lee's (2016) study. The results of their study showed that the metadiscourse features present in successful L2 essays were similar to those found in successful L1 essays. The paper concluded by suggesting that L2 writing instruction should focus more on teaching L2 students about interactional metadiscourse through explicit instruction. This finding was supported by a similar study conducted by Lee and Deakin (2016). Their analysis was based on three corpora of student writing, successful and less-successful L2 argumentative essays, and successful L1 argumentative essays. Using Hyland's (2005a) model of interactional metadiscourse, the essays were compared to assess the differences in the use of metadiscourse resources between successful and less-successful argumentative essays produced by students. The study revealed that both L1 and L2 successful argumentative essays contained a higher quantity of metadiscourse features compared to the less-successful ones. A study by Park and Oh (2018) investigating the correlation between L2 writing proficiency and metadiscourse use in argumentative texts analyzed two corpora of argumentative essays written by three different proficiency groups of Korean English as a Foreign Language (EFL) learners and native speakers of English. The findings revealed marked variations in both the quantity and quality of metadiscourse use across different proficiency levels. As proficiency improved, writers relied less on interactive resources, achieved a more balanced use of interactional resources such as hedges and boosters, and expanded the range of metadiscourse markers used. This indicates that the use of interactional devices is a crucial aspect of creating engaging and persuasive argumentative texts. The findings also showed the range of metadiscourse to be one of the indicators of writing proficiency as it increased according to writing proficiency.

In contrast, Knoch et al. (2014) discovered that writers with lower proficiency levels employed more metadiscourse compared to those who were more proficient. A closer examination of individual items revealed that the disparity between writers of different proficiency levels lay in the specific types of metadiscourse items they chose. For instance, less proficient writers tended to use a particular set of metadiscourse items (such as *however, firstly, secondly*) with greater frequency (Kennedy & Thorp, 2002). This inconsistency may arise from variations in how metadiscourse is defined and analyzed (e.g. whether it includes only a specific set of items or broader categories), as well as the nature of the writing task (Knoch et

al., 2014). Overall, while the findings regarding the impact of metadiscourse on writing quality have varied across studies, the research indicates that the use of metadiscourse items can differentiate between different levels of L2 writing proficiency.

Furthermore, numerous studies have been carried out to investigate whether the instruction of metadiscourse can enhance the quality of students' writing. These studies aim to examine the impact of explicit instruction in metadiscourse usage on students' performance. Overall, the findings consistently support the notion that L2 students who receive instruction on metadiscourse demonstrate significant improvement in their writing abilities (e.g. Steffensen & Cheng, 1996). Additionally, they show enhanced comprehension of English texts (Tavakoli et al., 2010). Cheng and Steffensen (1996), for instance, conducted a study in which they taught metadiscourse in a writing class to demonstrate its role in improving students' writing quality. The experiment aimed to assess the impact of students' awareness of metadiscourse on their own writing abilities. They divided an L1 university class into two groups – one group received instruction on metadiscourse features as part of composition writing, while the other group did not. Pre- and post-test papers were analyzed to compare the use of metadiscourse between the two groups. The results indicated that the group exposed to metadiscourse instruction showed a notable improvement in their scores compared to the control group, demonstrating skillful use of metadiscourse. This study suggested that teaching students about metadiscourse is crucial for enhancing their writing skills. Additionally, Hyland (2005a) argues that incorporating metadiscourse in writing serves as an effective means to shift the focus from the writer to the reader, thus facilitating communication, increasing text readability, and establishing a connection between the writer and the reader. Park and Oh (2018) also concluded that the findings of their above-mentioned study provided some useful insights into teaching and learning of metadiscourse in persuasive writing, which contribute to fostering a sense of dialogue, interaction, and engagement with the audience. Cheng and Jiang (2004) took Chinese students majoring in English as research subjects, and they found that metadiscourse teaching can not only improve students' writing proficiency but also, agreeing with Hyland (2005a), cultivate students' consciousness of engaging with readers. Huh and Lee (2016) also examined the relationship between the use of metadiscourse and writing quality and how metadiscourse features were employed by L2 undergraduate students to make their persuasive texts effective. They concluded that teachers should make the metadiscourse features of persuasive writing explicit to students to assist them in making stronger arguments. The results of Ho and Li's (2018) study, investigating the way first-year university students construct persuasive arguments in writing by exploring their pattern of use of metadiscourse,

suggested the need for explicit and direct instruction on metadiscourse at both secondary and early tertiary education levels. They argued that the instruction would enable students to effectively employ metadiscourse in English academic writing to create convincing arguments. The study concluded that the ineffective use of metadiscourse may be a result of insufficient exposure to metadiscourse knowledge during secondary education. It suggested that this lack of exposure could be attributed to the limited emphasis placed by teachers, curriculum, and writing textbooks on the forms and functions of metadiscourse (cf. Crismore et al., 1993; Intaraprawat & Steffensen, 1995; Hyland, 2005a; Li & Wharton, 2012; Ho & Li, 2018).

Li and Wharton (2012) conducted a study that focused on English writing produced by first language (L1) Mandarin speakers. The objective was to examine patterns of similarity and difference in the use of interactive and interactional metadiscourse between educational contexts (native Mandarin speakers studying in China using English as a medium of instruction versus those studying in the UK using English as a medium of instruction) and disciplines (Literary Criticism and Translation Studies). Although the writers shared the same cultural and linguistic background, their undergraduate English writing in each discipline occurred within distinct educational contexts, which influenced their writing patterns. The results of the study indicated that the use of metadiscourse patterns was influenced by both disciplinary and contextual factors, with contextual factors having a stronger influence. The differences observed in the L2 writings were attributed to the guidance provided to students, specifically regarding the inclusion of personal perspectives in their writing. On one hand, tutors explicitly encouraged the use of markers that foster collective engagement, while on the other hand, tutors emphasized the presence of an individual first-person voice in student texts. Additionally, students tended to pay more attention to tutor feedback on their own writing than to examples of disciplinary writing they may have been exposed to, which further influenced their metadiscourse usage. Jwa and Ha's (2020) study investigated how students' metadiscourse use changed over time as their academic literacy developed. L2 students' metadiscourse was documented in alignment with their semester-long learning of writing research papers. They examined the overall frequency and actual implementation of metadiscourse in student writing, as well as what changes were made in their metadiscourse use as their understanding of academic discourse developed. Their findings indicated that the number of metadiscourse students used did not significantly increase, but the ways they employed metadiscourse changed over time, e.g. the writer's development of researcher identity and a corresponding change in his or her orientations towards the reader. The study also discussed how

metadiscourse can be incorporated into writing instruction to help L2 students build an academic identity.

The results of these studies seem to suggest, as Hyland (2005a) noted, that "a lack of familiarity with the metadiscourse conventions central to many expository genres in English may be detrimental to learners' academic performance" (p. 36). Specifically, teaching and analyzing texts that focus on various genres and the use of metadiscourse markers in different contexts can assist students in effectively organizing their written work and guiding their readers. Consequently, by familiarizing students with the principles of academic writing, their use of metadiscourse in academic writing can be enhanced. This familiarity can be achieved through direct or indirect instruction, wherein different genres, metadiscourse markers, and the appropriate strategies for their application are introduced in various contexts. By raising students' awareness through instruction, they can attain successful integration into the academic and professional discourse community (Hyland, 1994). Comparative studies on metadiscourse, such as the current one, can assist ESP and foreign language researchers, teachers, and learners in increasing their understanding of English writing conventions and identifying potential challenges in metadiscourse usage. Overall, what is worth noting in studies cited here is that good writing quality is characterized by both frequency and diversity of metadiscourse in use (Intaraprawat & Steffensen, 1995; Li & Wharton, 2012; Huh & Lee, 2016). Moreover, a greater inclusion of metadiscourse is characteristic of L2 students' writing proficiency, and a variety of metadiscoursal resources in writing tends to elicit a positive evaluation. Metadiscourse use is thus recognized as "something for teachers to teach and for students to practice for rhetorical sophistication" (Jwa & Ha, 2020, p. 2). Instead of leaving metadiscourse as a "pervasive yet 'hidden' dimensions of persuasive writing" (Lee & Deakin, 2016, p. 32), it is suggested that L2 students be provided with a range of linguistic devices that can be used to support their arguments and establish a relationship with the readers (Jwa & Ha, 2020).

2.4.3 *Summary*

The previous sub-chapter reviewed published research on metadiscourse in academic discourse. Previous research seems to show that the use of metadiscourse is not uniform across languages, disciplines and genres accounting for the cross-cultural variations in the rhetorical conventions of the academic writing and lending support to the claim that cultural differences can lead writers to employ different metadiscourse resources.

Moreover, academic discussions about cross-cultural research in academic writing often revolve around intercultural rhetoric. Essentially, this field examines the impact of an individual's L1 and culture on their writing in L2, or how a common language is used in different cultural settings. The majority of research in this domain has primarily concentrated on English as L2, which is warranted due to its worldwide status as the primary language for academic and research endeavors, as well as the influence of the dominant Anglo-American writing style on the conventions of other languages.

The research in this domain suggests that studying metadiscourse use in L2 academic writing compared to that of native speakers can help determine if cross-cultural differences result in varying patterns of metadiscourse use. It also highlights the significance of intercultural rhetoric research in examining metadiscourse features in student academic discourse. It emphasizes the need to explore cross-cultural differences in metadiscourse use and its implications for L2 learners' development of academic writing skills.

In addition, previous research showed that analyses of metadiscourse use provide an insight into the preferred rhetorical conventions between academic English and other languages as well as L2 English and raise awareness of primarily cross-cultural differences in academic writing. Understanding of these differences can contribute to the development of academic literacy as well as assist non-native speakers of English in their publishing efforts.

3. A COMPARATIVE ANALYSIS OF METADISCOURSE IN THE NON-NATIVE AND NATIVE ENGLISH ARGUMENTATIVE ESSAYS

3.1 Towards the approach adopted in the present study

So far, the present discussion dealt with the theoretical accounts of metadiscourse markers. In line with the purpose of the present study, the discussion has focused on the role of metadiscourse in academic discourse as the primary focus of the study as well as on the outline of metadiscourse classification and theoretical issues. While a more comprehensive description of the methodology employed in the study will be provided in this chapter, at this point is seems reasonable to provide a broad overview of the general framework used to examine metadiscourse. The present study explores the use of metadiscourse markers in a genre of student academic writing in L2 and L1 English. The decision to focus on argumentative texts in the study was motivated by their relevance in academic writing and by the fact that this type of writing typically calls for the use of metadiscourse. In order to gain a better understanding of the use of metadiscourse markers in a specific genre of academic writing of MA students with diverse mother tongue backgrounds, this study uses a corpus-based approach. It presents a comparative analysis of metadiscourse usage in argumentative essays written in English by both native and non-native students. Therefore, it may be characterized as genre-based, corpus-based study which aims at exploring variations in the frequency and distribution patterns of metadiscourse markers in L2 and L1 English and consequently provide an insight into a particular aspect of the rhetorical preferences in student academic writing. It is important to stress that the study explicitly adopts Hyland's (2005a) well-established taxonomy of metadiscourse in its entirety, primarily due to positive traits of the framework which have been acknowledged in the previous research on metadiscourse use in academic discourse. But, as the subsequent analysis shows, the current study adopts the position of maintaining an open system which can be modified with emerging data.

3.2 Methodological framework

The methodological framework adopted in this study follows the previously discussed theoretical background of socially situated academic writing which sees that academic texts are forms of interactions between members of particular discourse communities (Hyland, 2004a). The primary objective of this study is to examine the usage of metadiscourse markers in academic argumentative essays written by non-native English speakers, specifically

Croatian MA learners of English as a foreign language. It seeks to identify differences in their usage by comparing them with the choices made by native English speakers. Additionally, the study aims to investigate the distribution patterns of metadiscourse markers in argumentative essays written by both non-native and native English speakers. It is important to note that the comparison with native speakers does not imply that their texts serve as a definitive model of appropriateness. Rather, they act as a reference point, solely intended to provide "the basis for revealing the characteristics of learner language" (Johansson 1998, p. 7, as cited in Ädel, 2006, p. 6).

The present study is also motivated by the lack of studies and the evidence for the relationship between the overall metadiscourse use in student writing in the Croatian context. To the best of my knowledge, pertinent exploration of academic discourse produced by Croatian L2 writers is still scarce. The studies mentioned previously, however, have been rather narrow in focus dealing only with selected aspects of the use of interactive metadiscourse, i.e. sub-features of metadiscourse (e.g. cohesive devices, sentence-initial metadiscourse, frame markers, discourse markers of contrast, transition markers, cf. Pavičić Takač, 2018; Pavičić Takač & Vakanjac Ivezić, 2019; Pavičić Takač et al., 2020; Bogdanović et al., 2023), and the evidence for the relationship between the overall metadiscourse use, i.e. both interactive and interactional categories of metadiscourse, remains relatively inconclusive.

The present study, in contrast, is based on a model of metadiscourse which assigns equal importance to the interpersonal aspects of metadiscourse as well as the organizational aspects of the text. This allows for providing a more comprehensive insight in the writing of Croatian L2 writers than has tended to be shown by previous research. In contrast to proficient student writers who interact with academic writing and disciplinary discourses, MA students in the Croatian context primarily receive instruction on writing within the non-discipline-specific genre of argumentative essay. This instruction is typically part of their preparation for the National Secondary School-leaving Exam in English during their secondary school English lessons. The purpose of creating the current corpus was to simulate a genre representing MA argumentative writing with the aim to investigate the metadiscourse features that may characterize argumentative texts produced by student writers.

3.2.1 *Research questions and hypotheses*

The aim of this research was to analyze and determine the characteristics of the use of metadiscourse in argumentative essays written by students of English as a foreign language

and to compare them with those written by native speakers. Hyland's (2005) model was employed to identify patterns of metadiscourse. The following were the research questions and hypotheses:

1. What was the frequency of metadiscourse markers in argumentative essays of Croatian foreign language users compared to native English users?

   H1: The relative frequency of tokens was statistically significantly higher in written essays by non-native speakers compared to native speakers.

2. What were the metadiscourse features of argumentative essays written by non-native speakers compared to essays written by native speakers?

   H2.1: Non-native speakers most frequently used interactive markers and the frequency of their use was significantly higher among non-native speakers compared to native speakers.

   H2.2: Non-native and native speakers most frequently used interactive subcategory transitions and the frequency of their use was significantly higher among non-native speakers compared to native speakers.

   H2.3: The next most frequent interactive subcategory in the essays of non-native and native speakers were frame markers and the frequency of their use was significantly higher in non-native than in native speakers' essays.

   H2.4: Differences in the use of other interactive subcategories endophoric markers, evidentials and code glosses between non-native and native speakers were not significant.

   H2.5: The frequency of interactional markers (attitude markers, boosters, engagement markers, hedges, self-mention) was significantly lower in non-native speakers' essays compared to native speakers' essays.

3. What were the distribution patterns of metadiscourse markers in the individual paragraphs of argumentative essays by native and non-native speakers?

   H3.1: There was no significant difference in the distribution of interactive markers in all parts of the essay between non-native and native speakers.

   H3.2: Native speakers used interactional markers more frequently in all parts of the essay compared to non-native speakers.

The hypotheses put forward were based on previous research and findings to make the present research stronger and more reliable.

3.2.2 *Textual sources of data*

In order to conduct a comparative study in dealing with the textual level of analysis, it was important to first ensure that the analysis of the student academic writing is made on the comparable data. According to Moreno (1998), it is essential to ensure that the elements being compared are comparable. To that purpose, the study broadly follows the model for contrastive rhetoric research, as proposed by Moreno (1998) and further discussed by Connor and Moreno (2005) and Moreno (2008). Connor and Moreno (2005) propose that in research on academic discourse, the model relies on establishing various criteria for comparison, known as *tertia comparationis*, which is considered a crucial prerequisite. The concept of *tertia comparationis* emphasizes the need for maximum similarity between the contrasting elements to ensure that "we compare elements that can in fact be compared" (Connor & Moreno, 2005, p. 154). However, the selection of these elements depends on the specific purpose of the study. The establishment of *tertia comparationis* in academic discourse studies involves three levels of research design. Firstly, it involves identifying texts or selecting comparable primary data for the corpus design. Secondly, it entails identifying comparable textual constants, which are the textual concepts to be studied in the corpus. Lastly, it involves identifying linguistic features used to express these concepts, thereby designing the taxonomy of linguistic data for the comparative analysis.

3.2.2.1 *Corpus design*

The present study may be characterized as a cross-cultural, corpus-based, genre-based study. The overall aim of the present study is to investigate the use of metadiscourse in student academic writing and examine the possible cross-cultural variations in the use of both interactive and interactional metadiscourse, i.e. the pragmatics of metadiscourse markers in the corpora of the Croatian L2 MA students and English native speakers. To that aim, two comparable corpora of the Croatian L2 (NNS) and English native speakers' (NS) argumentative essays were compiled. The present study follows the footsteps of a plethora of the genre-based studies on academic discourse cited in Chapter 2 which are based on self-compiled, specialized corpora. In line with previous research and for the sake of convenience, the two corpora were given the abbreviated labels which are used in the subsequent discussion. Thus, NNS stands for the L2 corpus, while NS represents the L1 corpus. The term 'comparable corpora' is understood here as the corpora comprised of the texts sharing the same

communicative purpose, written in English by native and non-native speakers (Bowker & Pearson, 2002).

In line with previous research (Sanderson, 2008), the two corpora were compiled by the author of the present thesis and their main purpose is to allow an examination of the use of metadiscourse markers in an instance of student academic writing. The NNS corpus consists of texts written in English by MA Croatian university students at upper intermediate/advanced (B2/B2+) proficiency level (CERF, 2001). Students were given a task to write an untimed 500- to 1000-word argumentative essay in an electronic form on a set of topics to choose from in which they had to present two points of view on a controversial topic, express their opinion and give supporting arguments. The essay model characterized by a three-part argumentative structure – introductory paragraph, body paragraph, and concluding paragraph – described in more detail in Chapter 2, is put forward as the basis of this study. The students were given a task to write the untimed essays in their free time with a permission to use language tools, research the topic and gather the necessary information, but the essays had to be the student's own work; when writing an essay, they were not supposed to refer to sources or seek the help of native speakers. Untimed essays were selected because they represent students' texts produced in a more authentic and natural setting. The students were given a consent form in which they gave the consent for their essays to be used in the present research as well as in which they informed the researcher about the chosen title of their essay, if they used any language tools when writing their essay, if they were MA students and how long they had been studying English as a foreign language.

The texts are based on the task defined by the guidelines of the International Corpus of Learner English (ICLE) project (2015) initiated and coordinated by Sylviane Granger at the University of Louvain in Belgium (cf. Granger, 1993). In order to meet the demands of the argumentative genre, characterized by a three stage structure which represents the organizing principles of the genre, students could choose one of the four offered topics for the essay which had to contain a thesis stage, i.e. introduction paragraph, argument stage, i.e. the body paragraph or the main part with theses and arguments for and against the topic and conclusion stage, i.e. the conclusion paragraph containing the conclusion and personal attitude towards the topic. The topics the students could choose were: 1) Most university degrees are theoretical and do not prepare students for the real world. They are therefore of very little value., 2) In his novel Animal Farm, George Orwell wrote "All men are equal: but some are more equal than others". How true is this today?, 3) In the words of the old song "Money is the root of all evil" and 4) Some people say that in our modern world, dominated by science technology and

industrialization, there is no longer a place for dreaming and imagination. What is your opinion?.

For the purposes of comparison, i.e. in order to evaluate the learner corpora against the norm or standard of comparison in the form of native speakers corpus (Ädel, 2006), a native-speakers' corpus was created by selecting comparable texts from the LOCNESS (cf. Granger, 1993), a corpus of native English essays made up of British and American students' argumentative essays which is free and available to use for academic purposes. The general idea is that "[w]hen matched with comparable native-speaker texts, a learner language corpus provides the basis for revealing the characteristics of learner language, e.g. identifying interference from the mother tongue" (Johansson 1998, p. 7, as cited in Ädel, 2006, p. 6). Although the two corpora differ in the number of words, length of individual texts and topics, they both contain argumentative essays written by university students, which makes them sufficiently comparable.

3.2.2.1.1 *Corpus size*

As can be seen in Table 5, the NNS corpus consisted of 99 argumentative essays. In total, the NNS corpus consisted of 64.228 words. The number of the argumentative essays to be included in the corpus was decided partially arbitrary, based on the number of the NNS essays that were made available to the researcher. As Bowker and Pearson (2002) observe, as there are no pre-determined rules on the ideal size of the corpus, the decision on its size is led by the research aim and availability of the data. For the purposes of comparison, the NS corpus was created similar in size by selecting 100 comparable texts. In total, the NS corpus consisted of 65.025 words. As expected, the essays differed to some extent in size. The mean length of the NNS essays was 648.77 words, while the mean length of the NS essays was 650.25 words. The two corpora are comparable due to the fact that they only slightly differ in the number of words per essay, contain argumentative essays written by university students, include a similar topic range, and both groups of student writers are similar in age and educational level while at mixed years of study.

Table 5 The size of the NNS and NS corpus

	NNS	**NS**
Number of essays	99	100
Total number of words	64228	65025
Average number of words per essay	648.77	650.25

The current study uses a small-scale corpus, which aligns with the prevailing practices in corpus-based research within the fields of English for Specific Purposes (ESP) and English for Academic Purposes (EAP). In these fields, smaller and more targeted corpora, specifically designed for particular research or pedagogical purposes, are considered to be more effective in providing insights directly applicable to teaching and learning for specific purposes (Alshahrani, 2015). This small-scale corpus is intended for specific contextual research purposes and thus does not provide a basis for generalized claims about the use of metadiscourse but has the advantage of allowing identification of patterns that may be specific to the context researched. The current size of the corpus is believed to adequately represent the academic writing being studied, thereby enabling the exploration of rhetorical practices within the two academic communities (Vaughan & Clancy, 2013).

The current corpus meets Moreno's (2008) requirements for corpus comparison by considering comparable contextual factors, including genre, discipline, writers' expertise level, and other relevant dimensions (Moreno, 1998; Connor & Moreno, 2005; Moreno, 2008). Prior to comparing the metadiscourse devices between the two groups of writers, certain study constants were established, such as the source of texts, genre, language, and the unit of analysis at the textual level, among other factors. The primary data used as *tertium comparationis* for the compilation of the two comparable corpora used in the present study are summarized in Table 6 as follows.

Table 6 *Tertia Comparationis* used for the design and compiling of the comparable corpora

Tertia Comparationis	
Text source	a corpus of essays written in English by British and American (L1) students; a corpus of essays written in English by Croatian (L2) university students
Genre	students' argumentative essays
Language	L2 English and L1 English
Mode	written L2 English and L1 English language
Number of essays	99/100 per corpus
Structural layout of essays	three-part structure: introduction, body and conclusion paragraphs
Textual unit of analysis	whole essay structure and individual parts of the three-part structure
Word length of essay	648.77 – 650.25

3.2.2.2 *Establishing the textual constant*

In line with the methodological framework proposed above, the next level of establishing *tertia comparationis* involved identifying the textual constant in the analysis. In the present study,

this is the broad use of metadiscourse as a feature of written discourse, which, as Hyland (2005a) argues, plays a central role in academic writing by improving readability and persuasiveness of the texts. In the context of academic writing, a plethora of empirical studies on English as well as other languages have established that the use of metadiscourse markers encompasses a range of rhetorical strategies employed to manage the interactions between the writer, the developing text, and the intended reader in academic discourse as discussed in Chapter 2. Therefore, the position adopted in this study is that the use of metadiscourse is an intrinsic characteristic of the contemporary academic writing. Against this background, the study is based on the assumption that both native and non-native writers employ a variety of metadiscourse markers in their argumentative essays to support their arguments and produce persuasive and coherent texts. The outline of taxonomizing the metadiscourse markers in argumentative essays under study is the focus of the next section. Before presenting the taxonomy used in this study, it is important to acknowledge that the selection of metadiscourse devices involves a certain level of subjectivity on the part of the analyst. To ensure reliability, a second researcher was included in resolving all instances of divergence until full agreement was reached.

3.2.2.2.1 *Outline of the taxonomy of the metadiscourse markers used in the present study*

This stage of research involved deciding on the linguistic realizations of metadiscourse to be analyzed across the two corpora. The present analysis is based on a pre-determined taxonomy of the metadiscourse markers but finishes with what was actually found in the corpus itself. The research methodology aims to keep a flexible system, allowing for modifications to the initial framework based on emerging data. It is important to highlight that the current analysis solely concentrates on the lexico-grammatical elements of metadiscourse markers, disregarding clauses or paragraphs as units of analysis (Vold, 2006a). The analysis is based on Hyland's (2005a) classification scheme of metadiscourse, i.e. an Interpersonal Model of Metadiscourse (Hyland, 2005a, p. 49) and his list of items that potentially realize metadiscourse functions. Hyland's model was chosen over the others as the framework for this study because: a) the model has gained significant popularity in terms of its wide use in the field of L2 academic writing research, b) it combines various taxonomies of metadiscourse, incorporating their strengths and limitations, while introducing necessary adjustments, c) its classification is concise and comprehensive, specifically tailored for academic text analysis, rendering it suitable for the texts examined in this study, and d) it focuses on texts authored by non-native

English writers, offering a structured foundation for teaching academic writing. The framework's positive characteristics have been recognized and acknowledged by Alipour et al. (2015), Abdollahzadeh (2011), Mur-Dueñas (2011), Li and Wharton (2012), Khoutyz (2013), Letsoela (2013), Shi and Han (2014), Kobayashi (2016), Tan and Eng (2014), etc. who also relied on Hyland's (2005a) model in their study on metadiscourse. As Dueñas (2013) argues, given his more than 15 books and 140 articles and book chapters on academic discourse, Ken Hyland can be rightfully called one of the leading authorities in the research on academic discourse worldwide. Table 7 provides a list of the main categories and the respective subcategories of interactive and interactional metadiscourse with the examples extracted from the present corpora.

Table 7 An Analytical Framework of Interactive and Interactional Metadiscourse

Category	Function	Examples
Interactive	**Help to guide the reader through the text**	**Resources**
Transitions	express relations between main clauses	*furthermore; but*
Frame markers	refer to discourse acts, sequences or stages	*finally; to conclude*
Sequencing	sequence parts of the text or internally order arguments	*firstly; lastly*
Label stages	label text stages	*in conclusion; overall*
Announce goals	announce discourse goals	*this essay; would like to*
Shift topic	indicate topic shifts	*now; regarding*
Endophoric markers	refer to information in other parts of the text	*X above; in the introduction*
Evidentials	refer to information from other texts	*according to*
Code glosses	elaborate prepositional meanings	*e.g., such as*
Interactional	**Involve the reader in the text**	**Resources**
Hedges	withhold commitment and open dialogue	*might; perhaps*
Boosters	emphasize certainty or close dialogue	*actually; surely*
Attitude markers	express writer's attitude to proposition	*unfortunately; agree*
Self-mentions	explicit reference to author(s)	*I; my*
Engagement markers	explicitly build relationship with reader	*assume; consider*

3.2.2.3 *Data analysis procedure*

The first step in the analysis involved the identification and the extraction of the metadiscourse markers. The texts were first computer-processed using the corpus query tool SketchEngine (http://www. sketchengine.eu). During the analysis, several issues had to be considered. The first one was the variety of terms, definitions and classifications of metadiscourse markers and lists of lexical items that may count as metadiscourse markers. As mentioned in Chapter 2, according to Hyland (2005a), there is a lack of clarity in the existing literature regarding to what counts as metadiscourse. Consequently, he argues that any list of metadiscourse markers can only be partial and that a comprehensive description of metadiscourse is unattainable. However, Hyland's (2005a) list offers a method for comparing the usage of metadiscourse

devices across various aspects, such as writers, genres, cultures, and communities. Therefore, the analysis was based on the list of metadiscourse items that potentially realize both interactive and interactional metadiscourse. First, the NNS corpus was searched for the metadiscourse markers included in Hyland's (2005a) list. Then, the NNS texts were read to identify other metadiscourse markers not contained in Hyland's list. The overall list of metadiscourse markers used in the analysis is provided in Appendix A.

Another issue that arose was the multifunctionality of metadiscourse elements. As highlighted by Hyland (2005a), these elements can serve different purposes in various texts and contexts. They can simultaneously fulfil two or more functions, expressing interactive or interpersonal meanings, and realizing both propositional and metadiscursive meanings. As the meaning of the metadiscourse markers is largely contextually bound and occasionally polysemous, a decision on the use and meaning of a metadiscourse marker and consequently the inclusion in the corpus was subjected to close examination of the surrounding context in the essays they were extracted from. Thus, the automatic identification of the data was supplemented by a discourse-analytic methodology which aimed to ensure that the items included in the analysis met the selection criteria to be included in the analysis (Sanderson, 2008). Therefore, due to the potential multifunctionality, all examples identified in the corpus had to be analyzed by referring to the context in which they were used. The corpus query tool SketchEngine makes the contextual analysis convenient as it retrieves all the occurrences in which the key word was used in the target corpus. It also allows going back into the original text and checking the context in which the target item was used. Specifically, the analysis involved determining whether an item pertained to the present text or an external phenomenon and discerning between interactive or interactional meanings. This is illustrated in Examples 11 to 14: the token *could* found in the two corpora can realize both propositional and metadiscursive meaning. In Examples 11 and 13, it was used as a modal verb to express ability in the past, and is therefore not considered metadiscursive, but in Examples 12 and 14 it hedges the statements and functions as a metadiscursive item.

NNS corpus

11) *Fifty years ago, not that many people attended universities and one person having a job which required only a high school degree <u>could</u> support their whole family.* (E79 NNS body)

12) *However, it **could** be claimed that, in reality, it is not true.* (E6 NNS body)

NS corpus

13) *A classic example is that of Frank Bruno, the much loved British world champion, he did not have a great future in prospect but when he took to boxing he found something he could do well.* (BOX 10 NS body)
14) *This argument **could** point to computers as the replacement of human brains yet their development is similar to ours, as we programme them according to the knowledge which we acquire.* (TECH 6 NS body)

Furthermore, there was a potential for metadiscursive elements that serve different functions to be used in combinations, complicating their classification and quantification. Instances of combining various functions within a single unit were observed in both corpora, demonstrating that metadiscourse items can embody both interactive and interpersonal meanings. The tokens *take a look for example* (in Example 15) and *surely mean* (in Example 17) realized interactional meaning and were used as an engagement marker (in Example 15) and as a booster (in Example 17), whereas the tokens *for example* (in Example 16) and *mean* (in Example 18) realized interactive meaning and were both used as code glosses.

NNS corpus

15) ***Take a look for example** at politicians and wealthy people and people that have no political influence or do not have as much money.* (E9 NNS body)
16) *Take a look **for example** at politicians and wealthy people and people that have no political influence or do not have as much money.* (E9 NNS body)

NS corpus

17) *A single Europe will **surely mean** a loss of sovereignty for Britain, assuming we take sovereignty to mean simply freedom for a country's national government to act in all three of its branches, (executive, legislative and judiciary) without outside interference (in this case, from the European parliament and other bodies).* (EU 26 NS body)
18) *A single Europe will surely **mean** a loss of sovereignty for Britain, assuming we take sovereignty to mean simply freedom for a country's national government to act in all three of its branches, (executive, legislative and judiciary) without outside interference (in this case, from the European parliament and other bodies).* (EU 26 NS body)

These examples can be viewed as individual metadiscourse units with one general function, or they can be interpreted as units encompassing two or three distinct types of metadiscursive

functions. This leads to the issue of identification of metadiscoursal units. Metadiscourse can be realized in a range of sizes, spanning from single words to entire clauses or sentences, where certain larger units contain smaller ones. However, recognizing the smaller elements does not overlook the larger ones, and it accurately reflects the extent of metadiscourse in a text, provided that analysts are clear in their assessments and maintain consistent coding practices (Hyland, 2019). In this study, a micro-level perspective was adopted, following Ädel (2006), wherein multiple occurrences of different metadiscourse types within a clause were counted as separate tokens. In this study, for example, '*we will analyze*' was categorized as two units, with '*we*' and '*analyze*' coded as two engagement markers. Another example of how the units were identified in the present study are endophoric markers '*X above*', '*X before*' and '*X earlier*', where '*X*' stands for, for example, '*paragraph*', '*expression*' or '*mentioned*'. The occurrences of these markers were not so frequent, so they were identified as one unit grouped under '*X above*', '*X before'* and '*X earlier'* to make the statistical analysis more relevant (for a complete list of metadiscourse markers identified in the present study, see Appendix A). Considering the aforementioned challenges in quantifying metadiscourse, all automatically retrieved items were analyzed and examined to determine if they qualified as metadiscourse. A significant portion of the retrieved items were found to lack a metadiscursive function and were subsequently excluded from further analysis. The same process was repeated for the NS corpus.

The final issue that needed addressing pertained to how errors in the texts should be handled. Texts generated by learners often contain instances of non-standard language usage, as noted by Thomas (2015). However, making any alterations to the text can undermine its authenticity and potentially lead to the loss of valuable information, such as the specifics of the departure from conventional language. To mitigate these risks, only spelling errors that could impede automated computer searches were rectified (e.g. *finally – finaly).

3.2.2.4 *Frequency analysis*

Once the extracted metadiscourse devices were classified into the above outlined categories, the first step in the analysis was comparing the type and token frequency of metadiscourse markers, i.e. to calculate the ratio between the total number and different types of metadiscourse markers in the NNS and NS corpus. The next step was comparing frequencies of categories of metadiscourse markers used in the NNS essays with their counterparts in the NS corpus. Raw frequencies were calculated for each metadiscourse marker. Raw frequencies were then normalized to a text length of 1000 words, which is a standard methodological

procedure for comparing the frequency counts across the texts which differ in length (Biber, 1988). The normalized frequencies were calculated according to the following formula (Biber, 1988):

(raw frequency count / total words in the text) x 1000

In order to compare the two corpora, the relative frequency representing hits per 1000 words was calculated for each metadiscourse marker in the NNS corpus and for the matching items in the NS corpus. Assumptions of normality of data distribution as well as homogeneity of variances were checked to ensure the appropriateness of the chosen statistics. The Kolmogorov-Smirnov test indicated that the corpora data scores for relative frequency do not follow a normal distribution ($D(5970)=0.299$, $p<0.010$). Accordingly, the differences in relative frequencies among categories of metadiscourse markers between the two corpora were tested applying the non-parametric Kruskal-Wallis test. It has to be noted that a partial (or one-way) Contrastive Interlanguage Analysis (CIA) (Granger, 1993) was conducted so that frequency and statistical comparisons were made only for those items identified in the NNS corpus. Finally, the patterns of distribution of metadiscourse markers were explored by comparing frequencies of categories of metadiscourse markers across the three-stage structure, i.e. introduction, body and conclusion paragraphs.

At this point it should be noted that the study aims to clarify differences and similarities in the patterns of the use of metadiscourse markers by the non-native and native speakers, and as such, does not use any other more rigorous statistical method in the analysis of the present data. In that respect, the methodological approach adopted here uses the frequencies as "a springboard to more qualitative study", i.e. "as a basis for characterizing broad similarities and differences" in the academic writing at hand (Hyland, 2004a, p. 141).

4. RESULTS OF THE CORPUS ANALYSIS

The analytical part of the thesis reports the results and discusses the corpus findings. The analysis is divided into four sub-chapters. The sub-chapters are organized as follows: first, the results of the type and token frequency and dispersion for both interactive and interactional metadiscourse are provided, followed by the analysis of the overall frequency of interactive and interactional metadiscourse markers. Then, the frequency of each category of the interactive and interactional metadiscourse is analyzed. The next part is the analysis of the overall distribution of interactive and interactional metadiscourse, followed by the analysis of the distribution of interactive and interactional metadiscourse in individual essays and distribution of interactive and interactional metadiscourse and each respective interactive and interactional category across the essay structure. The analytical part of the thesis closes with the overall findings and distribution of all metadiscourse devices examined in both corpora.

4.1 Type/token ratio in the NNS and NS corpus

To measure whether the corpus used a wide range of metadiscourse markers or only a limited range of items, which get recycled, a lexical diversity statistic was calculated. According to Brezina (2018), the simplest lexical diversity statistic is the type/token ratio (TTR) which expresses the proportion of types (different word forms) relative to the proportion of tokens (running words). The idea is that a larger number of different word forms (types) relative to the number of all words in text (tokens) points to a lexically more varied text. The simple type/token ration can be used only for comparison of the texts of the same length, which makes it applicable for the present corpus. The TTR value showing the ratio between the total number of both interactive and interactional metadiscourse markers and different types of interactive and interactional metadiscourse markers was calculated for both corpora. The results for both interactive and interactional metadiscourse reported in Table 8 and Table 9 indicate a relatively low lexical variation in both the NNS and NS corpus.

Table 8 Interactive metadiscourse type/token ratio

Interactive metadiscourse	NNS tokens	NNS types	NNS TTR	NS tokens	NS types	NS TTR
Code glosses	411	28	0.07	456	22	0.05
Endophoric markers	15	7	0.47	12	5	0.42
Evidentials	9	1	0.11	25	1	0.04
Frame markers: total	302	61	0.21	159	26	0.16
FM sequencing	139	26	0.19	113	13	0.12
FM label stages	94	13	0.15	26	7	0.27
FM announce goals	52	12	0.23	10	4	0.40
FM shift topic	17	10	0.59	10	2	0.20
Transition markers	2056	53	0.03	1705	42	0.02
TOTAL	2793	151	0.05	2357	96	0.04

TTR – type/token ratio

Table 9 Interactional metadiscourse type/token ratio

Interactional metadiscourse	NNS tokens	NNS types	NNS TTR	NS tokens	NS types	NS TTR
Attitude markers	134	33	0.25	127	22	0.17
Boosters	443	43	0.10	410	34	0.08
Engagement markers	83	21	0.25	131	17	0.13
Hedges	833	51	0.06	941	44	0.05
Self-mention	152	4	0.03	306	3	0.01
TOTAL	1645	152	0.09	1915	120	0.07

TTR – type/token ratio

A more detailed statistical analysis, showing both raw and relative frequency of both interactive and interactional metadiscourse categories will be presented in the next section.

4.2 Dispersion of metadiscourse markers in the NNS and NS corpus

Table 10 Dispersion across interactive metadiscourse subcategories

Interactive metadiscourse	NNS CV	NNS tokens	NNS Juilland's *D*	NS CV	NS tokens	NS Juilland's *D*
Code glosses	0.8218	411	0.92	0.7144	456	0.93
Endophoric markers	2.5585	15	0.74	2.7217	12	0.73
Evidentials	3.5456	9	0.64	2.9746	25	0.70
Frame markers	0.7366	302	0.93	1.0428	159	0.90
Transition markers	0.3461	2056	0.97	0.4024	1705	0.96

CV – coefficient of variation; Juilland's D – measure of dispersion

When reporting frequencies in corpora, frequency information needs to be considered in combination with dispersion (Brezina, 2018). Table 10, therefore, provides a measure of dispersion, i.e. Juilland's *D* for interactive metadiscourse. Juilland's *D* is a measure of dispersion that builds on the coefficient of variation (CV). In essence, it is an inverse number to coefficient of variation, i.e. larger Juilland's *D* means a more even distribution and less variation. It is a number between 0 and 1, with 0 signifying extremely uneven distribution and 1 perfectly even distribution (Brezina, 2018). As can be seen from Table 10, interactive metadiscourse markers were mostly fairly evenly distributed in the NNS corpus with Juilland's *D* values ranging from 0.7 to 0.9. Table 10 shows similar results observed for interactive metadiscourse in the NS corpus in which metadiscourse markers appeared with Juilland's *D* values ranging from 0.7 to 0.9 indicating relatively low variation in both corpora, which corroborates the type/token ratio (TTR) results for interactive metadiscourse. Table 11 provides a measure of dispersion, i.e. Juilland's *D* for interactional metadiscourse. As can be seen from Table 11, interactional metadiscourse markers were also fairly evenly distributed in both corpora with Juilland's *D* values ranging from 0.8 to 0.9 indicating relatively low variation, which corroborates the type/token ratio (TTR) results for interactional metadiscourse.

Table 11 Dispersion across interactional metadiscourse subcategories

	NNS			NS		
Interactional metadiscourse	**CV**	**tokens**	**Juilland's *D***	**CV**	**tokens**	**Juilland's *D***
Attitude markers	1.0412	134	0.89	1.1071	127	0.89
Boosters	0.6752	443	0.93	0.7423	410	0.93
Engagement markers	1.6583	83	0.83	1.6444	131	0.83
Hedges	0.5057	833	0.95	0.6182	941	0.94
Self-mention	1.4842	158	0.85	1.3251	306	0.87

CV – coefficient of variation; Juilland's D – measure of dispersion

4.3 Overall frequency of interactive and interactional metadiscourse in the NNS and NS corpus

To partly address RQ1 (What was the frequency of metadiscourse markers in the argumentative essays of the Croatian foreign language users compared to the native English users?) and RQ2 (What were the metadiscourse features of argumentative essays written by non-native speakers compared to those written by native speakers?) or, in other words, to answer whether there were any differences in the use of both interactive and interactional metadiscourse between the non-native and native speakers, both corpora were analyzed

quantitatively by comparing the use of metadiscourse markers. The hypothesis related to RQ1 was that the relative frequency of tokens was statistically significantly higher in the non-native speakers' written essays than in the native speakers' essays (H1). Regarding the second research question, two out of five hypotheses were that the non-native speakers most frequently used interactive markers, that their use was significantly higher among the non-native speakers compared to the native speakers (H2.1), and that the frequency of interactional markers was significantly lower in the non-native speakers' essays compared to the native speakers' essays (H2.5).

The following table shows the raw and relative frequency of all metadiscourse markers in the NNS and NS essays.

Table 12 Raw and relative frequencies of all metadiscourse markers (tokens) in the NNS and NS essays

	NNS	**NS**
Total number of words	64.228	65.025
Total number of metadiscourse markers (raw frequency (*f*))	4.438	4.272
Relative frequency (*rf*) of metadiscourse markers	69.10	65.70

The analysis of the corpus showed that there were 8.716 metadiscourse elements in 129.253 words, that is, there was one metadiscourse marker in almost 15 words. This was almost one per 14 for the NNS corpus (total number of words in the NNS corpus was 64.228), and one in almost 15 for the NS corpus (total number of words in the NS corpus was 65.025). Table 12 indicates that the non-native speakers showed more frequent use of all metadiscourse markers (tokens) (n=4.438) than the native speakers (n=4.272) although the difference was not statistically significant (H=0.00; df=1; p=0.975).

Further analysis of the two dimensions of metadiscourse is illustrated in Figure 1, which shows the relative frequency (*rf*) of interactive and interactional metadiscourse in both corpora. The overall findings showed that the non-native speakers used interactive metadiscourse (n/1000=43.49) more than interactional metadiscourse (n/1000=25.61). The same was observed in the NS corpus. The native speakers displayed slightly heavier reliance on the interactive resources (n/1000=36.25) than the interactional resources (n/1000=29.45). As can be seen in Figure 1, the corpus findings showed the opposite results in the use of interactional metadiscourse, with interactional resources being more frequently employed by the native speakers (n/1000=29.45) than by the non-native speakers (n/1000=25.61).

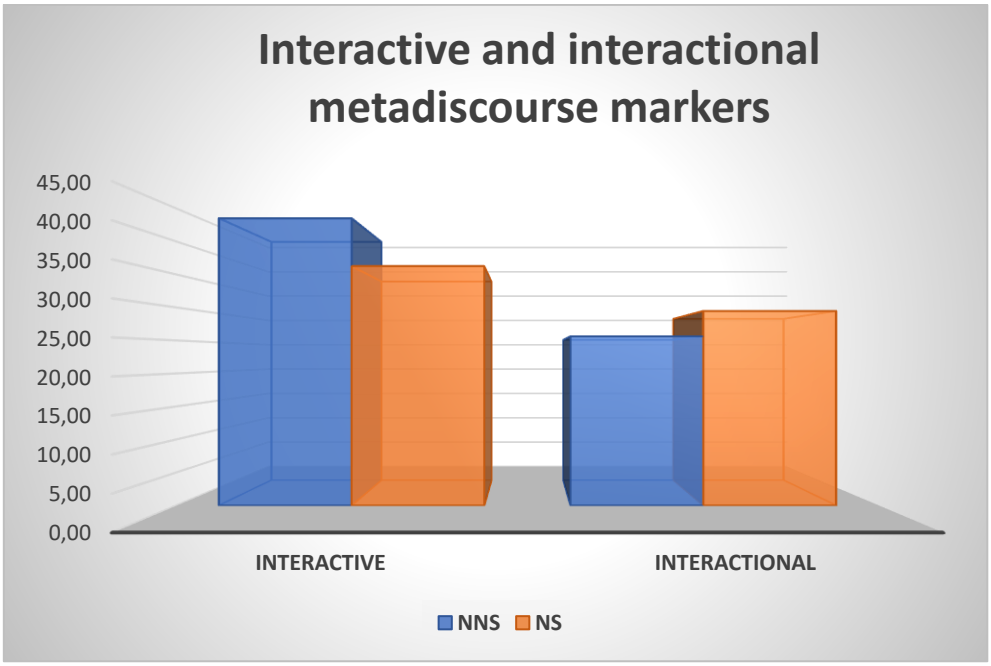


Figure 1 *Relative frequency of interactive and interactional metadiscourse in the NNS and NS corpus*

Statistical analysis of interactive metadiscourse, however, indicated no significant difference between the non-native and native speakers' use of interactive metadiscourse markers when analyzing the interactive metadiscourse across the whole essay structure. Moreover, similar to the analysis of the interactive metadiscourse across the whole essay structure, the analysis of the interactional metadiscourse also showed no significant difference between the two corpora (see Table 13).

Table 13 Kruskal-Wallis test for relative frequency of interactive and interactional metadiscourse

	H	**df**	**p value**
Interactive metadiscourse^{ns}	1.56	1	0.211
Interactional metadiscourse^{ns}	1.76	1	0.184

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level (^{ns} no significance)

The evidence regarding the overall frequency of interactive and interactional metadiscourse partially confirmed the hypothesis H2.1 but did not confirm the hypothesis H2.5. The non-native speakers used interactive metadiscourse more frequently but their use was not significantly higher among the non-native speakers compared to the native speakers (H2.1).

The overall frequency of interactional metadiscourse was not significantly lower in the non-native speakers' essays (H2.5).

The section that follows deals with a more detailed account of each respective metadiscourse category, starting with the account of interactive metadiscourse.

4.3.1 *Frequency of interactive metadiscourse in the NNS and NS corpus*

This section presents the results of the use of interactive metadiscourse. Related to the second research question, it was hypothesized that both the non-native and native speakers most frequently used interactive category transitions, and that the frequency of their use was significantly higher among the non-native speakers compared to the native speakers (H2.2); that the next most frequent interactive category in the essays of the non-native and native speakers were frame markers, and the frequency of their use was significantly higher in the non-native than in native speakers' essays (H2.3); and that the differences in the use of other interactive categories endophoric markers, evidentials and code glosses between the non-native and native speakers were not significant (H2.4).

Table 14 provides a summary of the descriptive statistics of each category of interactive metadiscourse. It shows the raw (*f*) and the relative frequency (*rf*) for all categories of interactive metadiscourse in both corpora indicating considerable variation for some categories while for other no variation between the two corpora in the use of specific interactive resources was found.

Table 14 The raw and the relative frequency for all categories of interactive metadiscourse

Interactive metadiscourse	**NNS**			**NS**		
	f	***rf***	**% F**	***f***	***rf***	**% F**
Code glosses	411	6.40	14.7	456	7.01	19.3
Endophoric markers	15	0.23	0.5	12	0.18	0.5
Evidentials	9	0.14	0.3	25	0.38	1.1
Frame markers	302	4.70	10.8	159	2.45	6.7
FM sequencing	139	2.16	5.1	113	1.74	4.8
FM label stages	94	1.46	3.5	26	0.40	1.1
FM announce goals	52	0.81	1.9	10	0.15	0.4
FM shift topic	17	0.26	0.6	10	0.15	0.4
Transition markers	2056	32.01	73.6	1705	26.22	72.3
TOTAL	2793	43.49	100	2357	36.25	100

When looking at the overall frequencies of individual interactive categories, the results showed that transition markers were by far the most frequent interactive category in both corpora. Table 14 shows that the frequency of the transition markers accounted for 73.6 % of the overall frequency of the interactive category in the NNS corpus and 72.3 % of the overall frequency of the interactive category in the NS corpus. As can be seen in Table 14, the relative frequency of transition markers was much larger in the NNS corpus than in the NS corpus indicating significant difference ($p \leq 0.001$) (see Table 15) between the NNS and NS corpora.

The second most frequent interactive category in both corpora was the category of code glosses. The results showed that there was no significant difference ($p=0.213$) in the use of code glosses between the non-native and native speakers (see Table 15).

The next most frequent category was the category of frame markers. As can be seen form Table 14, frame markers showed a higher frequency of occurrences in the NNS essays than in the NS essays, i.e. the discrepancy in the relative frequency of frame markers was high indicating a significant difference ($p \leq 0.001$) (see Table 15) between the two corpora in the use of frame markers. At the level of individual subcategories of frame markers, the current analysis showed that the FM sequencing were the most frequently used devices in both corpora. The results also showed that there was no significant difference in the use of these frame markers ($p=0.268$) (see Table 13) between the two groups. However, the results showed a significant difference ($p \leq 0.001$) (see Table 15) in the use of FM label stages and FM announce goals between the two corpora indicating that the non-native speakers used FM label stages and FM announce goals considerably more frequently than the native speakers (see Table 14). Again, the results showed that there was no significant difference in the frequencies of FM sequencing ($p=0.268$) and FM shift topic ($p=0.484$) (see Table 15) between the two corpora.

The least frequent interactive categories in both corpora were endophoric markers and evidentials. Table 12 shows that endophoric markers were slightly more frequently used in the NNS corpus than in the NS corpus, thus indicating no significant difference ($p=0.626$) (see Table 15) in the use of endophoric markers between the non-native and native speakers.

Evidentials were slightly more frequently used by the native speakers (see Table 14), but the discrepancy in the relative frequencies again showed that there was no significant difference ($p=0.132$) (see Table 15) in the use of evidentials between the non-native and native speakers.

Table 15 Kruskal-Wallis test for relative frequency for interactive metadiscourse

Interactive metadiscourse	***H***	**df**	**p value**
Code glosses^{ns}	1.55	1	0.213
Endophoric markers^{ns}	0.24	1	0.626
Evidentials^{ns}	2.27	1	0.132
Frame markers***	25.59	1	0.000
FM sequencing^{ns}	1.23	1	0.268
FM label stages***	54.92	1	0.000
FM announce goals***	19.76	1	0.000
FM shift topic^{ns}	0.49	1	0.484
Transition markers***	20.98	1	0.000

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level (^{ns} no significance, ***0.001)

The evidence regarding the frequency of interactive metadiscourse confirmed hypothesis H2.2. The non-native and native speakers most frequently used interactive category transitions, and the frequency of their use was significantly higher among the non-native speakers than the native speakers. Hypothesis H2.3 was partially confirmed. The next most frequent interactive category in the essays of the non-native and native speakers were not frame markers but code glosses; however, the results confirmed that the frequency of the use of frame markers was significantly higher in the non-native than in native speakers' corpus. The evidence confirmed hypothesis H2.4 in that the differences in the use of other interactive categories endophoric markers, evidentials and code glosses between the non-native and native speakers were not significant (H2.4).

The results showed different distributional patterns for interactive categories when observing their occurrences in different parts of the essays, which will be discussed in more detail in Section 4.4.7.

4.3.2 *Frequency of interactional metadiscourse in the NNS and NS corpus*

This section presents the empirical results concerning the use of interactional metadiscourse. Related to the second research question and hypothesis H2.5, the overall frequency of interactional metadiscourse was not significantly lower in the non-native speakers' essays compared to the native speakers' essays. However, it was hypothesized that not just the overall frequency of interactional metadiscourse markers but the frequencies of all interactional categories, i.e. attitude markers, boosters, engagement markers, hedges and self-mention, were significantly lower in the non-native speakers' essays (H2.5).

Table 16 provides a summary of the descriptive statistics of each main category of interactional metadiscourse. In what follows, the results regarding each category of interactive metadiscourse are presented.

Table 16 Raw and the relative frequency for all categories of interactional metadiscourse

Interactional metadiscourse	**NNS**			**NS**		
	f	***rf***	**% F**	***f***	***rf***	**% F**
Attitude markers	134	2.09	8.1	127	1.95	6.6
Boosters	443	6.90	26.8	410	6.31	21.4
Engagement markers	83	1.29	5.0	131	2.01	6.8
Hedges	833	12.97	50.5	941	14.47	49.1
Self-mention	152	2.37	9.2	306	4.71	16.0
TOTAL	1651	25.71	100	1915	29.45	100

The results showed that hedges were the most frequent interactional category in both corpora. The relative frequency of hedges was larger in the NS corpus (n/1000=14.47) than in the NNS corpus (n/1000=12.97); however, there was no significant difference (p=0.475) (see Table 17) between the NNS and NS corpus.

Table 16 shows that the next most frequent interactional category in both corpora was the category of boosters. The discrepancy in the relative frequency of boosters between the two corpora showed that there was no significant difference (p=0.275) (see Table 17) in the use of this category between the non-native and native speakers.

As for the category of self-mention, which was the third most frequent category in both corpora, the results showed significant difference (p=0.007) (see Table 17) between the non-native and native speakers. As can be seen in Table 16, the relative frequency of the category of self-mention was much larger, with almost double the frequency of metadiscourse resources in the NS corpus than in NNS corpus.

Furthermore, Table 16 shows that the next most frequent interactional category in both corpora was the category of attitude markers. The results pointed to the low discrepancy in the relative frequencies of attitude markers between the two corpora indicating that there was no significant difference (p=0.621) in the use of attitude markers between the non-native and native speakers (see Table 17). The results also indicated that attitude markers were among the least frequently used interactional metadiscourse category in both the NNS and NS writing.

Engagement markers were the least frequent interactional category in both corpora. The results showed that the relative frequency of engagement markers was larger in the NS corpus.

Although there was no significant difference (p=0.076) (see Table 17) between the two corpora in the use of engagement markers, the present findings showed that the NS students (n/1000=2.01) used engagement markers more often than the NNS students (n/1000=1.29).

Table 17 Kruskal-Wallis test for relative frequency for interactional metadiscourse

Interactional metadiscourse	***H***	**df**	**p value**
Attitude markers^{ns}	0.24	1	0.621
Boosters^{ns}	1.19	1	0.275
Engagement markers^{ns}	3.15	1	0.076
Hedges^{ns}	0.51	1	0.475
Self-mention**	7.33	1	0.007

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level (^{ns} no significance, **0.01)

The evidence regarding the frequency of individual interactional metadiscourse categories, i.e. attitude markers, boosters, engagement markers, hedges and self-mention, did not confirm hypothesis H2.5. There were no significant differences in the use of attitude markers, boosters, engagement markers and hedges between the non-native and native speakers. However, the evidence confirmed that only the frequency of the category of self-mention was significantly lower in the non-native speakers' essays.

Again, the results showed different distributional patterns for interactive categories when observing their occurrences in the three-part structure of the essays, which will be discussed in more detail in Section 4.4.8.

4.3.3 *Discussion of the NNS and NS corpus findings for the frequency of interactive and interactional metadiscourse*

The ratio between the total number of metadiscourse elements and the total number of words in both the NNS and NS corpus (see Table 12) clearly indicates that both the NNS' and NS' argumentative essays contain a relatively large number of metadiscourse markers, thus reflecting the significance of metadiscourse use in argumentative texts. This underlines the importance of the interactive and interactional organization of academic discourse. In broad strokes, the present findings pointing to a more frequent use of metadiscourse markers by the non-native speakers (n=4.438) than by the native speakers (n=4.272) although the difference was not statistically significant (p=0.975), as it was initially hypothesized, seem to follow some general tendencies in the overall use of metadiscourse and agree with earlier reports that the

non-native writers showed higher density than the native writers in the overall metadiscourse use (e.g. Lee, 2009; Boshrabadi et al., 2014; Kim, 2014; Byun, 2015; Park & Oh, 2018).

With respect to the frequency of the interactive and interactional category, both the NNS (n/1000=43.49) and NS (n/1000=36.25) speakers used interactive metadiscourse more frequently than interactional metadiscourse. Contrary to the hypothesis, the non-native speakers did not use them significantly more frequently. A higher proportion of interactive resources in both corpora implies that both groups of speakers tend to put greater effort on textual congruity than on explicit interpersonal relations with the audience. The following examples (19 to 28) serve to illustrate the use of each of the category of interactive metadiscourse by both the non-native and native speakers.

Code glosses:

19) *Furthermore, it is the development of society that appreciates wealth and materialism and at the same time promotes equality, and as such shapes the minds of individuals to concur to its values,* ***that is*** *to blame for most of its evils.* (E59 NNS)
20) ***That is****, Parliament today cannot pass laws which limit tomorrow's Parliament's legislative powers, be they restrictions on manner and form, or as in the case of the European Communities Act, restrictions on subject matter.* (EU1 NS)

Endophoric markers:

21) *However, all of what has been said in the paragraph* ***above*** *is subject to criticism and a fair share of debunking.* (E40 NNS)
22) *As the article* ***above*** *states couples who are desperate to have a child use the father's genetic inheritance and not the mothers.* (ICLE9 NS)

Evidentials:

23) *Firstly,* ***according to*** *the rights given to every human being, all human beings are equal in front of the law; when it comes to the educational system and the medical care system.* (E52 NNS)
24) *Proponents,* ***according to*** *Gwendolyn Gibson, a supporter of "comprehensive education", also tend to compare sex education in basic ideas of which she considers a joke.* (ICLE42 NS)

Frame markers:

25) ***Next****, in some cultures, such as American, earning money is connected with hard work and success.* (E71 NNS)

26) *The **next** benefit would have to be the fact that the drug users would be responsible for their own debts.* (ICLE139 NS)

Transition markers:

27) ***Therefore**, it is safe to say that they are the ones who still dream and even fight for their dreams to come true.* (E90 NNS)
28) ***Therefore**, these advocates are taking full advantage of their opponent's misinformation to gain support for their cause.* (ICLE42 NS)

The present findings align with previous research in terms of the preference for the interactive category of metadiscourse. The prevalence of interactive metadiscourse is a commonly observed phenomenon in academic writing. Studies have consistently reported a higher frequency of interactive metadiscourse usage compared to interactional metadiscourse in various forms of academic writing. These include argumentative essays by final-year university students (Crismore et al., 1993; Li & Wharton, 2012), master's or doctoral dissertations by postgraduate students (Hyland, 2004b), and research articles by academics (Hyland, 1998b; Mu et al., 2015).

However, the findings showed the opposite regarding the use of interactional metadiscourse. Interactional metadiscourse was more frequently used by the native speakers but not, as was initially hypothesized, statistically significantly. The present findings indicating a more frequent use of interactional metadiscourse in the NS corpus (n/1000=29.45) than in the NNS corpus (n/1000=25.61) imply that the native speakers tend to put greater effort on the management of controlling the appropriate level of personality in their argumentation than the non-native speakers. This agrees with earlier studies reporting a higher proportion of interactional resources in native writing as compared to non-native writing (e.g. Lee & Deakin, 2016; Park & Oh, 2018). The following examples (29 to 38), for each of the category of interactional metadiscourse, serve to illustrate both the non-native and native speakers' use of interactional items.

Attitude markers:

29) ***Unfortunately**, modern education system is based on remembering certain facts, while practical knowledge is neglected.* (E83 NNS)
30) *Cheating has become a major question of value to the present student; **unfortunately**, the consequences that should stop students from cheating are unsuccessful.* (ICLE44 NS)

Boosters:

31) *Orwell, **obviously** disappointed with the distortion of the ideals he believed in, saw that even those beliefs that sound good on paper could be warped towards a selfish and exploitable goal.* (E53 NNS)
32) ***Obviously**, a united Europe is not going to erase centuries of culture to form one identifiable "European culture"; but this might always be a worry for the British, (and probably, for other countries too).* (EU18 NS)

Engagement markers:

33) *There are numerous examples of such works, but **let us** name a few: George Orwell's 1984 or Ray Bradbury's Fahrenheit 451 represent the dystopian literature of the 20th century, however, there are other types of works, mainly in the 21st century, with dystopian topics, such as the book and movie series The Hunger Games, or the TV series Black Mirror.* (E87 NNS)
34) ***Let us** remember the roots of feminism, keep in mind the rudimentary beliefs that lay the foundation for the solidarity of women.* (ICLE66 NS)

Hedges:

35) *It is often **argued** that money is a good thing because one can use it to incentivize innovation and industry, economic growth in short; or simply donate to charity or give it away directly to people in need.* (E45 NNS)
36) *It can be **argued** that scientists only make discoveries, and it is others who misuse their work; Marie Curie could not have foreseen the nuclear threat of the cold war as she worked with radioactive samples.* (GENM1 NS)

Self-mentions:

37) *And the main argument **I** could think of for dreams being a relic of the past is only valid if we think of dreaming as its literal meaning, namely nightly mental projections of our subconsciousness.* (E21 NNS)
38) *There are many possible solutions to the problems **I** have identified many of which would complement each other.* (TRANS5 NS)

Nevertheless, the following results of the present study suggest that the distribution of interactive and interactional metadiscourse is more balanced for the NS writers. In the NNS corpus interactive metadiscourse accounted for 63 % and interactional metadiscourse accounted for 37 % of total metadiscourse use, with a difference of 26 %. In the NS subcorpus, interactive metadiscourse accounted for 55 % of the total metadiscourse and interactional

metadiscourse for 45 %, with a difference of 10 %. This indicates that although the native speakers tended to make more effort in ensuring that the text is cohesive, they were more faithful than non-native speakers to the involvement of the reader in the text. The empirical results concerning the discrepancies in the use of individual interactive and interactional categories of metadiscourse between the non-native and native speakers are discussed in what follows.

The results concerning the raw (*f*) and the relative frequency (*rf*) for individual categories of interactive metadiscourse showed that both the non-native and native speakers organize the discourse and ease the burden for their readers in processing information by providing necessary textual signposts and guides. In this respect, the findings pointed to both considerable variation as well as no variation between the two corpora in the use of specific interactive resources. The hypothesis regarding the use of transition markers was confirmed. In both corpora, transition markers were strikingly the most frequent interactive category. The high frequencies in transition markers pinpoint to both the non-native and native speakers' concern in guiding readers through arguments in the discourse and helping them to shape their understanding of the text. The use of transition markers is illustrated in the following examples (39 to 48) from the NNS and NS corpus.

39) ***Although*** *this may defy logic, the possibilities to realize equality are actually greater in poorer surroundings*. (E51 NNS)

40) ***Although*** *it may be true that the elimination of defective genes can prevent much pain and suffering both for the carriers and those who look after them, it is also true that those who are handicapped can lead rewarding, fulfilling and useful lives; many 'flawed geniuses' have come from their ranks.* (GENM4 NS)

41) ***As a result*** *of such educating system where answers are given before the questions are asked and where sheer knowledge has priority over wisdom, the individuals may find themselves utterly unprepared for the expectations of the reality that awaits them.* (E58 NNS)

42) ***As a result****, they were psychologically affected by their unhappiness and also by their feelings of a lack of self-fulfillment.* (ICLE126 NS)

43) ***In addition****, college officials are calling for teachers and professors to become more involved.* (ICLE44 NS)

44) ***In addition*** *to that, most of the jobs require a university degree, so regardless of what anyone thinks of it, it does have a pretty huge value when it comes to actual hiring, because you might not get hired if you don't have one.* (E3 NNS)

45) ***On the other hand****, producing progressively more innovations, that are making the lives of ordinary people much easier than before, humanity is at the same time becoming significantly more passive, lethargic and apathetic, not willing to live their lives to the fullest, but far too willing to waste it on fiddling things.* (E25 NNS)

46) ***On the other hand*** *the discoveries made by computers have stimulated the human brain to further fields of thought.* (TECH6 NS)

47) ***Yet*** *another common sense answer would be that there is a division of labor, that is, everybody does a different job because they are specialized.* (E45 NNS)

48) ***Yet*** *these people would get into a vicious circle where the only way to pay off gambling debts would be to win, and so the problem increases.* (NATL6 NS)

Present results corroborate the findings of previous studies (e.g. Hyland, 1998b; Hyland, 2004b; Hyland & Tse, 2004; Li & Wharton, 2012; Anwardeen et al., 2013; Mu et al., 2015; Huh & Lee, 2016; Ho & Li, 2018) which showed that transitions were the most frequently used interactive category in academic discourse and that the high proportion of transition markers is one of the common strategies used to "manage the information flow" (Hyland, 2004b, p. 138, as cited in Park & Oh, 2018) found in persuasive texts. However, as it was initially hypothesized and as can be seen in Table 15, the findings showed that the non-native speakers used transitional markers significantly more frequently than the native speakers ($p \leq 0.001$). In this respect, the present results also corroborate the previous research which points that the non-native writers used transitions significantly more frequently than the native writers (e.g. Park & Oh, 2018; Pavičić Takač et al., 2020).

With respect to the frequency of interactive categories, the present findings are in line with the previous research that showed that the next two most frequently used categories, falling behind transitions by a large margin, were frame markers and code glosses (Ho & Li, 2018). As frame markers function to sequence, label, predict and shift arguments, thus signposting the text boundaries and making the discourse clear to readers, it was initially assumed that frame markers would be the next most frequent category in the argumentative essays by both writer groups. Contrary to what was initially hypothesized, the second most frequent interactive category in the present study was not the category of frame markers but the category of code glosses. As the second most frequently used category by both the non-native and native speakers, code glosses, providing additional information, by rephrasing, explaining, or elaborating the intended meaning, as shown in examples 49 to 54, seem to be prevalent in both corpora.

49) *The readers of the novel should be aware of the allegorical nature of Orwell's text - the new political system* ***called*** *animalism is the surrogate of communism, or rather, Stalinism, so the characters serve as substitutes to real life figures and groups such as Lenin, Stalin, Trotsky, the proletariat, the secret police, and so on.* (E33 NNS)

50) *These so* ***called*** *images although maybe pleasant to some people, are not always realistic.* (ICLE124 NS)

51) *Possible inequality in them only relates to the ranks or hierarchy in the church orders or to the position in the chain of command,* ***i.e.*** *to giving and executing orders.* (E51 NNS)

52) *The Bank of England would also loose the right to print and distribute an independent currency,* ***i.e.*** *the pound, and the British government would lose power over all monetary policy, as there would be a single European exchange rate, interest rate, and inflation rate.* (EU3 NS)

53) *By stating that all lives matter or that blue lives matter, activists of these movements imply that in the past all lives did not matter, which was* ***indeed*** *the case for the lives of African Americans, who were stripped of their identity, and whose purpose was just to serve white people.* (E89 NNS)

54) ***Indeed****, this has been seen to become a problem, in that people from low socio-economic groups have spent more on the lottery than others, when they can't really afford to, because they wanted to 'get rich quick'.* (NATL12 NS)

The results also indicated, as it was initially assumed, that there was no difference ($p=0.213$) in the use of code glosses between the non-native and native speakers. However, this finding is in contrast with the previous research which recorded the low frequency of code glosses in student argumentative essays, suggesting the low frequency to be the result of students' unawareness that "many kinds of code glosses are used to express meanings with finer degrees of precision" (Aull & Lancaster, 2014, p. 164).

The frequency levels of frame markers use in both corpora, which consequently make the discourse clear for the target reader, showed, as it was hypothesized, that the non-native speakers used them significantly more frequently than native speakers ($p\leq0.001$) (see Table 15). This evidently points to the tendency of the NNS writers to overuse frame markers. In that respect, the present findings support the previous research which showed that frame markers were significantly more frequent in the NNS writing as compared to the NS writing (e.g. Park & Oh, 2018; Yüksel & Kavanoz, 2018). At the level of FM subcategories, the findings showed similarities as well as differences between the non-native and native speakers. The similarity

between the two corpora was most noticeable in the use of FM sequencing. Apart from being the most frequently used subcategory in both corpora, there was also no significant difference in their use between the two corpora (see Table 13). This contrasts with previous research indicating the NNS writers' overuse of FM sequencing (Pavičić Takač & Vakanjac Ivezić, 2019). The present finding regarding the use of FM sequencing suggests that both the non-native and native writers tend to make the discourse clear for the target reader by ordering arguments in the text, as illustrated in examples 55 to 58.

55) ***First of all****, the fact that theoretical knowledge is important for preparing young citizens for their professions should not be argued*. (E20 NNS)
56) ***Finally****, people with distorted moral standards may commit certain heinous crimes, money being the main motive.* (E93 NNS)
57) ***First of all****, many criminals sentenced to death can get out because of how much money they have.* (ICLE16 NS)
58) ***Finally****, the last major objection was the possibility of one single individual winning a sum of as much as Pound 40 million.* (NATL12 NS)

The highest discrepancy between the two corpora was observed in the frequencies of FM label stages and FM announce goals ($p \leq 0.001$) (see Table 15). The results indicated the non-native speakers used these devices considerably more frequently than the native speakers, signaling their overuse by the NNS writers. As for the devices used to shift topic, the results showed that there was no significant difference in the use of these markers ($p=0.484$) (see Table 15) between the two groups. These findings indicated that the overall significant difference in the use of frame markers was the result of the NNS writers' overuse of FM label stages and FM announce goals. The examples 59 and 60 serve to illustrate the use of these markers by the NNS speakers.

Label stages:

59) ***All in all****, it can be concluded that, even though the Declaration of Human Rights has been existing for more than seventy years, there are still many negative examples where many people are being devoid of their basic rights which they claimed at their birth*. (E79 NNS)

Announce goals:

60) ***The aim of this essay*** *is to provide both advantages and disadvantages of university degrees based mostly on theoretical parts.* (E76 NNS)

The present results are in line with the previous research in some respects regarding the subcategories of frame markers. The study by Pavičić Takač and Vakanjac Ivezić (2019) indicated the non-native students' overuse of a particular set of frame markers, i.e. their overreliance on, among others, FM label stages. Moreover, the findings of a study by Yüksel and Kavanoz (2018) showed that the frequencies of FM sequencing and FM label stages were similar when comparing the non-native and native speakers. In this respect, the present results regarding the use of FM sequencing support their finding. They also reported the difference in the use of FM announce goals and FM shift topic between the native and non-native speakers, indicating that the non-native learner writers seemed to have trouble in announcing goals and shifting topic. By contrast, the present findings showed saliency in the use of FM announce goals in the NNS corpus.

The lowest discrepancy in the relative frequencies in the two corpora regarding the use of interactive metadiscourse was recorded with the category of endophoric markers which were used slightly more frequently (p=0.626) (see Table 15) by the non-native speakers. By contrast, evidentials were slightly more frequently used by the native speakers (see Table 14), but again, as it was initially assumed, with no significant difference regarding the discrepancy in the relative frequencies (p=0.132) (see Table 15) between the two corpora. This is in line with the previous research reporting that endophoric markers and evidentials were the least frequent interactive categories in both the non-native and native speakers' corpora (e.g. Li & Wharton, 2012; Huh & Lee, 2016; Ho & Li, 2018). Although endophoric markers play a central role in guiding readers' comprehension of the text and indicating connections to other parts of the text to enhance understanding and support the writers' interpretations, their usage was limited in both corpora examined in this study. As seen in the limited use of endophoric markers and evidentials, both the non-native and native speakers are less willing to use information in other parts of the text or from other texts. This could be attributed to the average length of the essays (500 words), which may have made it less necessary to explicitly guide readers to various sections of the text. Moreover, even though the students had the possibility to refer to the outside source of information, evidentials were scarcely used, suggesting that both the non-native and native writers relied more on their personal projection in providing support for their arguments. The use of endophoric markers by both the non-native and native speakers is illustrated in examples 61 and 62.

61) *In conclusion, we can say that the thesis set up* ***in the introduction*** *has been confirmed: although equality is frequently talked about, it is often vitiated because in modern societies there are people who are privileged.* (E51 NNS)

62) *In reference to that study by Heitzman, Diamantes says that <*>*[4] *and he goes on - in fact, in the same* ***paragraph*** *- to say that <*>.* (ICLE38 NS)

The results concerning the raw (*f*) and the relative frequency (*rf*) for individual categories of interactional metadiscourse showed that both the non-native and native speakers signal writer's stance and engage with their readers. In this respect, the findings also pointed to both differences as well as similarities between the two corpora. The most frequently used interactional markers by both the NNS and NS writers were hedges. Even though the native speakers used them slightly more frequently than the non-native speakers, the results indicated, contrary to what was hypothesized, that there was no significant difference (p=0.475) (see Table 17) in their use between the two corpora. The saliency of the category of hedges in both the NS and NNS writing has also been attested by the previous research (Abdollahzadeh, 2011; Huh & Lee, 2016; Lee & Deakin, 2016; Musa et al., 2019), suggesting that hedges seem to be a very important feature of stance taking in student writing (Hyland, 2005a; Aull & Lancaster, 2014). As stated by Lee and Deakin (2016), the prevalence of hedging in academic writing is anticipated, as expressing uncertainty and modesty when presenting an argument is highly esteemed in Anglophone academic cultures (Li & Wharton, 2012). In such contexts, formulating a position in this manner contributes to the creation of a text that "project[s] honesty, politeness, caution, and deference to the opinions of others" (Hinkel, 2004, p. 327, as cited in Lee & Deakin, 2016), and thus might be interpreted as being more persuasive. The present results suggest that the native speakers, similarly to the non-native speakers, seem to be cautious about making exaggerated statements when presenting claims and construct their arguments with less certainty. In doing so, students indicate that "information is presented as opinion rather than accredited fact" (Hyland, 1998a, p. 351). This is demonstrated by the following examples (63 to 70) in both the NNS and NS corpora.

63) *Whilst there* ***may*** *be some truth to that claim, there are still a number of arguments that may show a different approach to the development of science technology and technology in general.* (E87 NNS)

[4] International Corpus of Learner English (ICLE) explanation of the corpus editing symbol: The symbol <*> stands for removed quotes.

64) *To counter the importance of this presented argument, one **might** agree with the superficial position of the lack of contribution coming from the humanities and social sciences to the perceived advancement of society through technology.* (E5 NNS)
65) *All things considered it is eminently **plausible** that the college degrees mostly revolve around theory which cannot effortlessly be materialized into practical knowledge.* (E58 NNS)
66) *Various examples **suggest** that it is even dangerous to be on the opposite side of some powerful people in a court.* (E65 NNS)
67) *This **may** seem to be a cold hearted viewpoint but it is important to look clinically at the facts and not be carried away with emotion when discussing this emotive subject.* (BOX6 NS)
68) *However in response to this one **might** say that the computer is an invention of the human brain's imagination at a very high level, and indeed its development.* (TECH6 NS)
69) *This may seem **plausible**, but under close scrutiny it ends up being completely false.* (ICLE169 NS)
70) *I **suggest** the alternative opinion that scientists must share the burden of moral responsibility for the consequences of their work.* (GENM1 NS)

Unlike the results of the previous research which showed that the native speakers used hedges more frequently than the non-native writers (e.g. Hu & Cao 2011; Chen & Zhang, 2017; Park & Oh, 2018), the present results are in line with the previous findings from Lee and Deakin's (2016) study indicating that the native-speakers' texts contained higher instances of hedges, yet no significant difference was found between the native and non-native speakers. The findings of Park and Oh's (2018) study, comparing the use of metadiscourse markers between the NS group and three different proficiency NNS groups, indicated that the frequency of hedge usage was more frequent in the native speaker group, but also that it increased markedly from the intermediate to the advanced non-native speaker groups. The present findings regarding the use of hedges in the NNS corpus suggest that NNS writers seem to understand, to some extent, that the use of hedges is an essential element in processing argumentation in academic English. This is in line with Aull and Lancaster's (2014) findings which showed that more advanced students tended to draw on hedges more frequently than the first-year university students. In addition, Ho and Li's (2018) findings showed that higher-rated essays contained more hedges suggesting that hedges are found to be contributing to student writing quality. The present results indicating that there was no statistically significant difference in the use of these markers between the native and non-native writers might suggest that the use of hedges could be an indicator of this study's NNS students' writing proficiency and/or the quality of their writing. Yet, a firm conclusion cannot not be drawn, because the NNS students' English proficiency as

well as the relation between metadiscourse use and overall text quality in the NNS texts is not considered in this study.

Congruent with the previous research (Lee & Deakin, 2016), the corpus results showed that boosters appeared less frequently than hedges in both corpora. However, the present findings showed that the second most frequently used interactional category by both the non-native and native speakers was the category of boosters as well as that, contrary to what was initially assumed, there was no difference in the use of boosters between the two groups. The latter is in line with the findings recorded in Lee and Deakin's (2016) study. The following examples (71 to 76) illustrate how both the NNS and NS speakers used boosters to make their essays more persuasive to the audience.

71) *This **certainly** means that what George Orwell said, still holds up today because in reality, some men really are more equal than others.* (E66 NNS)
72) *While it is **true** that the more inventions exist, the lesser are the chances of straightforward thinking bringing innovation, we should not fall into the trap of thinking that innovation is the only purpose of imagination.* (E21 NNS)
73) ***Undoubtedly**, money is used to support wars, run drug distribution, keep the human trafficking chain going and even to create 'opportunities' where they never should have existed in the first place, in other words corruption.* (E95 NNS)
74) *There is **certainly** a change in attitudes in society.* (TECH10 NS)
75) *This is especially **true** in the major cities such as London and Birmingham and this can be seen in the horrific traffic problems which plague these cities.* (TRANS5 NS)
76) *This poses a problem, since **undoubtedly** those at-home tasks contribute services to society equally valuable in comparison to marketplace "jobs".* (ICLE50 NS)

Previous research examining academic writing by advanced and expert academic writers (Hyland, 1998b; Li & Wharton, 2012) has consistently shown a stronger preference for using hedges rather than boosters. This suggests that the students in the current study were also aware of the importance of conveying both uncertainty and confidence simultaneously when presenting an argument, thereby enhancing the persuasiveness of their essays (Lee & Deakin, 2016; Ho & Li, 2018). In fact, boosters accounted for approximately 20 % of all interactional metadiscourse in the current NNS corpus, and this distribution resembles the NNS writers in Hyland's (2004b) and Lee and Deakin's (2016) study.

While the previous two categories of interactional metadiscourse showed relatively similar frequencies in their use between the non-native and native speakers, the category of

self-mention, which was the third most frequent category in both corpora, was significantly more frequently used by the NS (p=0.007) (see Table 17) than by the NNS speakers. As it was hypothesized, the saliency of self-mention markers in the NS corpus was confirmed. The current findings follow the previous research which showed that self-mention markers were used fairly frequently in argumentative essays, and which suggested that their frequent use may be the result of the writing task itself requiring the students to rely more on and give credit for their personal projection (Lorés-Sanz, 2011; Huh & Lee, 2016). Likewise, the greater presence of self-mention markers in the NS writing, as compared to the NNS writing, is also in line with the previous research which showed that that the NNS student essays included far fewer self-mentions than the NS essays (Leedham, 2015; Lee& Deakin, 2016). By contrast, in Lee and Deakin's (2016) study, the category of self-mention was the least frequently used category in both L1 and L2 essays. However, they also found statistically significant differences among the groups, suggesting that the greater presence of self-mention markers in L1 writing "highlights L1 students' tacit understanding of the important value placed on authorial identity in Anglophone academic writing contexts" (Lee & Deakin 2016, p. 30), which cannot be argued for the present NNS writers. The following examples (77 to 82) from the NNS and NS corpus serve to illustrate the students' use of self-mention markers.

77) **I** would also like to point out the importance of motivation in a person's life and how money provides that motivation quite often. (E23 NNS)
78) In the end, **I** would like to conclude that both technology and imagination/creativity are finally starting to catch up one to another. (E40 NNS)
79) **I** can also agree with those who claim that there is so much more to be done to achieve equality, because I experienced injustice just because of my gender. (E6 NNS)
80) This, **I** believe, is why so many young men enter the sport **I** the hope that they, in years to come, will be fighting for a World Title having just earned several million dollars for the fight. (BOX15 NS)
81) On the other hand, **I** consider that the many varying cultures and languages which will continue to exist throughout Europe will serve to retain the individual nations' Identities once the single market is in operation. (EU6 NS)
82) **I** will not say all women could because **I** know they couldn't, but not all men could either. (ICLE171 NS)

Another similarity between the non-native and native speakers observed considers attitude markers. The category of attitude markers was the next most frequent category in both

corpora. In addition, the findings showed, contrary to what was initially expected, that there was no difference in the use of attitude markers between the non-native and native speakers (p=0.621) (see Table 17). This is in line with the findings reported in Lee and Deakin's (2016) study for the difference in the use of attitude markers between the L1 and L2 writers. The following examples (83 to 88) show how both the NNS and NS speakers explicitly marked their personal attitudes in their essays.

83) *On one hand, technology has enabled our society to grow rapidly, and the results of that growth are **astonishing** in many fields.* (EE7 NNS)
84) *The late twentieth century has seen an **astonishing** range of developments in the field of genetic manipulation; science has become so advanced that scientists are often accused of 'playing God' by their actions which affect, sometimes very directly, the lives of individual human beings.* (GENM4 NS)
85) *It is **interesting** how in these cases the inventions were heavily dependent on art, specifically literature In conclusion, imagination and dreaming seems to become unappreciated, at least on the surface level.* (E98 NNS)
86) *The theory that scientists should take responsibility for their work and its consequences is an **interesting** idea but there is one basic function of human psychology that makes this hypothesis invalid; when an individual scientist is working on research they are almost always working under sponsorship or directly working for a company.* (GENM33 NS)
87) *In my own experience, I **prefer** practical courses more because they tend to be more interesting, intriguing, and also thought-provoking.* (E22 NNS)
88) *Post-menopausal women should also have to go through the legal system - only I would **prefer** rigorous tests in order to see if they would be suitable as greater age would make them somewhat less suitable.* (INV10 NS)

By contrast, Abdollahzadeh (2011) and Musa et al. (2019) found that the non-native speakers used attitude markers less frequently than the native speakers. Similarly, the previous research showed that attitude markers were among the least frequently used interactional metadiscourse category in both L2 and L1 writing (Li & Wharton, 2012; Tann & Eng, 2014; Lee & Deakin, 2016). As Lee and Deakin (2016) suggested, the low frequency of attitude markers may be suggestive of students' general discomfort with explicitly marking personal attitudes in argumentative writing, thus proposing the view that that student writers prefer more detached and impersonal style in argumentative writing (Lee & Deakin, 2016). This, as Lee and Deakin (2106) argued, may be attributed to students' perception that the explicit expression of affective

positions may be interpreted as indicating subjectivity rather than objectivity, which could contradict the conventional understanding of academic writing. This might be true for the present study's participants, too.

Engagement markers, indicating "writer's dialogic awareness" (Hyland 2005a, p. 365) of texts and readers, were the least frequent interactional category in both corpora, which indicates that both the NNS and NS writers seem not to show sensitivity to audience by bringing the readers into the text as discourse participants (Lee & Deakin, 2016). This corroborates the previous research reporting the scarcity of engagement markers in L2 student writing (Lee & Deakin, 2016; Musa et al., 2019). Contrary to what was hypothesized, there was no difference in the use of engagement markers between the non-native and native speakers. Although there was no significant difference (p=0.076) (see Table 17) in the use of engagement markers between the non-native and native speakers, the results showed that that the use of engagement markers was 57 % higher in the NS corpus than in the NNS corpus. This supports the previously reported findings that L1 writers were more faithful than L2 writers to the involvement of the reader in the text (Lee & Deakin, 2016). The examples below (89 to 94) show how the NNS and NS speakers engaged their readers.

89) *To answer this question, we must first choose which area of human civilization we **will analyze** and the scope of our analysis.* (E54 NNS)
90) *The quote can be viewed as quite controversial because if we **look at** society today it is true that some are more equal, but do they deserve it?* (E57 NNS)
91) *While no sane person should actually defend the recent violence attributed to the members of the movement, one cannot help but to find himself/herself pondering: **Have** we not already **seen** this fray between the Parisian glitterati and the plebeian masses?* (E47 NNS)
92) *Although if you **analyze** many of these arguments they are not very substantial.* (ICLE167 NS)
93) *First **look at** the rising amount of crime involving marijuana.* (ICLE172 NS)
94) *Firstly you could **see** that the introduction of computers has made us think more because of all the programmes used on them.* (TECH1 NS)

Overall, at the level of individual interactive categories, the results pointed to similarities as well as differences between the two corpora. Transition markers and frame markers were significantly more frequently used by the non-native than native speakers. When looking at subcategories of frame markers, the differences between the two corpora were evident in the use of FM label stages and FM announce goals markers, suggesting that the

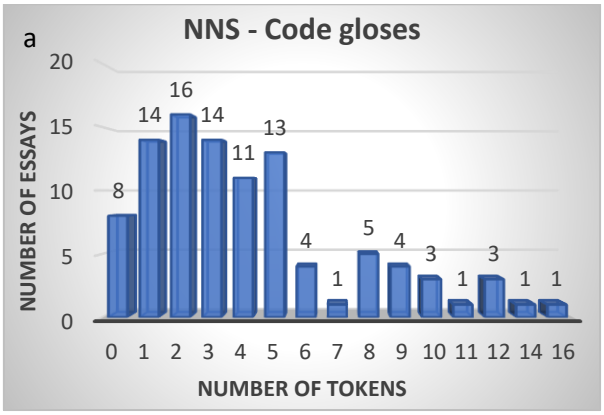
overall significant difference in the use of frame markers between the NNS and NS writers was the result of NNS writers' overuse of FM label stages and FM announce goals. The difference, although statistically not significant, between the two corpora was also observed in the use of endophoric markers, which were again slightly more frequently used by the non-native speakers and evidentials, which were slightly more frequently used by the native speakers. In contrast, there was no significant difference between the two corpora in the use of code glosses. In general, the findings indicated that the overall higher frequency of interactive metadiscourse in the NNS corpus, as compared to the NS corpus (Figure 1), was the result of the significantly more frequent use of transition markers ($p \leq 0.001$) and frame markers ($p \leq 0.001$), and more frequent use of endophoric markers (p=0.626) by the NNS writers. At the level of individual interactional categories, the results showed again both differences and similarities between the non-native and native speakers. The category of self-mention was more frequently used by the native speakers showing a significant difference between the two corpora; however, the results showed that there was no significant difference in the use of hedges, engagement markers, boosters and attitude markers between the non-native and native speakers. On the whole, the results in Figure 1 indicate that interactional resources were more frequently employed by the native than by the non-native speakers. By looking at individual interactional categories, the present findings indicated that the overall higher frequency of interactional metadiscourse in the NS corpus, as compared to NNS corpus (Figure 1), was the result of the significantly more frequent use of the self-mention category by the native speakers (p=0.012), as well as a result of the more frequent use of hedges (13 % higher in the NS corpus than in the NNS corpus) and engagement markers (57 % higher in the NS corpus than in the NNS corpus) in the NS corpus.

4.4 Distribution patterns of metadiscourse in the NNS and NS corpus

To address the differences in the use of both interactive and interactional metadiscourse the quantitative analysis also included comparing distribution patterns of interactive and interactional metadiscourse between the two corpora. The analysis presented in this section focuses on the distribution of metadiscourse markers occurring in individual essays. The similarities and differences are further illustrated by comparing distribution patterns of metadiscourse markers across all three parts of the essays as well as at the level of individual metadiscourse markers, i.e. particular linguistic items which were most frequently used to realize metadiscoursal functions.

4.4.1 *Distribution of interactive metadiscourse in individual essays in the NNS and NS corpus*

To address the differences in the use of both interactive and interactional metadiscourse, the quantitative analysis also included comparing the number of metadiscourse markers occurring in individual essays in both corpora. The following figures show similarities and differences between the distribution of interactive metadiscourse in the two corpora. As demonstrated in Figure 2a and b, the distribution of code glosses in individual essays in the NNS and NS corpus was fairly similar, ranging from 0 occurrences in 8 essays to 16 occurrences in 1 essay in the NNS corpus and from 0 occurrences in 2 essays to 17 occurrences in 1 essay in the NS corpus. Overall, the findings pointed to a quite similar patterns of occurrences of code glosses in individual essays in both corpora.



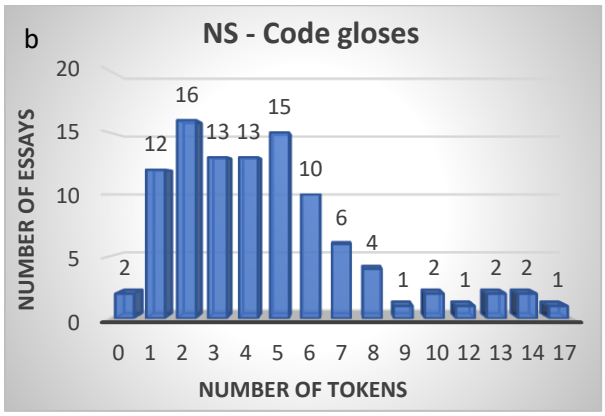


Figure 2a and b *Distribution of code glosses in individual essays in the NNS and NS corpus*

Figure 3a and b shows the occurrence of endophoric markers in individual essays from 0 occurrences in 85 essays to 1 occurrence in 13 essays and 2 occurrences in 1 essay in the NNS corpus. The distribution of endophoric markers in individual essays was again similar in

the NNS and NS corpus in which endophoric markers appeared only once in 12 out of 100 essays.

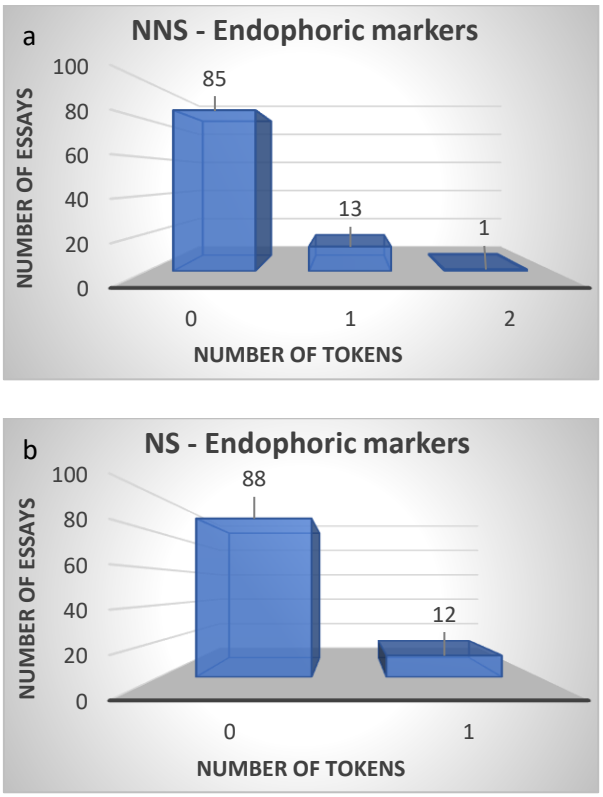


Figure 3a and b *Distribution of endophoric markers in individual essays in the NNS and NS corpus*

As can be seen in Figure 4a and b, the distribution of the only observed evidential *according to* was slightly different in the NNS and NS corpus. Out of 99 essays in the NNS corpus *according to* was used once in 7 essays and twice in 1 essay. In the NS corpus, it occurred once in 10 essays, twice in 2 essays, three times in 2 essays and five times in 1 essay.

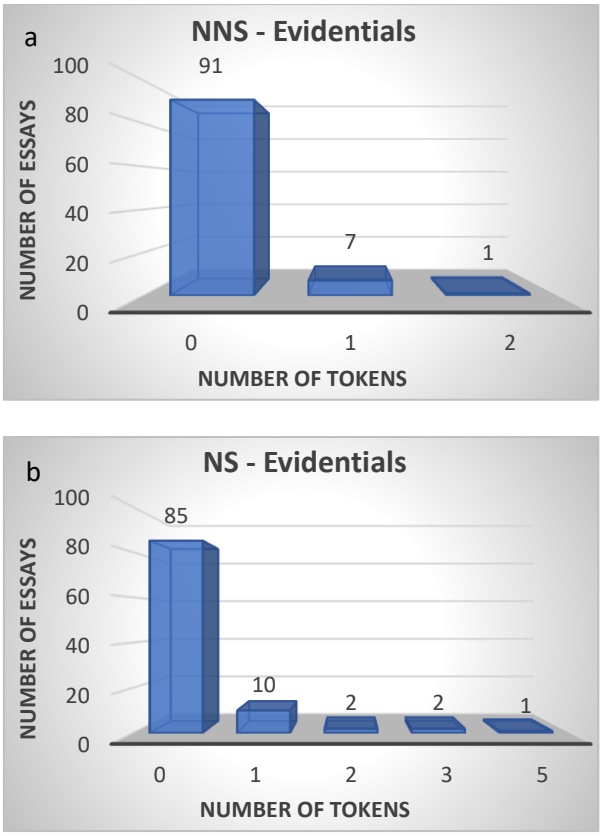


Figure 4a and b *Distribution of evidentials in individual essays in the NNS and NS corpus*

As can be seen in Figure 5a and b, the distribution of transition markers in individual essays in both corpora was fairly similar, ranging from 7 occurrences in 1 essay to 44 occurrences in 1 essay in the NNS corpus and from 5 occurrences in 1 essay to 44 occurrences in 1 essay in the NS corpus. Overall, quite similar patterns of occurrences of transition markers in individual essays were observed in both corpora.

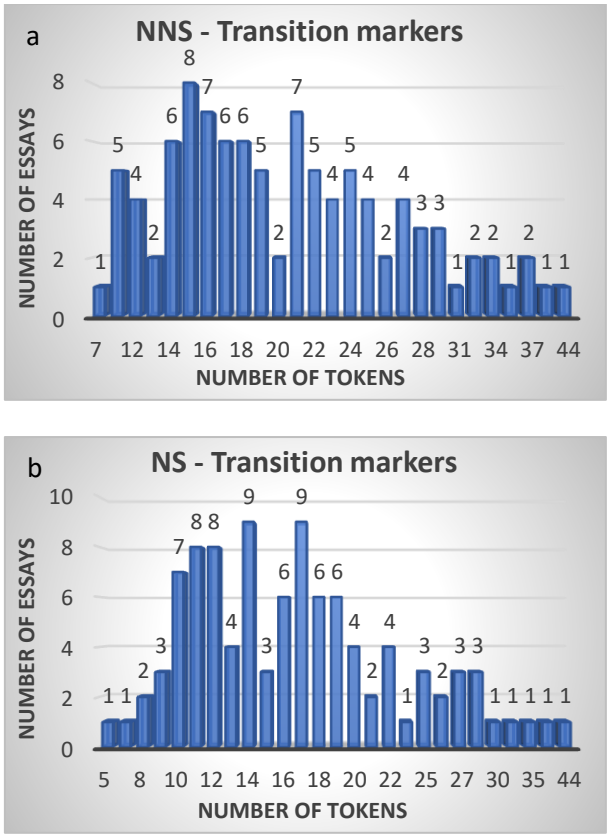


Figure 5a and b *Distribution of transition markers in individual essays in the NNS and NS corpus*

Figure 6a and b shows slightly different overall distributional patterns of occurrences of frame markers in individual essays between the two corpora, ranging from 0 occurrences in 7 essays to 9 occurrences in 2 essays in the NNS corpus and from 0 occurrences in 27 essays to 8 occurrences in 1 essay in the NS corpus.

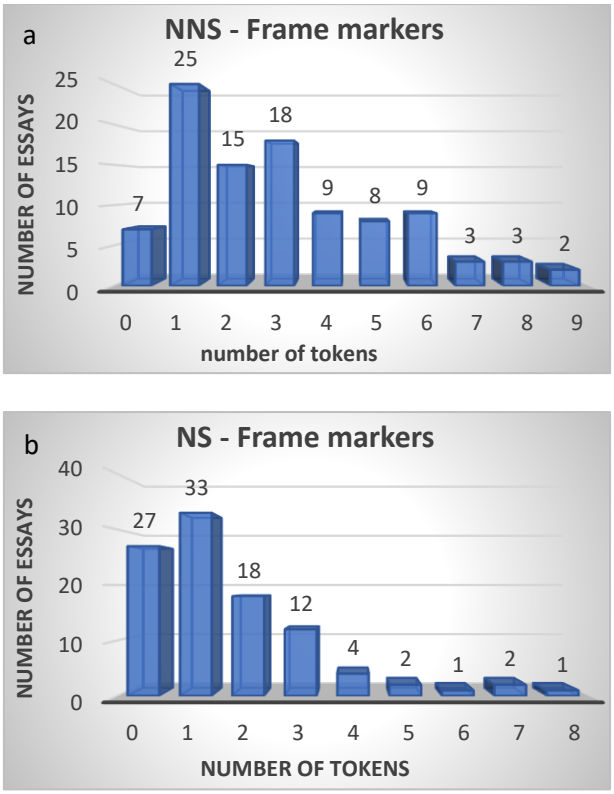


Figure 6a and b *Distribution of frame markers in individual essays in the NNS and NS corpus*

The following graphs show the similarities and differences in the distributional patterns of the FM subcategories between the two corpora. Figure 7a and b shows how many FM sequencing occurred in individual essays, ranging from 0 occurrences in 42 essays to 6 occurrences in 2 essays in the NNS corpus and from 0 occurrences in 41 essays to 7 occurrences in 1 essay in the NS corpus. As can be seen from the figure, the distribution patterns of FM sequencing in individual essays in the NNS and NS corpus were fairly similar, except for the high discrepancy between the numbers of essays for 1 occurrence.

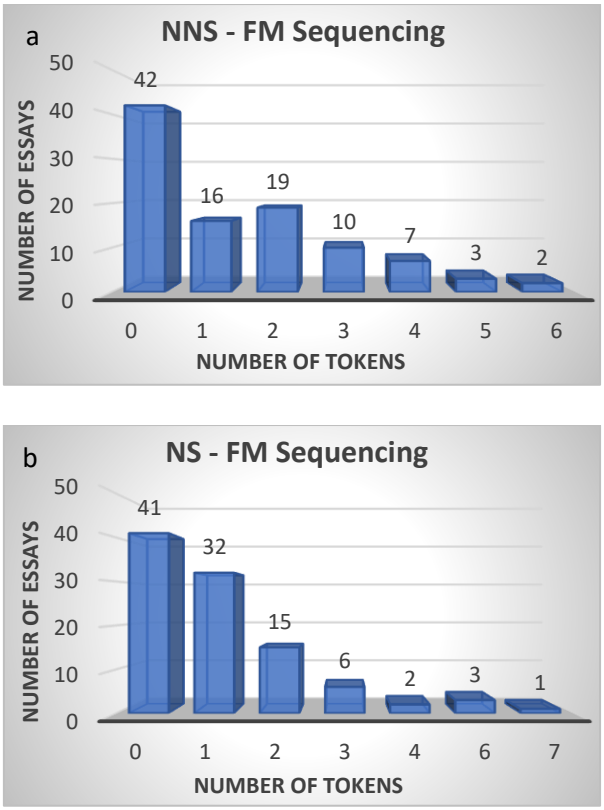


Figure 7a and b *Distribution of FM sequencing in individual essays in the NNS and NS corpus*

With respect to the distribution of FM label stages in individual essays, as can be seen from Figure 8a and b, the findings pointed to a completely different distributional patterns, ranging from 0 occurrences in 22 essays to 4 occurrences in 1 essay in the NNS corpus and from 0 occurrences in 75 essays to 2 occurrences in 1 essay in the NS corpus.

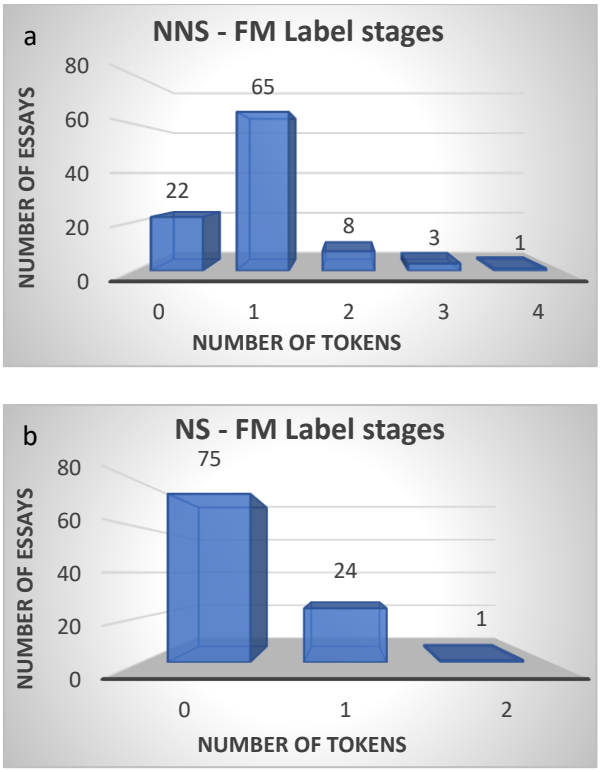


Figure 8a and b *Distribution of FM label stages in individual essays in the NNS and NS corpus*

As demonstrated in Figure 9a and b, slightly different distributional patterns of FM label stages in individual essays were recorded between the two corpora, ranging from 0 occurrences in 66 essays to 3 occurrences in 4 essays in the NNS corpus and from 0 occurrences in 92 essays to 2 occurrences in 3 essays in the NS corpus.

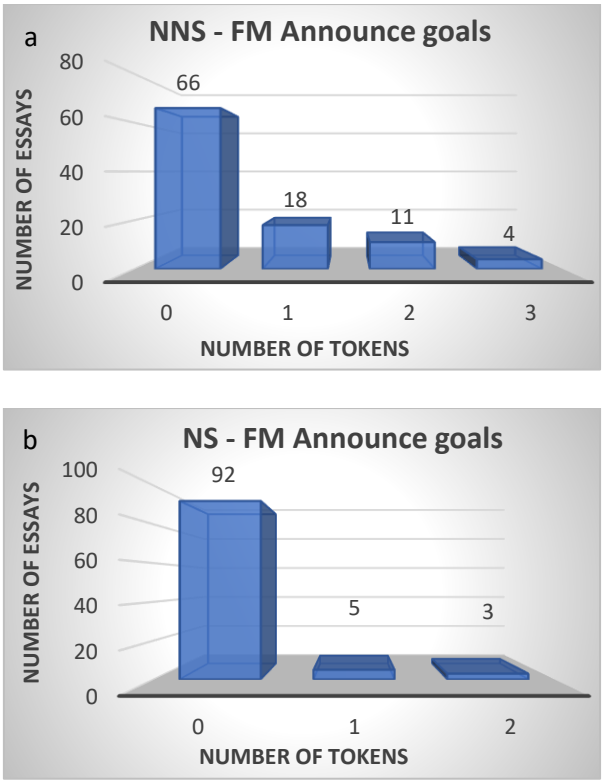
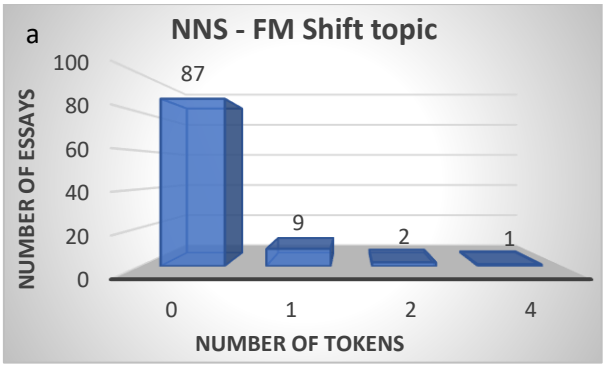


Figure 9a and b *Distribution of FM announce goals in individual essays in the NNS and NS corpus*

Slightly different distributional patterns of FM shift topic in individual essays were observed between the NNS and NS corpus. Figure 10a and b shows the number of FM shift topic occurring in a single essay, from 0 occurrences in 87 essays to 4 occurrences in 1 essay in the NNS corpus and from 0 occurrences in 91 essays to 1 occurrence in 9 essays in the NS corpus.



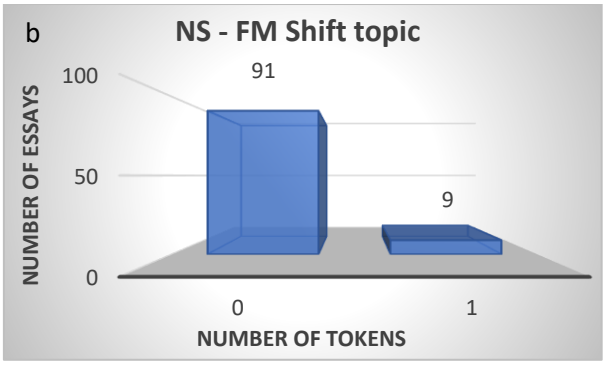


Figure 10a and b *Distribution of FM shift topic in individual essays in the NNS and NS corpus*

4.4.2 *Distribution of interactional metadiscourse in individual essays in the NNS and NS corpus*

The following graphs show the similarities and differences between the number of interactional metadiscourse markers occurring in individual essays in both corpora, i.e. the distribution of interactional categories in the two corpora. As demonstrated in Figure 11a and b, the distribution of attitude markers in individual essays in the NNS and NS corpus was slightly different, ranging from 0 occurrences in 29 essays to 8 occurrences in 1 essay in the NNS corpus and from 0 occurrences in 39 essays to 6 occurrences in 2 essays in the NS corpus. Overall, the findings pointed to slightly different patterns of occurrences of attitude markers in individual essays in both corpora.

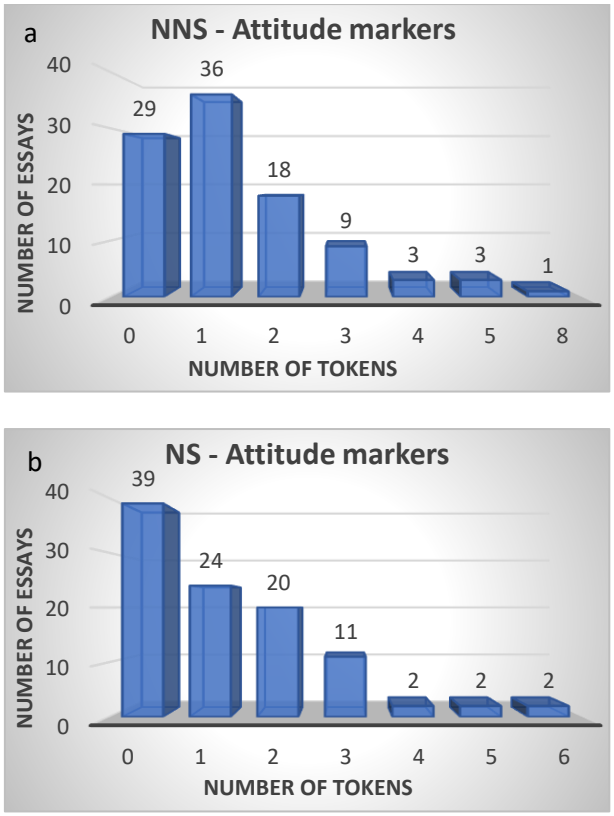


Figure 11a and b *Distribution of attitude markers in individual essays in the NNS and NS corpus*

With respect to the distribution of boosters in individual essays, as can be seen from Figure 12a and b, the findings pointed to fairly congruent distributional patterns between the two corpora, ranging from 0 occurrences in 5 essays to 17 occurrences in 1 essay in the NNS corpus and from 0 occurrences in 5 essays to 14 occurrences in 2 essays in the NS corpus.

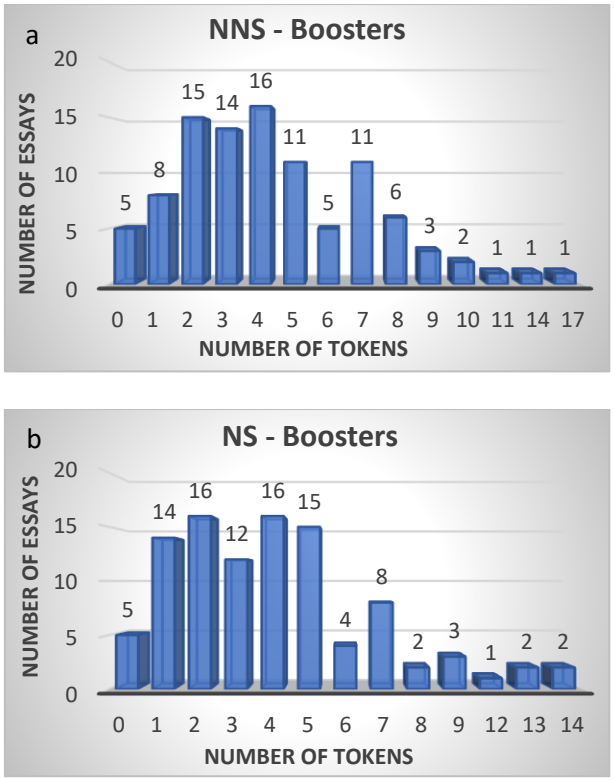


Figure 12a and b *Distribution of boosters in individual essays in the NNS and NS corpus*

Figure 13a and b shows overall slightly different distributional patterns of occurrences of engagement markers in individual essays between the two corpora, ranging from 0 occurrences in 60 essays to 8 occurrences in 1 essay in the NNS corpus and from 0 occurrences in 46 essays to 11 occurrences in 1 essay in the NS corpus.

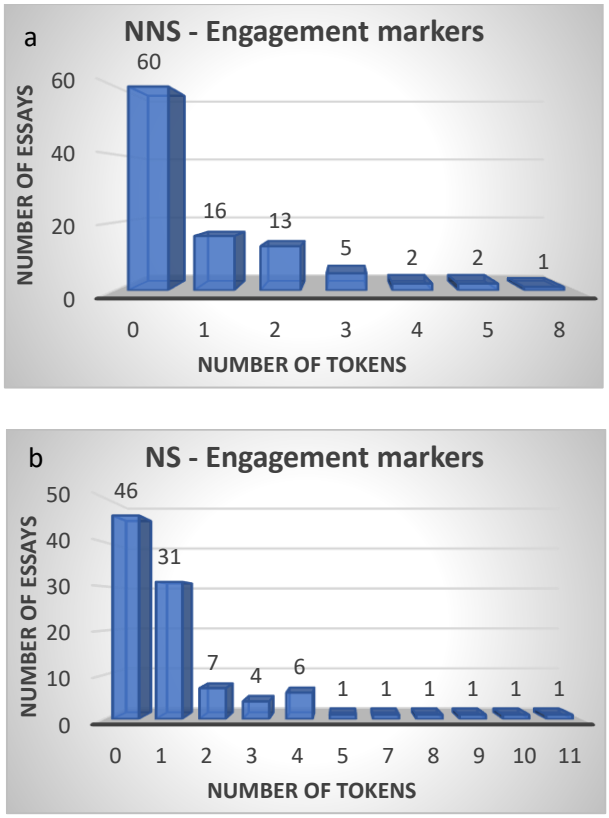


Figure 13a and b *Distribution of engagement markers in individual essays in the NNS and NS corpus*

With respect to the distribution of hedges in individual essays (Figure 14a and b), the findings pointed to different distributional patterns between the two corpora, ranging from 1 occurrence in 2 essays to 18 occurrences in 2 essays in the NNS corpus and from 1 occurrence in 4 essays to 33 occurrences in 1 essay in the NS corpus.

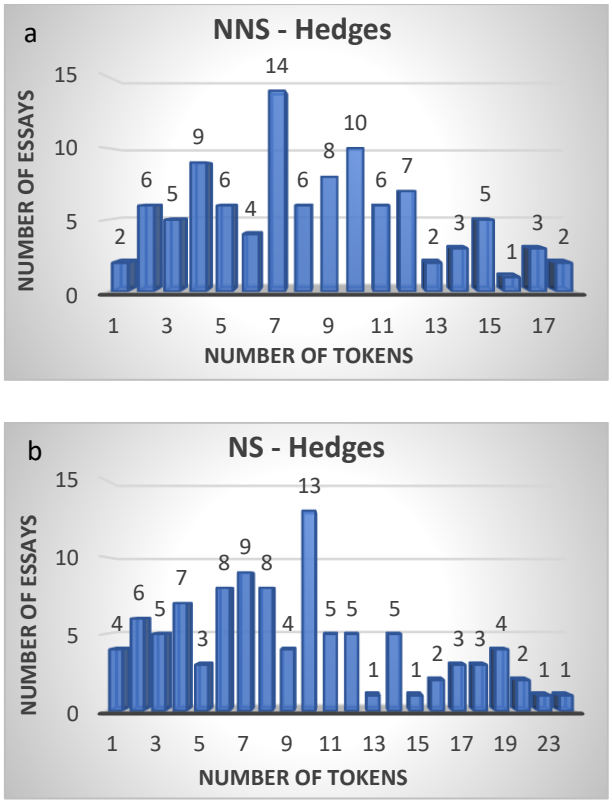


Figure 14 a and b *Distribution of hedges in individual essays in the NNS and NS corpus*

Figure 15a and b shows overall different distributional patterns of occurrences of self-mention markers in individual essays between the two corpora, ranging from 0 occurrences in 33 essays to 16 occurrences in 1 essay in the NNS corpus and from 0 occurrences in 31 essays to 21 occurrences in 1 essay in the NS corpus.

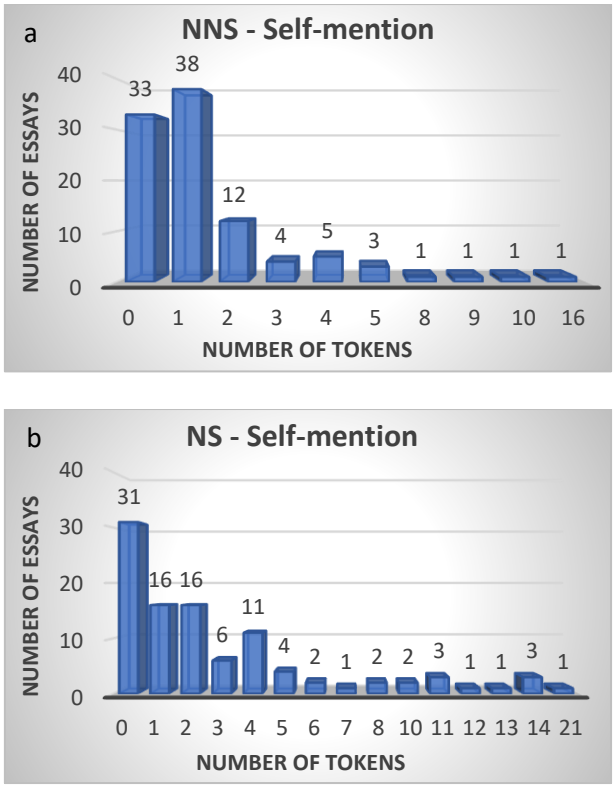


Figure 15 a and b *Distribution of self-mention in individual essays in the NNS and NS corpus*

4.4.3 *Discussion of the NNS and NS corpus findings for the distribution patterns of interactive and interactional metadiscourse in individual essays*

The comparison of the number of metadiscourse markers occurring in individual essays in both corpora revealed quite similar or slightly different overall patterns of distribution in individual essays in both corpora. The distributional patterns between the two corpora differed in the number of essays in which interactive markers did not occur. This could be observed in the number of essays in which frame markers were not used (see Figures 2a and b – 10a and b). Frame markers did not occur in 27 % of essays in the NS corpus as opposed to a much lower percentage, i.e. in 7 % of essays in the NNS corpus (see Figure 6a and b). Similar patterns could be observed in the number of essays in which FM announce goals were not used. A higher percentage of essays (92 %) in which FM announce goals were not used was observed in the NS corpus as opposed to a lower percentage (66 %) in the NNS corpus (see Figure 9a and b). The only notably different distributional patterns were observed for FM label stages. The difference in the distribution of FM label stages could be again observed in the number of essays in which these items were not used. They were not used in 75 % of essays in the NS corpus in contrast to the NNS corpus in which they were not used in 22 % of the essays, which reflected in the difference in the number of essays they were used once in, i.e. 65 % of the

essays in the NNS corpus and 24 % in the NS corpus (see Figure 8a and b). In that respect, the present findings indicated a more balanced use of interactive metadiscourse in the NNS corpus.

The results for interactional metadiscourse indicated more differences in the distribution patterns between the two corpora. Overall, the findings pointed to slightly different patterns of occurrences of boosters and engagement markers in individual essays in the two corpora (see Figure 12a and b and Figure 13a and b). However, notable differences were observed in the distribution patterns of self-mention markers and hedges (see Figure 15a and b and Figure 14a and b). Here, the differences resulted from the different number of essays in which they did not occur as well as the number of essays in which they did occur. The higher percentage of essays in which engagement markers were not used was observed in the NNS corpus (i.e. 60 % in the NNS corpus vs. 46 % in the NS corpus; see Figure 13a and b).

The difference in the distribution of self-mention markers between the two corpora was observed in two aspects. Firstly, the difference was observed in the number of essays in which self-mention markers were either not used at all or used once and twice, i.e. 83 % of essays in the NNS corpus in contrast to 63 % of essays in the NS corpus. Secondly, the obvious difference lies in the range of essays in which self-mention markers were used, in other words, self-mention markers were distributed across a larger number of essays in the NS corpus than in the NNS corpus (see Figure 15a and b).

However, the highest discrepancy in the number of essays in which both interactive and interactional metadiscourse markers occurred between the two corpora was observed in the distributional patterns of hedges which occurred in almost twice as many essays in the NS corpus than in the NNS corpus, thus indicating a more balanced use of these items by the native speakers (see Figure 14a and b). This distinct pattering of hedges corroborates the findings of the previous research which indicated that L1 English academic writing featured markedly more hedges than writing in L2 English or other languages (Abdollahzadeh, 2011; Hu & Cao, 2011; Mur-Dueñas, 2011; Beljo & Miškulin Saletović, 2015; Varga, 2016; Yüksel & Kavanoz, 2018; etc.). This was attributed to the rhetorical norms of Anglo-American cultures to question ideas and beliefs and engage in debate and argumentation (Hu & Cao, 2011). Previous research investigating the use of these devices in student writing indicated that as proficiency developed, student writers exhibited a more balanced use of interactional resources such as hedges (Aull & Lancaster, 2014; Park & Oh, 2018), as well as that hedges, among other markers, were found to be critical elements contributing to student writing quality (Huh & Lee, 2016; Ho & Li, 2018). In that respect, even though hedges were by far the most frequently used interactional markers in both corpora, and even though there was no significant difference in their use

between the two corpora, the findings regarding their distribution patterns in individual essays may suggest that the most notable difference in the use of hedges between the non-native and native speakers in the present study was reflected in a less as opposed to a more balanced use of these devices.

4.4.4 *Distribution of interactive metadiscourse across the essay structure*

In regard to the third research question, i.e. the distribution patterns of metadiscourse markers in individual paragraphs of argumentative essays by the native and non-native speakers, the first hypothesis was that there was no difference in the distribution of interactive markers in all parts of the essay between the non-native and native speakers (H3.1).

Table 18 shows the comparison of distribution patterns of interactive metadiscourse across the whole essay structure as well as the individual paragraphs, namely, introduction, body and conclusion. The interactive markers were evenly distributed across the whole essay structure in the NS corpus, while the NNS speakers used them more frequently in the body and conclusion paragraphs. At the level of individual paragraphs, there was no significant difference in the distribution patterns in the introduction (p=0.100) and body (p=0.319) paragraphs (see Table 19) between the NNS and NS corpus. However, there was a significant difference between the two corpora in the distribution of interactive metadiscourse in the conclusion paragraph (p=0.003) (see Table 19).

Table 18 Distribution patterns of interactive metadiscourse across the introduction, body and conclusion paragraphs and the whole essay structure

Interactive metadiscourse	**NNS**				**NS**			
	f	**Nr. words**	***rf***	**% F**	***f***	**Nr. words**	***rf***	**% F**
Introduction	372	10338	35.98	13.3	341	10321	33.04	14.5
Body	1846	41676	44.29	66.1	1669	44951	37.13	70.8
Conclusion	575	12214	47.08	20.6	347	9753	35.58	14.7
TOTAL	2793	64228	43.49	100	2357	65025	36.25	100

Table 19 Kruskal-Wallis test for relative frequency for distribution patterns of interactive metadiscourse across the introduction, body and conclusion paragraphs

Interactive metadiscourse	***H***	**df**	**p value**
Introduction [ns]	2.71	1	0.100
Body [ns]	0.99	1	0.319
Conclusion[**]	8.58	1	0.003

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level ([ns] no significance, [**]0.01)

The evidence regarding the distribution patterns of interactive metadiscourse markers in individual paragraphs of argumentative essays by the native and non-native speakers partially confirmed hypothesis H3.1. As for the introduction and body paragraph, the hypothesis was confirmed. There were no differences in the distribution of interactive markers in the introduction and body paragraphs between the non-native and native speakers. Contrary to the hypothesis, there was a difference in the distribution of interactive markers in the conclusion paragraph. The non-native speakers used interactive metadiscourse significantly more frequently in the conclusion paragraph than the native speakers.

4.4.5 *Distribution of interactional metadiscourse across the essay structure*

The second hypothesis regarding the distribution patterns of metadiscourse markers in individual paragraphs of argumentative essays by the non-native and native speakers was that the native speakers used interactional metadiscourse markers more frequently in all parts of the essay compared to the non-native speakers (H3.2). The comparison of distribution patterns of interactional metadiscourse across the whole essay structure as well as at the level of individual paragraphs, namely, the introduction, body and conclusion paragraphs, showed rather different results. The results showed that interactional metadiscourse was much more frequently used in the body paragraph in both corpora (see Table 20).

Table 20 Distribution patterns of interactional metadiscourse across the introduction, body and conclusion paragraphs and the whole essay structure

Interactional metadiscourse	**NNS**				**NS**			
	f	**Nr. words**	***rf***	**% F**	***f***	**Nr. words**	***rf***	**% F**
Introduction	283	10338	27.37	17.2	249	10321	24.13	13.0
Body	916	41676	21.98	55.7	1290	44951	28.70	67.4
Conclusion	446	12214	36.52	27.1	376	9753	38.55	19.6
TOTAL	1645	64228	25.61	100	1915	65025	29.45	100

At the level of individual paragraphs, the results indicated significant difference between the two corpora. The non-native speakers used interactional metadiscourse significantly more frequently in the conclusion ($p \leq 0.001$), while the native speakers used interactional resources significantly more frequently in the body paragraph ($p=0.002$) (see Table 21).

Table 21 Kruskal-Wallis test for relative frequency for interactional metadiscourse across the introduction, body and conclusion paragraphs

Interactional metadiscourse	***H***	**df**	**p value**
Introduction ^{ns}	3.54	1	0.060
Body**	10.05	1	0.002
Conclusion***	20.88	1	0.000

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level (^{ns} no significance, **0.01, ***0.001)

The evidence regarding the distribution patterns of interactional metadiscourse markers in individual paragraphs of argumentative essays by the native and non-native speakers partially confirmed hypothesis H3.2. The hypothesis was confirmed only regarding the body paragraph – the native speakers used interactional markers significantly more frequently in the body paragraph. However, contrary to the hypothesis, there was no difference in the distribution of interactional markers in the introduction paragraph between the non-native and native speakers. The difference in the distribution of interactional markers in the conclusion paragraph between the non-native and native speakers was not, as hypothesized, the result of the significantly more frequent use of these markers by the native but by the non-native speakers.

4.4.6 *Discussion of the NNS and NS corpus findings for the distribution patterns of interactive and interactional metadiscourse across the essay structure*

The comparison of distribution patterns of interactive and interactional metadiscourse across the whole essay structure, as well as the individual paragraphs, indicated rather different distribution patterns of interactive and interactional metadiscourse in the two corpora. While interactive metadiscourse markers were evenly distributed across the whole essay structure in the NS corpus, the NNS writers used interactive markers more frequently in the body and conclusion paragraphs (see Table 18). If we observe the essays as a whole, as reported in Section 4.3, the figures showed that the non-native writers used interactive metadiscourse more frequently than the native speakers; however, there was no significant difference in the use of interactive metadiscourse between the NNS and NS corpus (see Table 13 and 18). If we observe

the use of interactive metadiscourse at the level of individual paragraphs, the results indicated, as it was initially assumed, that there was no significant difference in the distribution patterns in the introduction (p=0.100) and body (p=0.319) paragraphs (see Table 19) between the two corpora. Contrary to what was hypothesized, the significant difference between the two corpora was found in the use of interactive metadiscourse in the conclusion paragraph (p=0.003) (see Table 19) – the non-native writers used interactive metadiscourse more frequently than the native speakers. Overall, with respect to the difference in the use of interactive metadiscourse between the NNS and NS corpus, the results pointed to an interesting finding that the NNS writers used interactive markers in the conclusion paragraph considerably more frequently than the native speakers, which ultimately affected the results of the whole essay structure (see Table 13).

The comparison of distribution patterns of interactional metadiscourse across the whole essay structure as well as the individual paragraphs between the two corpora also showed rather different results. Unlike the interactive metadiscourse, which was more or less evenly distributed in all paragraphs in the NS corpus, interactional metadiscourse was much more frequently used in the conclusion paragraph in both corpora (see Table 20). If we observe the use of interactional metadiscourse at the level of individual paragraphs, there were significant differences between the two corpora. Contrary to what was initially expected, the non-native speakers used interactional metadiscourse much more frequently in the conclusion ($p \leq 0.001$). However, as it was initially expected, the native speakers used interactional resources more frequently in the body paragraph (p=0.002) (see Table 21). If we observe the use of interactional metadiscourse across the whole essay structure, as reported in Section 4.3, the results indicated that overall, the native speakers (n/1000=29.45) used interactional metadiscourse more frequently than the non-native speakers (n/1000=25.61) (see Figure 1). What can be observed from the results regarding the distribution of interactional metadiscourse is that the native speakers' more frequent use of interactional metadiscourse was the consequence of their frequent use in the body paragraph in the NS corpus. Overall, with respect to the difference in the use of interactional metadiscourse between the NNS and NS corpus, a more frequent use of interactional metadiscourse in the NS corpus was a consequence of a more frequent use of hedges, engagement markers and self-mention categories (see Table 16) as well as a more frequent use of interactional metadiscourse by the native speakers in the body paragraph (see Table 20). It can be argued that these two aspects led to an overall, although not statistically significant, higher relative frequency of interactional markers in the NS corpus as compared to the NNS corpus.

4.4.7 *Distribution of interactive categories across the essay structure*

A detailed look into the distributional patterns of interactive metadiscourse revealed differences between the NNS and NS corpus (Tables 22 – 27).

Table 22 Distribution patterns of interactive metadiscourse across the introduction paragraph

Interactive metadiscourse	**NNS**			**NS**		
Introduction	***f***	***rf***	**% F**	***f***	***rf***	**% F**
Code glosses	66	6.38	17.7	91	8.82	26.7
Endophoric markers	0	0.00	0.0	1	0.10	0.3
Evidentials	2	0.19	0.5	2	0.19	0.6
Frame markers	49	4.74	13.2	21	2.03	6.2
FM sequencing	5	0.48	1.3	12	1.16	3.5
FM label stages	1	0.10	0.3	2	0.19	0.6
FM announce goals	42	4.06	11.3	4	0.39	1.2
FM shift topic	1	0.10	0.3	3	0.29	0.9
Transition markers	255	24.67	68.6	226	21.90	66.2
TOTAL	372	35.98	100	341	33.04	100

Table 23 Kruskal-Wallis test for relative frequency for interactive metadiscourse across the introduction paragraph

Interactive metadiscourse Introduction	***H***	**df**	**p value**
Code glosses^{ns}	0.27	1	0.605
Endophoric markers^{ns}	0.99	1	0.320
Evidentials^{ns}	0.00	1	0.984
Frame markers***	10.21	1	0.001
FM sequencing^{ns}	0.71	1	0.398
FM label stages^{ns}	0.33	1	0.568
FM announce goals***	26.60	1	0.000
FM shift topic^{ns}	1.01	1	0.316
Transition markers^{ns}	1.26	1	0.262

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level (^{ns} no significance, ***0.001)

Table 24 Distribution patterns of interactive metadiscourse across the body paragraph

Interactive metadiscourse	**NNS**			**NS**		
Body	***f***	***rf***	**% F**	***f***	***rf***	**% F**
Code glosses	297	7.13	16.1	321	7.14	19.2
Endophoric markers	11	0.26	0.6	9	0.20	0.5
Evidentials	7	0.17	0.4	19	0.42	1.1
Frame markers	160	3.84	8.7	106	2.36	6.4
FM sequencing	128	3.07	7.0	93	2.07	5.6
FM label stages	13	0.31	0.7	5	0.11	0.3
FM announce goals	5	0.12	0.3	3	0.07	0.2
FM shift topic	14	3.84	0.8	5	0.11	0.3
Transition markers	1371	32.90	74.3	1214	27.01	72.7
TOTAL	1846	44.29	100	1669	37.13	100

Table 25 Kruskal-Wallis test for relative frequency for interactive metadiscourse across the body paragraph

Interactive metadiscourse Body	***H***	**df**	**p value**
Code glosses^{ns}	0.22	1	0.639
Endophoric markers^{ns}	0.13	1	0.715
Evidentials^{ns}	0.96	1	0.327
Frame markers**	8.04	1	0.005
FM sequencing*	4.33	1	0.038
FM label stages^{ns}	2.86	1	0.091
FM announce goals^{ns}	0.73	1	0.392
FM shift topic^{ns}	0.69	1	0.404
Transition markers***	18.42	1	0.000

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level (^{ns} no significance, *0.05, **0.01, ***0.001)

Table 26 Distribution patterns of interactive metadiscourse across the conclusion paragraph

Interactive metadiscourse	**NNS**			**NS**		
Conclusion	***f***	***rf***	**% F**	***f***	***rf***	**% F**
Code glosses	48	3.93	8.3	44	4.51	12.7
Endophoric markers	4	0.33	0.7	2	0.21	0.6
Evidentials	0	0.00	0.0	4	0.41	1.2
Frame markers	93	7.61	16.2	32	3.28	9.2
FM sequencing	6	0.49	1.0	8	0.82	2.3
FM label stages	80	6.55	13.9	19	1.95	5.5
FM announce goals	5	0.41	0.9	4	0.41	1.2
FM shift topic	2	0.16	0.3	1	0.10	0.3
Transition markers	430	35.21	74.8	265	27.17	76.4
TOTAL	575	47.08	100	347	35.58	100

Table 27 Kruskal-Wallis test for relative frequency for interactive metadiscourse across the conclusion paragraph

Interactive metadiscourse Conclusion	***H***	**df**	**p value**
Code glosses^{ns}	0.02	1	0.876
Endophoric markers^{ns}	0.70	1	0.404
Evidentials*	4.02	1	0.045
Frame markers***	23.84	1	0.000
FM sequencing^{ns}	3.17	1	0.075
FM label stages***	39.85	1	0.000
FM announce goals^{ns}	0.00	1	0.994
FM shift topic^{ns}	0.33	1	0.564
Transition markers**	9.95	1	0.002

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level (^{ns} no significance, *0.05, **0.01, ***0.001)

The quantitative data in Tables 22, 24, and 26 show absolute and relative frequencies, and the percentage of interactive metadiscourse in all three parts of the essays. There were no significant differences between the NNS and the NS corpus in the distribution patterns of code glosses in any of the three essay paragraphs, i.e. introduction (p=0.605), body (p=0.639) and conclusion (p=0.876) (see Tables 23, 25, and 27). The same was observed for the category of endophoric markers, i.e. introduction (p=0.320), body (p=0.715) and conclusion (p=0.404) (see Tables 23, 25, and 27).

In contrast, the results in Table 14 show that frame markers were more frequently used in the NNS corpus. There was a significant difference in the distribution patterns of frame markers across the whole essay structure between the two corpora (see Table 15). The data in Tables 23, 25, and 27 also show the differences between the two corpora when looking at distribution patterns of individual FM subcategories. FM sequencing were much more frequently used in the NNS corpus in the body paragraph (p=0.038) (see Table 25), but there were no significant differences in the use of this subcategory in the introduction (p=0.398) (see Table 23) and conclusion (p=0.075) paragraphs (see Table 27) between the two corpora. FM label stages were much more frequently used in the NNS corpus in the conclusion paragraph (p≤0.001) (see Table 27), but there were no significant differences between the non-native and native speakers in their use in the introduction (p=0.568) and body (p=0.091) paragraphs (see Tables 23 and 25). As can be seen from Tables 22, 24, and 26, similar distribution patterns were observed with the subcategory of announce goals. A higher discrepancy in the use of FM announce goals was recorded in the introduction paragraph (p≤0.001) (see Table 23). As can be seen in Table 22, FM announce goals were much more frequently used in the introduction

paragraph in the NNS corpus. However, there were no significant differences in the use of FM announce goals in the body (p=0.392) and conclusion (p=0.994) paragraphs (see Tables 25 and 27) between the NNS and NS corpus. As for FM shift topic, there were no significant differences in the distribution patterns between the two corpora (see Tables 25, 27 and 31).

Transition markers were statistically significantly more frequently used in the NNS corpus in the body (p≤0.001) and conclusion (p=0.002) paragraphs (see Tables 25 and 27). However, there was no significant difference between the two corpora in the use of transition markers in the introduction paragraph (p=0.262) (see Table 27).

Finally, the findings showed that evidentials were statistically significantly more frequently used in the NS corpus in the conclusion paragraph (p=0.045) (see Table 27). However, there were no significant differences in their use in the introduction (p=0.984) and body (p=0.327) paragraphs between the two corpora (see Tables 25 and 27).

4.4.8 *Distribution of interactional categories across the essay structure*

A detailed look into the distributional patterns of interactional metadiscourse also revealed differences between the two corpora (Tables 28 – 33).

Table 28 Distribution patterns of interactional metadiscourse across the introduction paragraph

Interactional metadiscourse	**NNS**			**NS**		
Introduction	***f***	***rf***	**% F**	***f***	***rf***	**% F**
Attitude markers	26	2.51	9.2	23	2.23	9.2
Boosters	75	7.25	26.5	90	8.72	36.1
Engagement markers	21	2.03	7.4	31	3.00	12.4
Hedges	145	14.03	51.2	63	6.10	25.3
Self-mention	16	1.55	5.7	42	4.07	16.9
TOTAL	283	27.37	100	249	24.13	100

Table 29 Kruskal-Wallis test for relative frequency for interactional metadiscourse across the introduction paragraph

Interactional metadiscourse Introduction	***H***	**df**	**p value**
Attitude markers^{ns}	1.23	1	0.268
Boosters^{ns}	0.38	1	0.537
Engagement markers^{ns}	0.08	1	0.777
Hedges***	30.76	1	0.000
Self-mention*	5.82	1	0.016

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level (^{ns} no significance, *0.05, ***0.001)

Table 30 Distribution patterns of interactional metadiscourse across the body paragraph

Interactional metadiscourse	**NNS**			**NS**		
Body	***f***	***rf***	**% F**	***f***	***rf***	**% F**
Attitude markers	75	1.80	8.2	85	1.89	6.6
Boosters	250	6.00	27.3	256	5.70	19.8
Engagement markers	52	1.25	5.7	75	1.67	5.8
Hedges	517	12.41	56.4	715	15.91	55.4
Self-mention	22	0.53	2.4	159	3.54	12.3
TOTAL	916	88.61	100	1290	124,99	100

Table 31 Kruskal-Wallis test for relative frequency for interactional metadiscourse across the body paragraph

Interactional metadiscourse Body	***H***	**df**	**p value**
Attitude markers^{ns}	0.41	1	0.521
Boosters^{ns}	0.44	1	0.507
Engagement markers*	4.24	1	0.039
Hedges*	3.86	1	0.049
Self-mention***	37.55	1	0.000

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level (^{ns} no significance, *0.05, ***0.001)

Table32 Distribution patterns of interactional metadiscourse across the conclusion paragraph

Interactional metadiscourse	**NNS**			**NS**		
Conclusion	***f***	***rf***	**% F**	***f***	***rf***	**% F**
Attitude markers	33	2.70	7.4	19	1.95	5.1
Boosters	118	9.66	26.5	64	6.56	17.0
Engagement markers	10	0.82	2.2	25	2.56	6.6
Hedges	171	14.00	38.3	163	16.71	43.4
Self-mention	114	9.33	25.6	105	10.77	27.9
TOTAL	446	43.14	100	376	36.43	100

Table 33 Kruskal-Wallis test for relative frequency for interactional metadiscourse across the conclusion paragraph

Interactional metadiscourse Conclusion	***H***	**df**	**p value**
Attitude markers^{ns}	2.53	1	0.112
Boosters**	7.56	1	0.006
Engagement markers^{ns}	1.38	1	0.241
Hedges^{ns}	0.18	1	0.672
Self-mention^{ns}	0.52	1	0.470

H – Kruskal-Wallis H, df – degrees of freedom, p value – significance level (^{ns} no significance, **0.01)

The quantitative data in Tables 29, 31 and 33 show absolute and relative frequencies, and the percentage of interactional metadiscourse in all three parts of the essays. There were no significant differences in the use of attitude markers in any of the three essay paragraphs, i.e. introduction (p=0.268), body (p=0.521) and conclusion (p=0.112) paragraphs, between the NNS and the NS corpus.

The use of boosters was significantly more salient in the conclusion paragraph in the NNS corpus as compared to their use in NS corpus (p=0.006) (see Table 33). However, there were no significant differences in their use in the introduction (p=0.537) and body (p=0.507) paragraphs (see Tables 29 and 31) between the two corpora.

As can be seen in Tables 29, 31 and 33, engagement markers showed different distribution patterns. They were statistically significantly more frequently used in the body paragraph (p=0.039) (see Table 30) in the NNS corpus. However, there were no significant differences in their use in the introduction (p=0.777) and conclusion (p=0.241) paragraphs (see Tables 29 and 33) between the two corpora.

Self-mention markers were statistically significantly more frequently used in the introduction (p=0.016) and body (p≤0.001) paragraphs (see Table 31) in the NS corpus. As for the conclusion paragraph, the results showed that there was no significant difference (p=0.470) between the two corpora (see Table 31).

Hedges were statistically significantly more frequently used in the introduction paragraph (p≤0.001) (see Table 29) in the NNS corpus as compared to the NS corpus, but they were statistically significantly more frequently used in the NS corpus in the body paragraph (p=0.049) as compared to the NNS corpus (see Table 31). As for the conclusion paragraph (see Table 33), there was no significant difference in the use of hedges between the two corpora (p=0.672).

4.4.9 *Discussion of the NNS and NS corpus findings for the distribution patterns of interactive and interactional metadiscourse categories across the essay structure*

The findings regarding distributional patterns of interactive metadiscourse categories pointed to interesting differences between the non-native and native writers. While there was no significant difference between the NNS and NS corpora in the distribution patterns of code glosses (see Tables 22, 24, and 26) and endophoric markers (see Tables 23, 25, and 27) in any of the individual essay paragraphs, there were differences in the use of frame markers, transition markers and evidentials. Examples 95 to 100 illustrate the use of code glosses to

support the propositions with examples in all three parts of essays in both the NNS and NS corpus.

95) ***For example**, how Columbus accidentally discovered America after wanting to find paths that lead to India, China and Japan or genome editing and RNA-sequencing in the more recent years.* (E59 NNS introduction)
96) *Two extremes can be identified; millionaire, celebrity status in the case of Naseem Hamed **for example**, or death in the ring as is sometimes the tragic case.* (BOX6 NS introduction)
97) ***For example**, unlike in 19th century where only rich people, who could afford to embark in risky economic adventures and create their own businesses, today, anyone has the opportunity to achieve one's dreams and create and contribute to the world if one plays their cards right.* (E31 NNS body)
98) *I believe that in some areas there may be a case for genetic manipulation, **for example** the case of Duchenne muscular dystrophy, which has been shown to have genetic links.* (GENM1 NS body)
99) *This of course depends on the university you're attending, **for example** if you're studying philosophy, like I am, there won't really be any practical parts, but that doesn't mean it's worthless, it just gives its value in a different way.* (E3 NNS conclusion)
100) *What I would like to see, would be consistent train journeys to major destinations displayed and advertised **for example**, I'd like to know every Saturday that I could catch a train from Lancaster to Manchester at ten thirty.* (TRANS9 NS conclusion)

Even though their use was very limited in both corpora, the occurrences of the most frequent endophoric markers *above* and *before*, as can be seen in examples 101 to 105, were used to support arguments by referring to other parts of the text across the whole essay structure in both corpora. *Above* did not occur in the introduction in the NNS corpus, which was not unexpected given that in this part of the essay it is not common to refer to previously mentioned information.

101) *All the **above** are carried out on living people, but nowadays biological operations can be carried out on humans which are not even born.* (INVITRO3 NS introduction)
102) *And, while in most cases this is true, one overlooked detail keeps popping up, and I have mentioned it **before**; the governments even in these times were chosen by the people in most cases, and were supported by a vast majority in most cases.* (E34 NNS body)
103) *As I said **before**, it has developed into an extremely lucrative sport with millions of pounds being offered for the elite to fight.* (BOX10 NS body)

104) *Judging by **above** mentioned ways in which colleges fail to impart indispensable skills for entrepreneurship, personal growth and reasoning as well as teach crucial lessons on miscellaneous psychology and emotional intelligence I am also inclined to believe that they give an inadequate support for the real life hardships.* (E58 NNS conclusion)

105) *The ideas **above** are just a few of the topics we are now concerned with.* (ICLE113 NS conclusion)

The overall findings presented in Table 14 show that the NNS writers used frame markers much more frequently than the NS writers, and they did so consistently across the whole essay structure. In other words, there were significant differences in the distribution patterns of frame markers across the whole essay structure between the two corpora (see Table 15). Analysis of the distribution patterns of individual subcategories of frame markers also revealed discrepancies between the two corpora (Tables 23, 25, and 27). The NNS writers used FM sequencing statistically significantly more frequently in the body paragraph ($p=0.038$), FM label stages in the conclusion paragraph ($p\leq0.001$), and FM announce goals in the introduction paragraph ($p\leq0.001$). Examples 106 to 108 illustrate the use of *lastly* to sequence arguments in the introduction, *to sum up* to label stages in the conclusion and *discussed* to announce goals in the introduction in the NNS corpus.

Sequencing:

106) ***Lastly**, prejudices present another difficulty in obtaining equality - minorities such as blacks and Asians and historically oppressed groups such as women are faced with unfair treatment on the daily basis.* (E33 NNS body)

Label stages:

107) ***To sum up**, all these facts prove that at the bottom of some of the worst social and ecological problems lies private property.* (E45 NNS conclusion)

Announce goals:

108) *Both viewpoints will be **discussed** in this essay.* (E93 NNS introduction)

In addition, the discrepancy between the two corpora in the use of FM label stages in the conclusion paragraph was rather striking. The NNS writers used FM label stages in the conclusion so frequently that it was reflected across all three parts of the essay resulting in the significant difference between the two corpora (see Table 27 and Table 15). This can be

attributed to the frequent use of formulaic expressions like *to conclude* and *in conclusion* by the NNS writers. The saliency of FM label stages in the concluding paragraph, in particularly the frequent formulaic use of the same above-mentioned expressions in student argumentative writing was also recorded in Ho and Li's (2018) study. The discrepancy between the two corpora in the use of FM announce goals in the introduction paragraph was rather prominent as well. As can be seen in Table 22, the use of FM announce goals was considerably more salient in the introduction paragraph in the NNS corpus as compared to the NS corpus. In fact, the sub-category of announce goals was used in the introduction in the NNS corpus so frequently that it reflected across the whole essay structure (Table 23 and Table 14). However, the results indicated that there was no significant difference between the non-native and native speakers' choices in the use of these frame markers in other parts of the essay. As for the FM shift topic, there was no significant difference in the distribution patterns regarding all three parts of the essay between the two corpora (Tables 23, 25 and 27).

Transition markers were statistically significantly more frequently used by the NNS writers in the body ($p \leq 0.001$) and the conclusion paragraph ($p=0.002$) (Tables 25 and 27). However, there were no discrepancies in the non-native and native speakers' choices in the use of transition markers in the introduction paragraph ($p=0.262$) (Table 27). This may be illustrated by, on the one hand, a frequent use of the transition marker *furthermore* in the NNS corpus (examples 109 to 112) and, on the other, by the extremely rare use of *furthermore* by the native speakers, which was only used twice in the body paragraph in the NS corpus, as shown in examples 113 and 114.

109) ***Furthermore****, there are also people, who have, as a result of some accident or disaster, lost everything they have owned, and they need to begin from the bottom.* (E2 NNS body)

110) ***Furthermore****, every participant of today's society has an equal opportunity to achieve their goals.* (E54 NNS body)

111) ***Furthermore****, even though it has been concluded that money can incite evil doings, it would be out of line to call it the root of all evil.* (E77 NNS body)

112) ***Furthermore****, one cannot talk about equality in today's world when there are so much racism all over us.* (E9 NNS body)

113) *And* ***furthermore*** *the fall that Britain isn't importing beef means that other countries wouldn't want to import UK beef because there is no trading between the countries.* (BSE16 NS body)

114) ***Furthermore****, the children received little or no exposure to the educational environment of the inner city thus, these transfer students who had not become accustomed to one particular style of learning were more easily able to adapt to a new method of learning.* (ICLE7 NS body)

The NS writers used evidentials statistically significantly more frequently than the NNS writers only in the conclusion paragraph (p=0.045) (see Table 27), while there were no differences in their use in the introduction (p=0.984) and body (p=0.327) paragraphs between the two corpora (see Tables 25 and 27). The use of the only observed evidential marker *according to* in the conclusion paragraph in the NS corpus is illustrated in examples 115 to 118.

115) *As this European Act is not entrenched, and the sovereignty may be seized back at any time, it may be predicted that if the U.K. hands its sovereignty over to a greater extent at a time of total unification, it too may take back sovereignty,* ***according to*** *the doctrine of parliamentary legislative supremacy.* (EU20 NS conclusion)

116) *Whatever the British viewpoint, the single market will still go ahead* ***according to*** *the needs of the European countries.* (EU7 NS conclusion)

117) ***According to*** *people who partake in fox hunting it is an enjoyable sport.* (FOX3 NS conclusion)

118) *It also has other problems,* ***according to*** *some people, such as encouraging under-age gambling, putting other lottery firms out of business and the enormous abnormal profits earned by the organiser, Camelot.* (NATLOT9 NS conclusion)

It is worth noting here that *according to* was not used in the conclusion paragraph by the non-native speakers. Based on my teaching experience, NNS learners in this sample might have been avoiding evidentials because of their encounter with the genre of argumentative essay only in their foreign language classes during secondary school and by the guidelines in the Examination catalog for the School-leaving Exam in English language. The guidelines instruct students to, in order to compete the task of writing an essay successfully and receive the maximum points for the Task completion criterion, after briefly summarizing their arguments, express their evaluative thoughts on the subject in the concluding paragraph. As a result, they might not have felt the need to justify their claims they consider to be their own opinion on the topic.

Overall, it seems interesting to point out that there was either no difference in the distribution patterns of interactive metadiscourse categories between the two corpora or, if there was, they were used more frequently by the non-native speakers in all parts of the essay. The only exception were evidentials which were more frequently used in the conclusion paragraph by the native speakers.

A detailed look into the distributional patterns of interactional metadiscourse revealed different patterns from those of interactive metadiscourse. There were no significant differences between the NNS and NS corpus in the distribution of attitude markers across the whole essay structure (see Tables 29, 31 and 33).

In contrast, differences were found between the NNS and NS corpus in the distribution patterns regarding the use of boosters, engagement markers and hedges. The difference in the use of boosters between the two corpora was evident only in the conclusion paragraph (p=0.006) where the non-native speakers used boosters statistically significantly more frequently than the native speakers (see Table 33). The NNS writers' more frequent use of boosters in the conclusion paragraph was also observed in Ho and Li's (2018) study investigating the patterns of use of metadiscourse markers in students' argumentative essays. They suggested that students in their study tended to boost most frequently in the conclusion because they "found it necessary to appear to be more assertive after presenting their thesis statement in the introduction and arguments in the body, and they could then end the essay in a stronger tone supporting the stance they had argued for in the preceding paragraphs" (Ho & Li, 2018, p. 6). The followings examples (119 to 123) show the only occurrence of *definitely* in the conclusion paragraph in the NS corpus and four occurrences in the conclusion paragraph in the NNS corpus.

119) *It is clear that in order for a computer to work it needs the input of a human brain and so in this respect it has **definitely** not replaced the human.* (TECH11 NS conclusion)
120) *Also, the IT sector as a whole is a great step into the right direction for those who feel like they need to have full control over both the technological aspect of human activity, alongside the creative aspect which is **definitely** needed in order to succeed in such endeavours.* (E40 NNS conclusion)
121) *In my opinion, even though to treat everyone equally, people cannot and **definitely** are not equal in everything.* (E63 NNS conclusion)
122) *To conclude with, people should **definitely** be grateful for the evolution of technology and industrialisation.* (E69 NNS conclusion)
123) *It has **definitely** helped humankind in many ways, but we must be wary of where it will lead.* (E69 NNS conclusion)

As can be seen in Tables 29, 30, 31, 32 and 33, a considerably higher discrepancy between the two corpora was recorded in the use of engagement markers in the body paragraph (p=0.039) where engagement markers were statistically significantly more frequently used in

the NS corpus as compared to the NNS corpus. Examples 124 and 125 illustrate the use of the engagement marker *you* in the body paragraph in the NS corpus.

124) *Although if **you** analyze many of these arguments they are not very substantial.* (ICLE167 NS body)
125) *Let me throw a couple of statistics at **you** that I gathered doing a paper last year.* (ICLE169 NS body)

The limited use of a reader pronoun *you* and frequent use of pronoun *one* in the body paragraph by the NNS writers (illustrated by examples 126 and 127) could be regarded as a matter of a stylistic preference to rely on a more formal written style they consider to be characteristic of argumentative writing.

126) ***One** might think that wealth then, is the only way to avoid such exhaustion, but it is not true.* (E39 NNS body)
127) ***One** may argue that a person of a firm and grounded benevolent character cannot be spoiled by material gain.* (E88 NNS body)

The use of the self-mention category was considerably more salient in the introduction ($p=0.016$) and body ($p\leq0.001$) paragraphs (see Table 31) in the NS corpus as compared to their use in the NNS corpus. As expected, the NNS writers used self-mention markers the most frequently in the conclusion paragraph (see Table 32) where writers need to make an explicit stance and give credit for their personal projection. Based on my teaching experience, I am again inclined to speculate that this outcome was a result of the NNS writers in this sample primarily encountering the non-discipline-specific genre of argumentative essay only in their foreign language classes during secondary school. As previously mentioned, the learners are instructed that this type of writing should be free from evaluative judgements and that writers' final thoughts on the subject are expressed in the concluding paragraph. The present finding is in line with the previous research indicating a high frequency of self-mention markers in the concluding paragraph in argumentative writing (Ho & Li, 2018). Examples 128 to 131 illustrate the non-native speakers' use of *I* to make explicit stance and give credit for their personal projection in the conclusion paragraph. However, there were a few instances of the use of *I* in the introduction paragraph in the NNS corpus which, as can be seen in examples 132 to 135, do not function to express writers' thoughts on the subject.

128) *Finally, **I** think that our degree has its value, but with some improvements, that value would be much higher.* (E13 NNS conclusion)

129) *In my own experience, **I** prefer practical courses more because they tend to be more interesting, intriguing, and also thought-provoking.* (E22 NNS conclusion)

130) ***I** also think it is very important to add that, although I do not think that every person needs to attend university, **I** strongly believe that everyone should develop in their profession constantly, because otherwise they will never be able to keep up with the increasing difficulty of the demands of the modern world.* (E50 NNS conclusion)

131) ***I** believe that in many cases the universities do not prepare students for the real world, and that there should be some more improvements, but **I** also do not believe that having a degree is worthless as it helps to educate and improve our society.* (E78 NNS conclusion)

132) *In this essay **I** will talk about the thought that in our modern world, dominated by science technology and industrialisation, there is no longer a place for dreaming and imagination.* (E46 NNS introduction)

133) *In this essay **I** will examine the socio-economical area, but also integrate some other factors from different areas that may prove vital.* (E54 NNS introduction)

134) *In this essay, **I** will discuss the importance of a university degree and how it dictates your life as opposed to other career paths or life decisions that can, too, upgrade your life quality.* (E80 NNS introduction)

135) *In this essay **I** will describe both points of view and give my own opinion about the chosen topic.* (E97 NNS introduction)

The use of the self-mention marker *I* in the introduction and body paragraphs in the NS corpus is illustrated in examples 136 to 142. The native writers supported their arguments and counterarguments by expressing their thoughts on the subject across the whole essays structure.

136) *Whilst to a certain extent I may be guilty of having an island mentality, **I** wouldn't go as far as to say Britain is in danger of handing all control over to faceless bureaucrats in Brussels or Strasbourg.* (EU27 NS introduction)

137) *There have been many demonstrations by activists when fox hunting is taking place and although **I** do not agree with some of the animal activists' methods **I** am in this case of the strong opinion that fox hunting should be banned in the United Kingdom.* (FOX2 NS introduction)

138) *Well, **I** believe that no matter what the circumstances, there is no need for a death penalty because it will not stop our criminal problems, it is immoral, and may even hinder the development of our society.* (ICLE16 NS introduction)

139) *This, **I** believe, is why so many young men enter the sport I the hope that they, in years to come, will be fighting for a World Title having just earned several million dollars for the fight.* (BOX15 NS body)

140) ***I** do not think that necessarily means a woman is totally limited in terms of assignments where emotions could be a serious impediment, it just means there are some limitations that society should recognize when trying so hard to create the equality among the sexes.* (ICLE159 NS body)

141) ***I** think that **I** would like to see a change in the law to allow women to have children if they feel able to cope but **I** feel if legalised it would be a decision taken to freely by women and not taking into consideration the consequences.* (INV2 NS body)

142) *With the Newbury bypass work now being stopped for 3 days running **I** can sympathise with the protestors.* (TRANS8 NS body)

The comparison of the use of hedges showed discrepancies between the two corpora in the introduction and body paragraphs. The non-native speakers used hedges statistically significantly more frequently in the introduction ($p \leq 0.001$), while the native speakers used them statistically significantly more frequently in the body paragraph ($p=0.049$) (see Tables 29, 31, and 33). Examples 143 to 153 illustrate the non-native speakers' overuse of the verb *argue* in the introduction paragraph. Such uses of the verb *argue* were common in the introduction paragraph in the NNS corpus which might indicate that the non-native speakers relied on a limited number of metadiscourse items, while other types of markers were neglected. What is more, as Pavičić Takač and Vakanjac Ivezić (2019) observed, introduction paragraphs in L2 texts appear to be composed around those items in that they accommodate propositions to metadiscourse rather than the other way around. This was attested by the present findings regarding the use of *argue* in the introduction paragraph in the NNS corpus, as shown in examples 143 to 153.

143) *However, some would **argue** that this is an overstatement because not everyone is that easily influenced by it. (*E16 NNS introduction)

144) *It is often **argued** that money is a good thing because one can use it to incentivize innovation and industry, economic growth in short; or simply donate to charity or give it away directly to people in need.* (E45 NNS introduction)

145) *On the other hand, money is **argued** to be a very rotten thing which corrupts people's hearts and minds because it lends itself to greed, megalomania and corruption; all which purportedly leads to poverty, inequality, all kinds of oppression and war.* (E45 NNS introduction)

146) *Some **argue** that no matter which profession a person chooses, attending university would offer them more choices, and broaden their horizons.* (E50 NNS introduction)

147) *However, others **argue** that universities are just a waste of time, and that the degree one gets after finishing their studies has no actual value in the real world.* (E50 NNS introduction)

148) *This is why some people think that technology deprived humans of their imagination and dreaming, while others **argue** that it allows humans to be more imaginative than ever*. (E56 NNS introduction)

149) *This is why some people think that technology deprived humans of their imagination and dreaming, while others **argue** that it allows humans to be more imaginative than ever*. (E59 NNS introduction)

150) *Bad things happened because of the desire to have more money and this paper is going to **argue** if it is money itself at fault here, or is it something else.* (E16 NNS introduction)

151) *It is widely **argued** that, even though most of the countries around the globe officially cherish democratic system and values, equality is not applied in practice at all.* (E65 NNS introduction)

152) *Some people **argue** that the knowledge which the students gain at the university is mostly theoretical and does not prepare them for the real world, which is why they consider the university degrees to be of very little value.* (E67 NNS introduction)

153) *Many **argue** that universities that do not equip and prepare their students for real life requirements related to their professions are of very little value.* (E96 NNS introduction)

Overall, the present findings indicated that the NS writers use interactional markers in the body paragraph (see Table 21), and engagement and self-mention markers across the whole essay structure significantly more frequently than the NNS writers.

On the whole, the present results regarding the distribution patterns of interactive metadiscourse indicated that the discrepancies between the NNS and NS corpora were evident in the more frequent use of interactive categories by the non-native speakers. On the other hand, the distribution patterns of interactional metadiscourse showed that the differences between the two corpora were more often the result of the more frequent use of interactional markers by the native speakers.

4.4.10 *Distribution of individual metadiscourse markers in the NNS and NS corpus*

This section focuses on the comparative findings with respect to the use of individual metadiscourse markers in the non-native and native speakers' corpus. Tables B1 – B5 in Appendix B and Table C1- C5 in Appendix C outline different items used to realize interactive and interactional metadiscourse functions in the NNS and NS corpora.

4.4.10.1 *Distribution of individual interactive metadiscourse makers*

A total of 28 types of code glosses were found in the NNS corpus. The list in Table B1 in Appendix B shows the rank of observed code glosses types based on the number of essays in which each type appeared. In the NNS corpus, *say* was the most frequent code gloss as it appeared in 49 essays. Three most frequent tokens in the category of code glosses found in the NNS corpus were *say* (*f*=87), *such as* (*f*=58) and parentheses *( )* (*f*=58). Most of the code glosses types were unevenly distributed (19 types) in the NNS corpus, with Juilland's *D* values ranging from 0.2 to 0.6, indicating a relatively high variation. However, 6 types of code glosses were fairly evenly distributed across individual essays with Juilland's *D* values ranging from 0.7 to 0.8 indicating a relatively low variation. Also, 3 code glosses types had a Juilland's *D* value of -0.01 thus lying outside the expected range (0-1) because they appeared only once in the NNS corpus.

Out of the 28 code glosses types observed in the NNS corpus, 6 did not appear in the NS corpus (i.e. *among other things, as a matter of fact, clarify, in that way, specifically,* and *what is more*). Among the 22 code glosses types found in the NS corpus, *say* was the most frequent one (46 essays), followed by parentheses *( )* (33 essays), and *such as* (28 essays). Three most frequent tokens in the category of code glosses in the NS corpus were parentheses *( )* (*f*=107), *say* (*f*=82) and *such as* (*f*=57). As for the dispersion, 9 code glosses types were fairly evenly distributed, with Juilland's *D* values ranging from 0.7 to 0.8, and 8 code glosses types were fairly unevenly distributed, with Juilland's *D* values ranging from 0.2 to 0.6. Juilland's *D* value of 5 markers appearing only once in the NS corpus was -0.01, thus lying outside the expected range (0-1).

Moreover, the analysis of the use of code glosses types per individual essay showed that some types were much more frequently used by the native than non-native speakers: parentheses *( )* (in 42 NS essays vs. 21 NNS essays), *i.e.* (in 12 NS essays vs. 7 NNS essays), *illustrate* (in 7 NS essays vs. 2 NNS essays), *indeed* (in 14 NS essays vs. 7 NNS essays), *in fact* (in 18 NS essays vs. 7 NNS essays). But there were code glosses types that were much more frequently used by the non-native than native speakers: *as such* (in 5 NNS essays vs. 1 NS essay), *for instance* (in 13 NNS essays vs. 6 NS essays), *in other words* (in 7 NNS essays vs. 2 NS essays), and *which means* (in 6 NNS essays vs. 1 NS essay). Also, there were differences between the two corpora in the token frequency of code glosses: *( )* (NS: *f*=107 vs. NNS: *f*=58), *in fact* (NS: *f*=23 vs. NNS: *f*=7). However, it was also observed that some tokens

were much more frequent in the NNS corpus than in the NS corpus: *for instance* (NNS: *f*=17 vs. NS: *f*=6), *in other words* (NNS: *f*=9 vs. NS: *f*=2), *which means* (NNS: *f*=8 vs. NS: *f*=1).

Only 7 types of endophoric markers were observed in the NNS corpus (see Table B2 in Appendix B). The most frequent ones were *X above* and *previously*, both appearing in 4 essays. The next most frequent endophoric marker type was *aforementioned*, occurring in 3 essays. The remaining 4 types occurred in only 1 essay. Juilland's *D* values ranged from 0.4 to 0.5 and indicated a relatively uneven distribution, that is, a high variation of endophoric markers. The 4 types appearing only once in the NNS corpus had the Juilland's *D* value -0.01 that lies outside the expected range (0-1).

Of the 7 types of endophoric markers found in the NNS corpus, 2 did not appear in the NS corpus (i.e. *aforementioned* and *in the introduction*). Of the 5 types of endophoric markers observed in the NS corpus, *X above* was the most frequent one: it appeared in 5 essays. The other two most frequent types were *X before* (3 essays) and *previously* (2 essays). As for the measure of dispersion, the results showed that endophoric markers were unevenly distributed with Juilland's *D* values ranging from 0.2 to 0.5, indicating high variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 2 items appearing only once in the NS corpus. The differences in the use of particular linguistic items used to realize metadiscourse functions were present but less noticeable. For example, the type *previously* appeared more frequently in the essays by the non-native speakers (in 4 NNS essays vs. 2 NS essays), but the opposite was observed for *X before* (in NS 3 essays vs. 1 NNS essay). The only more frequent token was *previously* which appeared 4 times in the NNS corpus, and only twice in the NS corpus.

Only one type of evidentials was observed in the NNS corpus: *according to* (see Table B3 in Appendix B). It occurred in 8 essays in the NNS corpus and 15 essays in the NS corpus. It occurred much more frequently, although not statistically significantly, in the NS corpus (NS: *f*=25 vs. NNS: *f*=9). Juilland's *D* values of 0.6 (in the NNS corpus) and 0.7 (in the NS corpus) indicated a fairly even distribution and low variation in both corpora.

As can be seen in Table B4 in Appendix B, there were differences in the distribution of individual frame markers between the two corpora. Out of 26 types of FM sequencing observed in the NNS corpus, *firstly* and *secondly* were the two most frequent types, each appearing in 16 essays. The third most frequent type was *another X*, appearing in 14 essays. The token frequency indicates the number of times FM sequencing markers appeared in the NNS corpus: *firstly* (*f*=18), *secondly* and *another X* (*f*=16) were the three most frequent ones. Among sequencing markers, 14 types were unevenly distributed in the NNS corpus, with Juilland's *D*

values ranging from 0.2 to 0.6 indicating a relatively high variation. However, 5 types were evenly distributed, with Juilland's *D* values ranging from 0.7 to 0.8 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 7 types appearing only once in the NNS corpus.

Out of the 26 types of sequencing markers observed in the NNS corpus, 12 did not appear in the NS corpus (i.e. *add, at last, further x, initially, on top of that, second of all, the next X, third, to begin, to begin with, to continue, to start with,* and *the following*). Among the 14 types found in the NS corpus, *another X* was the most frequent one, appearing in 28 essays, followed by *first* (14 essays) and *then* (12 essays). Three most frequent tokens in the NS corpus were: *another X* (*f*=39), *first* (*f*=15) and *then* (*f*=13). As for the dispersion, 4 types were unevenly distributed, with Juilland's *D* values ranging from 0.2 to 0.6 indicating a relatively high variation. However, 5 types were unevenly distributed, with Juilland's *D* values ranging from 0.7 to 0.8 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 4 types appearing only once in the NS corpus.

In addition, the analysis of the use of FM sequencing types per individual essay showed that some types were much more frequent in the NNS corpus: *finally* (in 11 NNS essays vs. 4 NS essays), *first of all* (in 7 NNS essays vs. 1 NS essay), *secondly* (in 16 NNS essays vs. 7 NS essays). However, there were FM sequencing types that were more frequent in the NS corpus: *another X* (in 28 NS essays vs. 16 NNS essays), *one of the X* (in 11 NS essays vs. 3 NNS essays), *then* (in 12 NS essays vs. 6 NNS essays). Also, there were differences between the two corpora in the token frequency of FM sequencing: *first of all* (NNS: *f*=8 vs. NS: *f*=2), *finally* (NNS: *f*=11 vs. NS: *f*=4), *secondly* (NNS: *f*=16 vs. NS: *f*=7). However, some tokens were much more frequent in the NS corpus: *another X* (NS: *f*=39 vs. NNS: *f*=16), *one of the X* (NS: *f*=12 vs. NNS: *f*=4), *then* (NS: *f*=13 vs. NNS: *f*=7).

Out of 13 types of FM label stages observed in the NNS corpus, *to conclude* was the most frequent as it appeared in 25 essays. The other two most frequent types were *in conclusion* (23 essays) and *to sum up* (13 essays). Three most frequent tokens in the NNS corpus were *to conclude* (*f*=25), *in conclusion* (*f*=23), *to sum up* and *all in all* (*f*=13). Among FM label stages, 2 types were unevenly distributed, with Juilland's *D* values 0.5 and 0.6 indicating a high variation. However, 4 types were evenly distributed, with Juilland's *D* values ranging from 0.7 to 0.8 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 7 types appearing only once in the NNS corpus.

Out of 13 types of label stages markers observed in the NNS corpus, 6 did not appear in the NS corpus (i.e. *all in all, so far, to summarize, to sum up, to wrap it all up, with that*

said). Among the 7 types found in the NS corpus, *in conclusion* was the most frequent one, appearing in 9 essays, followed by *to conclude* (4 essays), *in the end* and *in short* both appearing in 3 essays. Three most frequent tokens in the NS corpus were: *in conclusion* (*f*=9), *to conclude* (*f*=4), *in the end* and *in short* (*f*=3). As for the dispersion, all label stages types were unevenly distributed in the NS corpus, with Juilland's *D* values ranging from 0.2 to 0.6 indicating a relatively high variation. There was no Juilland's *D* value lying outside the expected range (0-1) meaning that all observed types appeared more than once in the NS corpus.

Additionally, the analysis of the use of FM label stages types per individual essay showed that some types were much more frequent in the NNS corpus: *to conclude* (in 25 NNS essays vs. 4 NS essays) and *in conclusion* (in 23 NNS essays vs. 9 NS essay). Also, there were differences between the two corpora in the token frequency of FM label stages: *to conclude* (NNS: *f*=25 vs. NS: *f*=5) and *in conclusion* (NNS: *f*=23 vs. NS: *f*=9).

Out of 12 types of FM announce goals observed in the NNS corpus *this essay* was the most frequent type appearing in 15 essays, followed by *be discussed* (10 essays) and *in this essay* (7 essays). The token frequency indicates the number of times FM announce goals appeared in the NNS corpus: *this essay* (*f*=16), *be discussed* (*f*=11), *in this essay* (*f*=7). Among announce goals markers, 6 types were unevenly distributed in the NNS corpus, with Juilland's *D* values ranging from 0.2 to 0.6 indicating a relatively high variation. However, 1 type was evenly distributed, with Juilland's *D* value 0.7 indicating a low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of the 5 types appearing only once in the NNS corpus.

Out of 12 types of announce goals markers observed in the NNS corpus, 8 did not appear in the NS corpus (i.e. *going to argue, in the main part of the essay, this paper, the aim of this essay/paper, talk about, refer to, be discussed, as counter arguments*). Among 4 types found in the NS corpus, *answer* and *this essay* were the most frequent types both appearing in 3 essays, followed by *would like to* appearing in 2 essays and *in this essay* in 1 essay. Three most frequent tokens in the NS corpus were: *would like to* (*f*=4), *answer* and *this essay* (*f*=3). As for the dispersion, all announce goals markers were unevenly distributed in the NS corpus with Juilland's *D* values ranging from 0.2 to 0.4 indicating a relatively high variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of one observed type that appeared only once in the NS corpus.

Moreover, the analysis of the use of FM announce goals types per individual essay showed that some types were much more frequent in the NNS corpus: *this essay* (in 15 NNS essays vs. 3 NS essays) and *in this essay* (in 7 NNS essays vs. 1 NS essay). Also, there were

differences between the two corpora in the token frequency of FM announce goals: *this essay* (NNS: *f*=15 vs. NS: *f*=3) and *in this essay* (NNS: *f*=7 vs. NS: *f*=1).

Out of 10 types of FM shift topic observed in the NNS corpus, *in contrast* was the most frequent type appearing in 3 essays, followed by *now* and *regarding* both appearing in 2 essays. The other shift topic types appeared in only 1 essay. Three most frequent tokens found in the NNS corpus were: *in contrast, now* and *regarding* (*f*=3). Out of 10 shift topic types, 7 appeared only once in the NNS corpus, with Juilland's *D* value -0.01 that lies outside the expected range (0-1). The other 3 types were unevenly distributed in the NNS corpus with Juilland's *D* values ranging from 0.2 to 0.4 indicating a relatively high variation.

Out of 10 shift topic types found in the NNS corpus, only 2 were found in the NS corpus (i.e. *now* and *this brings us to*). *Now* was the most frequent type appearing in 8 essays followed by *this brings us to* appearing in only 1 essay. The most frequent token in the NS corpus was *now* (*f*=8). As for the dispersion, *now* was unevenly distributed in the NS corpus, with Juilland's *D* value 0.6 indicating a relatively high variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 1 observed type that appeared only once in the NS corpus.

Furthermore, the analysis of the use of shift topic types per individual essay showed that *now* was more frequent in the NS corpus: *now* (in 8 NS essays vs. 2 NNS essays). Also, token *now* was more frequent in the NS corpus: (NS: *f*=8 vs. NS: *f*=3).

The list of observed transition markers is given in Table B5 (in Appendix 4). Out of 53 types of transition markers found in the NNS corpus, *and* was the most frequent one: it appeared in 95 essays. The other two most frequent types were *but* (88 essays) and *because* (78 essays). Three most frequent tokens in the NNS corpus were *and* (*f*=488), *but* (*f*=358) and *because* (*f*=225). As for the dispersion, 20 types were unevenly distributed: their Juilland's *D* values ranged from 0.2 to 0.6 indicating a relatively high variation. However, 20 transition markers types in the NNS corpus were evenly distributed and their Juilland's *D* values ranged from 0.7 to 0.8 indicating a relatively low variation. Also, Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 13 types appearing only once in the NNS corpus.

Out of 53 types of transition markers, 11 did not appear in the NS corpus (i.e. *additionally, contrarily, conversely, ergo, for that reason, further, in contrast, nonetheless, notwithstanding, other than that, then again*). Among the 42 types found in the NS corpus, *and* was the most frequent one appearing in 94 essays, followed by *but* (87 essays) and *also* (76 essays). Three most frequent tokens in the category of transition markers in the NS corpus were

and (*f*=453), *but* (*f*=269) and *also* (*f*=206). As for the dispersion, 20 types were unevenly distributed, with Juilland's *D* values ranging from 0.2 to 0.6 indicating a relatively high variation. However, 17 types were evenly distributed with Juilland's *D* values ranging from 0.7 to 0.8 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 6 types appearing only once in the NS corpus.

In addition, the analysis of the use of transition markers types per individual essay showed that some types were much more frequently used by the non-native than native speakers: *even though* (in 31 NNS essays vs. 6 NS essays), *furthermore* (in 41 NNS essays vs. 2 NS essays), *moreover* (in 33 NNS essays vs. 2 NS essays), *on the other hand* (in 57 NNS essays vs. 11 NS essays), *while* (in 42 NNS essays vs. 15 NS essays). Also, it was observed that some tokens were much more frequent in the NNS corpus than in the NS corpus: *even though* (NNS: *f*=48; vs. NS: *f*=9), *because* (NNS: *f*=225 vs. NS: *f*=133), *but* (NNS: *f*=358 vs. NS: *f*=269), *furthermore* (NNS: *f*=54 vs. NS: *f*=2), *moreover* (NNS: *f*=38 vs. NS: *f*=3), *on the other hand* (NNS: *f*=64 vs. NS: *f*=12), *while* (NNS: *f*=69 vs. NS: *f*=21).

4.4.10.2 *Distribution of individual interactional metadiscourse markers*

The list in Table C1 in Appendix C shows a total of 33 types of attitude markers found in the NNS corpus and the rank of observed attitude markers types based on the number of essays in which each type appeared. In the NNS corpus, *main X* was the most frequent type as it appeared in 25 essays. Three most frequent tokens in the category of attitude markers found in the NNS corpus were *main X* (*f*=32), *important* (*f*=26) and *agree* (*f*=11). Most of the attitude markers types were unevenly distributed (13 types) in the NNS corpus with Juilland's *D* values ranging from 0.2 to 0.6 indicating a relatively high variation. However, 2 types were fairly evenly distributed with Juilland's *D* values ranging from 0.7 to 0.8 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 18 types appearing only once in the NNS corpus.

Out of 33 types of attitude markers observed in the NNS corpus, 11 did not appear in the NS corpus (i.e. *be inclined to, good, inclined to X, judging by, subject to, luckily, popular, preferable, striking, unusual, usual*). Among 22 types of attitude markers found in the NS corpus, *important* was the most frequent type appearing in 15 essays, followed by *main X* (13 essays) and *agree* (12 essays). Three most frequent tokens in the NS corpus were *important* (*f*=22), *main X* (*f*=20) and *agree* (*f*=15). As for the measure of dispersion, most of the attitude markers types (21 types) were unevenly distributed in the NS corpus, with Juilland's *D* value

ranging from 0.2 to 0.6 indicating a high variation. However, 10 types were evenly distributed, with Juilland's *D* value 0.7 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 12 attitude markers appearing only once in the NS corpus.

Moreover, the analysis of the use of attitude markers types per individual essay showed that one type was much more frequent in the NNS corpus than in the NS corpus: *main X* (in 25 NNS essays vs. 13 NS essays). It was also observed that one token was much more frequent in the NNS corpus than in the NS corpus: *main X* (NNS: *f*=32 vs. NS: *f*=20).

A total of 43 types of boosters were found in the NNS corpus (see Table C2 in Appendix C). In the NNS corpus, *always* was the most frequent type appearing in 43 essays. The other most frequent types were *never* (28 essays) and *actually* (27 essays). Three most frequent tokens in the NNS corpus were *always* (*f*=78), *never* (*f*=47) and *actually* (*f*=38). Most of the boosters types were unevenly distributed (21 types) in the NNS corpus, with Juilland's *D* values ranging from 0.2 to 0.6 indicating a relatively high variation. However, 10 types were fairly evenly distributed with Juilland's *D* values ranging from 0.7 to 0.8 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 12 types appearing only once in the NNS corpus.

Out of 43 types of boosters observed in the NNS corpus, 8 did not appear in the NS corpus (i.e. *bet, establish, indisputably, realize, showcase, to a certain degree, undeniable, undeniably, unquestionable*). Among 35 types of boosters found in the NS corpus, *believe* was the most frequent type appearing in 42 essays. The other two most frequent types were *show* (22 essays) and *of course* (20 essays). Three most frequent tokens in the NS corpus were *believe* (*f*=66), *show* (*f*=38) and *always* (*f*=28). As for the measure of dispersion, the results indicated that boosters were fairly unevenly (19 types) distributed, with Juilland's *D* value ranging from 0.1 (signifying a very uneven distribution) to 0.6 indicating a high variation. However, 12 types were evenly distributed with Juilland's *D* value ranging from 0.7 to 0.8 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 3 types appearing only once in the NS corpus.

Moreover, some types were much more frequently used by the non-native than native speakers: *actually* (in 27 NNS essays vs. 12 NS essays), *always* (in 43 NNS essays vs. 19 NS essays), *definitely* (in 8 NNS essays vs. 2 NS essays), *never* (in 28 NNS essays vs. 10 NS essays) and *think* (in 24 NNS essays vs. 2 NS essays). However, some types were much more frequently used by the native than non-native speakers: *believe* (in 42 NS essays vs. 13 NNS essays), *clearly* (in 9 NS essays vs. 4 NNS essays), *evidence* (in 10 NS essays vs. 1 NNS essay),

find (in 10 NS essay vs. 3 NNS essays), *in fact* (in 18 NS essays vs. 5 NNS essays), and *must* (in 7 NS essays vs. 2 NNS essays). Additionally, some tokens were much more frequent in the NNS corpus than in the NS corpus: *actually* (NNS: *f*=38 vs. NS: *f*=14), *always* (NNS: *f*=78 vs. NS: *f*=28), *definitely* (NNS: *f*=11 vs. NS: *f*=2), *never* (NNS: *f*=47 vs. NS: *f*=10) and *think* (NNS: *f*=336 vs. NS: *f*=6). However, some tokens were more frequent in the NS corpus than in the NNS corpus: *believe* (NS: *f*=66 vs. NNS: *f*=17), *certainly* (NS: *f*=21 vs. NNS: *f*=11), *clearly* (NS: *f*=10 vs. NNS: *f*=4), *evidence* (NS: *f*=13 vs. NNS: *f*=1), *find* (NS: *f*=10 vs. NNS: *f*=3), *in fact* (NS: *f*=17 vs. NNS: *f*=5), *must* (NS: *f*=11 vs. NNS: *f*=2), *show* (NS: *f*=38 vs. NNS: *f*=19), and *sure* (NS: *f*=12 vs. NNS: *f*=6).

Out of 21 types of engagement markers found in the NNS corpus (see Table C3 in Appendix C), *one* was the most frequent type appearing in 13 essays. The other two frequent types were *apply* (8 essays) and *see* (7 essays). Three most frequent tokens in the NNS corpus were *one* (*f*=17), *apply* and *we* (*f*=9). All engagement markers types were unevenly distributed (14 types) in the NNS corpus, with Juilland's *D* values ranging from 0.2 to 0.6 indicating a relatively high variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 7 types that appeared only once in the NNS corpus.

Out of 21 types of engagement markers observed in the NNS corpus, 4 did not appear in the NS corpus (*choose, let's, need to, take a look*). In the NS corpus, *analyze* was the most frequent type appearing in 21 essays, followed by *one* (11 essays) and *you* (9 essays). Three most frequent tokens in the NS corpus were *analyze* (*f*=31), *you* (*f*=22), and *one* (*f*=13). As for the measure of dispersion, the results indicated that engagement markers were fairly unevenly (14 types) distributed, with Juilland's *D* value ranging from 0.2 to 0.6 indicating a high variation, except for *analyze,* which was evenly distributed with Juilland's *D* value 0.7 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 2 types appearing only once in the NS corpus.

Moreover, one engagement markers type was much more frequent in the NNS corpus than in the NS corpus: *apply* (in 8 NNS essays vs. 4 NS essays). However, some types were much more frequent in the NS corpus than in the NNS corpus: *analyze* (in 21 NS essays; vs. 3 NNS essays), *consider* (in 7 NS essays vs. 2 NNS essays), *must* (in 7 NS essays vs. 2 NNS essays), *should* (in 7 NS essays vs. 2 NNS essays), *you* (in 9 NS essays vs.1 NNS essay). In addition, some tokens were more frequent in the NNS corpus than in the NS corpus: *apply* (NNS: *f*=9 vs. NS: *f*=4), *us* (NNS: *f*=4 vs. NS: *f*=2), *we* (NNS: *f*=9 vs. NS: *f*=3). However, some tokens were more frequent in the NS corpus than in the NNS corpus: *analyze* (NS: *f*=31 vs.

NNS: *f*=3), *consider* (NS: *f*=14 vs. NNS: *f*=3), *look at* (NS: *f*=7 vs. NNS: *f*=4), *must* (NS: *f*=10 vs. NNS: *f*=2), *should* (NS: *f*=8 vs. NNS: *f*=2), *you* (NS: *f*=22 vs. NNS: *f*=2).

A total of 51 types of hedges were found in the NNS corpus (see Table C4 in Appendix C). In the NNS corpus, *would* was the most frequent type appearing in 71 essays. The other two most frequent types were *often* (45 essays) and *may* (30 essays). Three most frequent tokens in the NNS corpus were *would* (*f*=207), *often* (*f*=83) and *may* (*f*=30). As for the dispersion, 21 types of hedges were unevenly distributed in the NNS corpus, with Juilland's *D* values ranging from 0.2 to 0.6 indicating a relatively high variation. However, 17 types of hedges were evenly distributed, with Juilland's *D* values ranging from 0.7 to 0.8 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 13 types appearing only once in the NNS corpus.

Out of 44 types of hedges observed in the NNS corpus, 7 did not appear in the NS corpus (i.e. *certain amount, certain level of, from my perspective, indicate, ought, presumably, relatively*). In the NNS corpus, *would* was the most frequent type appearing in 74 essays, followed by *may* (60 essays) and *could* (55 essays). Three most frequent tokens in the NS corpus were *would* (*f*=335), *may* (*f*=144) and *could* (*f*=105). Most of the hedges types were unevenly distributed (27 types) in the NS corpus, with Juilland's *D* values ranging from 0.2 to 0.6 indicating a high variation. However, 10 types were evenly distributed, with Juilland's *D* values ranging from 0.7 to 0.8 indicating a relatively low variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 7 types that appeared only once in the NS corpus.

Furthermore, some hedges types were more frequently used by the non-native than native speakers: *in general* (in 20 NNS essays vs. 7 NS essays), *in most cases* (in 7 NNS essays vs. 2 NS essays), *in my opinion* (in 27 NNS essays vs. 6 NS essays), *largely* (in 5 NNS essays vs. 1 NS essay), *often* (in 45 NNS essays vs. 7 NS essays), *seem* (in 21 NNS essays vs. 5 NS essays), *should* (in 11 NNS essays vs. 2 NS essays), *sometimes* (in 17 NNS essays vs. 1 NS essay), *tend to* (in 15 NNS essays vs. 5 NS essays) and *usually* (in 21 NNS essays vs. 10 NS essays). However, some types were more frequently used by the native than non-native speakers: *appear* (in 11 NS essays vs. 2 NNS essays), *could* (in 54 NS essays vs. 15 NNS essays), *in some cases* (in 6 NS essays vs. 3 NNS essays), *likely* (in 15 NS essays vs. 8 NNS essays), *may* (in 60 NS essays vs. 30 NNS essays) and *suggest* (in 6 NS essays vs. 1 NNS essay). Additionally, some tokens were more frequent in the NNS corpus than in the NS corpus: *assume* (NNS: *f*=4 vs. NS: *f*=2), *frequently* (NNS: *f*=7 vs. NS: *f*=3), *in general* (NNS: *f*=30 vs. NS: *f*=8), *in most cases* (NNS: *f*=9 vs. NS: *f*=2), *in my opinion* (NNS: *f*=28 vs. NS: *f*=8), *largely*

(NNS: *f*=5 vs. NS: *f*=1), *might* (NNS: *f*=50 vs. NS: *f*=23), *mostly* (NNS: *f*=20 vs. NS: *f*=2), *often* (NNS: *f*=83 vs. NS: *f*=7), *seem* (NNS: *f*=37 vs. NS: *f*=6), *should* (NNS: *f*=13 vs. NS: *f*=2), *sometimes* (NNS: *f*=24 vs. NS: *f*=1), *supposed to* (NNS: *f*=8 vs. NS: *f*=4), *tend to* (NNS: *f*=20 vs. NS: *f*=6) and *usually* (NNS: *f*=25 vs. NS: *f*=14). However, some tokens were more frequent in the NS corpus than in the NNS corpus: *appear* (NS: *f*=11 vs. NNS: *f*=2), *could* (NS: *f*=105 vs. NNS: *f*=211), *in some cases* (NS: *f*=6 vs. NNS: *f*=3), *likely* (NS: *f*=20 vs. NNS: *f*=10), *may* (NS: *f*=144 vs. NNS: *f*=55), *perhaps* (NS: *f*=23 vs. NNS: *f*=3), *quite* (NS: *f*=13 vs. NNS: *f*=4), *somewhat* (NS: *f*=6 vs. NNS: *f*=2), *suggest* (NS: *f*=7 vs. NNS: *f*=1) and *would* (NS: *f*=335 vs. NNS: *f*=207).

Out of 4 types of self-mention markers observed in the NNS corpus (see Table C5 in Appendix C), *I* was the most frequent self-mention type appearing in 43 essays. The other two most frequent types were *my* (40 essays) and *me* (4 essays). Three most frequent tokens in the NNS corpus were *I* (*f*=90), *my* (*f*=56), and *me* (*f*=5). In the NNS corpus, 2 self-mention types were evenly distributed, with Juilland's *D* value 0.8 indicating a low variation. One type was unevenly distributed, with Juilland's *D* value 0. 4 indicating a high variation. Juilland's *D* value -0.01 that lies outside the expected range (0-1) was the value of 1 type that appeared only once in the NNS corpus.

Out of 4 types of self-mention types observed in the NNS corpus, only 1 did not appear in the NS corpus (i.e. *we*). In the NS corpus *I* was the most frequent type appearing in 65 essays. The other two most frequent types were *my* (22 essays) and *me* (8 essays). The most frequent token in the NS corpus was *I* (*f*=256), followed by *my* (*f*=37), and *me* (*f*=13). As for the dispersion, 2 types were evenly (2 types) distributed in the NS corpus, with Juilland's *D* values ranging from 0.7 to 0.8 indicating a low variation. One type was unevenly distributed, with Juilland's *D* value 0.4 indicating a high variation.

Moreover, there were differences between all observed self-mention types in the NS and NNS corpus. *My* was much more frequently used by the non-native than native speakers: *my* (in 40 NNS essays vs. 22 NS essays). However, *I* (in 65 NS essays vs. 43 NNS essays), and *me* (in 8 NS essays vs. 4 NNS essays) were much more frequently used by the native than non-native speakers. Additionally, there were differences between the two corpora in the token frequency of self-mention: *my* (NNS: *f*=56 vs. NS: *f*=37) was more frequent in the NNS corpus than in the NS corpus. However, *I* (NS: *f*=256 vs. NNS: *f*=90) and *me* (NS: *f*=13 vs. NNS: *f*=5) were more frequent in the NS corpus than in the NNS corpus.

4.4.10.3 *Discussion of the NNS and NS corpus findings for the distribution of individual interactive and interactional metadiscourse markers*

The discrepancy in the overall findings between the NNS and NS corpora was much more noticeable at the level of particular linguistic items used to realize metadiscourse functions. While the non-native writers used a total of 303 different metadiscourse markers, the native speakers used 216 different metadiscourse markers in their essays. In addition, the NNS writers used 151 different interactive, and 152 different interactional markers in comparison to the NS writers who used 96 different interactive, and 120 different interactional markers. Moreover, 52 different metadiscourse markers found in the NNS corpus were not found in the NS corpus. The observed similarities and differences in Juilland's D values between the individual metadiscourse markers in the two corpora indicate that specific metadiscourse markers were differently distributed (see Tables B1-B5 in Appendix B and C1-C5 in Appendix C).

Firstly, the comparison of the frequencies of the three most frequent individual code glosses in the NNS and NS corpus pointed to both differences and similarities. For example, among the highest frequency items in both corpora were *such as, for example*, and various forms of the verb *say*, as well as parentheses *( )*. Examples 154 to 159 illustrate their use in both corpora.

154) *Next, in some cultures,* ***such as*** *American, earning money is connected with hard work and success.* (E71 NNS)

155) *Several countries tried to erase the social differences between people,* ***for example*** *the programme in the United States, which helped homeless people get a job and finance a small apartment, so that in a way, they could be equal to everyone else by owning a home*. (E35 NNS)

156) *However, some people* ***say*** *that the rapid change to a highly efficient, industrialised and technologically sophisticated society has had also a negative effect on our mental well-being.* (E31 NNS)

157) *These people tended to be those whose ideas and actions the general public are expected to follow;* ***such as*** *church leaders, or members of Parliament.* (NAT LOT 3 NS)

158) *I would consider it difficult for a scientist to shoulder the responsibility for his or her work, if his discoveries were implemented by others,* ***for example****, could Einstein, one of the greatest scientists of the 20th century, be held responsible for the development of the atom bomb, or more recently, the catastrophes at three-mile island or at Chernobyl.* (GEN M 8 NS)

159) *It goes without saying that they would want to take advantage of,* ***say****, better trade agreements between countries, cheaper holidays etc., but I cannot envisage a mass exodus across the Channel.* (EU 18 NS)

Code glosses seem to have been most frequently used by student writers in the present study to supply additional information by either providing examples or elaborating on and rephrasing a statement to help the readers understand the main ideas of a text. This corroborates the previous findings (e.g. Huh & Lee, 2016). The present results are also in line with the previous findings which showed that *such as* and *for example* were the two extensively employed code glosses in argumentative writing (Anwardeen et al., 2013). Similarly, Aull and Lancaster (2014) found that novice writers were able to properly support their propositions with examples. However, they encountered difficulties in effectively indicating the important and intricate aspects of the text. The most frequent metadiscourse markers in the present study seem to reveal the same tendency for both the native and non-native writers. What particularly stands out at the level of particular linguistic items used to realize metadiscourse functions is the difference in the frequency of certain items in each category of metadiscourse markers between the two corpora. In the category of code glosses, this discrepancy was the most noticeable in the use of parentheses *( )* – it was the most frequent code gloss in the NS corpus, appearing twice as frequently in the NS corpus than in the NNS corpus – and the use of *in fact* which was used by the native speakers three times more frequently than by the non-native speakers. These differences were evident in both the type and token figures for the NS corpus. Examples 160 to 163 illustrate the use of these two items in both corpora.

160) *Although, there are plans to create computers which can programme themselves, **(**which I, personally, feel is a very dangerous idea**)** the human brain still very much controls the computer and still the ability to end the existence of computers at any given moment; thankfully, a power computers do not have over humans.* (TECH 4 NS)

161) ***In fact**, many of the ills of society in the U.S. today have been traced by study after study to the lack of firm guidance and support from the family.* (ICLE 50 NS)

162) *Also, studying at a university can bring you different student benefits and free schooling **(**depending on a country's educational system and your prior academic success**)**.* (E80 NNS)

163) ***In fact**, it is not that rare to find a university graduate sitting at home jobless or working at a store or some other workplace for which they are overeducated.* (E67 NNS)

Secondly, the findings indicated a very low frequency of endophoric markers in both corpora (see Table B2 in Appendix B). The highest frequency of endophoric markers in both

corpora were observed for *X above, X before* and *previously.* Examples 164 to 169 illustrate their use by the NNS and NS writers.

164) *As it is mentioned **above**, many people claim that technology is destroying dreaming and imagination.* (E84 NNS)
165) *And, while in most cases this is true, one overlooked detail keeps popping up, and I have mentioned it **before**; the governments even in these times were chosen by the people in most cases, and were supported by a vast majority in most cases.* (E34 NNS)
166) *Secondly, a concrete example should be given in order to support **previously** stated facts.* (E83 NNS)
167) *As the article **above** states couples who are desperate to have a child use the father's genetic inheritance and not the mothers.* (ICLE 9 NS)
168) *Since I was twelve, I had an intense desire to learn Spanish, and because of these circumstances, that I mentioned **before**, I had no choice but to wait until I was twenty years old to even begin to learn this language.* (ICLE 85 NS)
169) *As mentioned **previously**, one of the main claims of the advocates of capital punishment focuses on the idea of the death penalty acting as a deterrent.* (ICLE 3NS)

In line with the previous research (e.g. Kobayashi, 2016), the present findings showed that, similarly to Chinese learners who used endophoric markers *above* and *below* the most frequently, both the native and non-native students used endophoric markers, such as *X above, X before,* and *previously* to support their arguments by referring to other parts of the text. As seen from Table B2 in Appendix B, both the NNS and NS writings exhibited a limited use of endophoric markers. Students' limited use of these markers was also observed in Huh and Lee's (2016) study. Alternatively, as already mentioned in Section 4.3.3, it may have been the consequence of the task, that is the required number of words in the essays, which might have rendered directing readers to different parts of the text unnecessary.

Thirdly, only one type of evidentials (i.e. *according to*) was found in the NNS corpus. Due to the partial (or one-way) contrastive interlanguage analysis, the NS corpus was not mined for other evidentials. Still, *according to* was used by the native speakers twice as frequently as non-native speakers, as indicated by both the type and token figures. Overall, as seen in their limited use of evidentials (see Table B3 in Appendix B), the NNS students were far less willing than the NS students to use information from other parts of the text or from other texts. Examples 170 to 175 illustrate the use of *according to* in the NNS and NS corpus.

170) ***According to*** *Katha Poilit a poet in her article the "Smurfette principle", preschool culture also has to change as it exemplifies the male and female ideal roles.* (ICLE 124 NS)

171) ***According to*** *the book Desegregation and Beyond, the climate that classroom teachers structure is very important in allowing young people to feel secure and to feel the need to achieve in the classroom.* (ICLE7 NS)

172) *"There are no obvious personality defects among those who use the drug on occasion",* ***according to*** *Psychology and You, by McMahon and Romano.* (ICLE 172 NS)

173) ***According to*** *a Time article, the screen-time children are exposed to even comes at the expanse of their imagination.* (E90 NNS)

174) ***According to*** *that logic, the best life was in caves, where our ancestors were covered with animal skin while they were hunting other animals in order to eat them and survive, like monkeys.* (E65 NNS)

175) *Firstly,* ***according to*** *the rights given to every human being, all human beings are equal in front of the law; when it comes to the educational system and the medical care system.* (E52 NNS)

The limited use of evidentials in the NNS writing and students' reliance on their personal projection in providing support for their arguments is not surprising given the fact that, on one hand, the writing task was an opinion-based type of writing in which they had to express their opinion and give supporting arguments, and on the other, even though they were given the permission to research the topic and gather the necessary information, they were not supposed to refer to sources. In this respect, it is worth noting that example 173 was the only instance of use of *according to* to refer to other texts in the NNS corpus. This is in line with the previous research reporting that evidential markers were rarely observed in student writings (Huh & Lee, 2016).

With respect to individual frame markers belonging to different frame markers subcategories, they exhibited different distributional patterns. The most frequently used FM sequencing in both corpora were *another X, firstly, first, secondly* and *then*. This is in line with the previous research indicating that prevalent types of FM sequencing in argumentative writing were *first, firstly* and *then* (Anwardeen et al., 2013). Moreover, the present findings showed that the non-native speakers tended to opt for such frame markers that show importance of an idea or an order of sequence. Thus, among the most frequent sequencing markers in the NNS corpus were *first* and *secondly* which were used twice as frequently in the NNS corpus than in the NS corpus. The same was observed with respect to the number of essays in which they occurred (see Table B4 in Appendix B). This indicates that a feature of this study's non-native writers is excessive use of a small set of ordinal numbers, which is in line with the

previous findings (Park & Oh, 2018; Pavičić Takač & Vakanjac Ivezić, 2019). Park and Oh (2018) attributed this inappropriate use of the items *first* and *second* to ineffective learning of frame markers in L2 writing. One of the most noticeable differences between the two corpora was the frequency of the use of *another X*: it was used twice as frequently in the NS corpus. Examples 176 to 185 illustrate the use of FM sequencing markers in the two corpora.

176) ***Another point*** *that will be discussed is that college helps people mature and become independent; therefore, it prepares them for the real world and is not of very little value.* (E13 NNS)
177) ***Firstly****, it is widely known that science and technology use pure facts as their arguments for everything.* (E37 NNS)
178) *The* ***first reason*** *why people call money 'the root of all evil' is because it is not equally distributed.* (E41 NNS)
179) ***Secondly****, women and men are promoted as competitors with equal chances and opportunities to acquire a specific promotion at work or simply to have equal chances for potential employment.* (E52 NNS)
180) ***Then****, it is not the competences which one has by a degree that matter.* (E68 NNS)
181) ***Another disadvantage*** *of a single Europe would be the coalition of certain aspects of the culture of individual members which may seem completely abhorrent to some or all of the other members.* (EU3 NS)
182) ***Firstly****, I would like to take the medical viewpoint.* (BOX10 NS)
183) *The* ***first claim*** *of supporters is that they are under the opinion that it is much more expensive to keep a convicted criminal in prison for life than to simply pull their plug.* (ICLE 169 NS)
184) ***Secondly****, educational levels in the developed world have also changed drastically with the technological revolution of the computer.* (TECH 10 NS)
185) ***Then****, when criminals do get sentenced to death, they end up waiting in a jammed up system.* (ICLE 16 NS)

The three most frequently used FM label stages were *to conclude, in conclusion, to sum up* and *all in all* in the NNS corpus, and *in conclusion, to conclude, in the end* and *in short* in the NS corpus. Examples 186 to 193 illustrate their use in the two corpora.

186) ***To conclude****, I belong to the group of people who believe that university degrees are not of a little value.* (E97 NNS)
187) ***In conclusion****, money is the main reason for social inequality, but it is also necessary for basic social needs.* (E75 NNS)

188) ***To sum up****, though technological advancements contribute to humans distancing themselves from their core qualities, among them creativity, it is also true that that these very advancements enabled humans to have more free time which can be spent however each individual decides to spend it.* (E56 NNS)

189) ***All in all*** *equality has moved forward since Orwell's Animal Farm, but there is a huge number of instances that can be listed and that can prove that civilization has not progressed as it should have regarding that issue.* (E6 NNS)

190) ***In conclusion****, I feel I have given significant reasons and statistics to revoke the main arguments for the support of capital punishment.* (ICLE 169 NS)

191) ***To conclude****, I would like to weigh up both sides of the argument.* (BOX10 NS)

192) ***In the end****, most physicians share a common belief about this controversial drug.* (ICLE 12)

193) ***In short****, because no data shows that prayer actually causes a better educational or social environment there is no reason to allow for its inclusion into the public school.* (ICLE 22 NS)

The FM label stages *in conclusion*, used to indicate the ending or summary of the writing, is a popular choice in L2 writing (Anwardeen et al., 2013). In contrast to Anwardeen's et al. (2013) study, which showed that learners preferred using *in conclusion* to *to conclude, to sum up, in sum* and *in summary,* the present results showed that the NNS writers used both *in conclusion* and *to conclude* twice as frequently than all other FM label stages; and twice as frequently as the NS writers. This corroborates the findings of the previous studies indicating that one of the characteristics of L2 writers' use of frame markers is the tendency to adopt specific expressions, such as *(to) conclude,* which they consistently employ to express certain functions (cf. Pavičić Takač, 2018). Present findings, again, indicated that the NNS writers exhibited mechanical, excessive use of a limited number of frame markers. But the non-native speakers used *to conclude* five times as frequently as the native speakers in respect to both the number of essays in which it was used and its overall frequency in the NNS corpus. Moreover, *in conclusion* was twice as frequently used by the non-native speakers than by the native speakers. Another difference between the two corpora was observed in the use of *to sum up* which was used in 13 % of the essays in the NNS corpus and was not used in the NS corpus at all (see Table B4 in Appendix B).

Differences between the non-native and native speakers were found in the use of FM announce goals and FM shift topic (see Table B4 in Appendix B). The most frequently used FM announce goals in the NNS corpus were *be discussed, in this essay,* and *this essay.* However, out of 12 types of announce goals markers observed in the NNS corpus, only four markers were found in the NS corpus: *answer, in this essay, this essay* and *would like to.* The

use of the most frequent FM announce goals in both corpora is illustrated in the following examples (194 to 199).

194) *The main problem that **will be discussed** through this paper is that college programs are based on theoretical knowledge which, without practical knowledge, does not prepare students for the real world.* (E13 NNS)
195) ***In this essay** I will examine the socio-economical area, but also integrate some other factors from different areas that may prove vital.* (E54 NNS)
196) ***This essay** will deal with the topic of domination of the science, technology and industrialisation and it will prove that, when one becomes aware of its surroundings, he becomes able to change it and to become the master of his life, even after his power and childlike nature have been suppressed for years.* (E81 NNS)
197) *The obvious **answer** may be to ignore sexual orientation and label it as irrelevant as James M. Wall does in, "A matter of civil rights", an article appearing in the Christian Century, allow homosexuals in the military.* (ICLE13 NS)
198) *The focus of **this essay** is to analyze the conflicting arguments concerning the death penalty and to show how the value of human life is affected by these arguments.* (ICLE3 NS)
199) *Of course there have been numerous inventions and discoveries of the 20 century that have significantly impacted the lives of people everywhere; however, I **would like to** discuss the invention of the television.* (ICLE95 NS)

A similar difference was observed with FM shift topic. The most frequently used items in the NNS corpus were *in contrast, now* and *regarding*. However, out of 10 types of shift topic markers observed in the NNS corpus, only two were employed in the NS corpus: *now* and *this brings us to* which was used only once by the native speakers (see Table B4 in Appendix B). The uses of the most frequent FM shift topic in both corpora are illustrated in the following examples (200 to 204).

200) ***In contrast** to that, the Western society created a safer context for our possessions, we have a judicial system that will even defend someone's possessions if they have a reason to believe that the possession actually belongs to that person.* (E19 NNS)
201) ***Now**, even though their rule seems like an common oligarchy, in my opinion, this is extended into basically every form of power, no matter how libertarian or oppressive it may seem or not.* (E34 NNS)
202) ***Regarding** Marxism, equality in capitalist society due to class differences is inevitably impossible.* (E86 NNS)

203) ***Now**, the only reason that they had these lawyers was because of the money they were able to pay them.* (ICLE16 NS)

204) ***This brings us to** the point that women could not handle the duties of attending the Citadel.* (ICLE171 NS)

What particularly stood out with respect to FM announce goals was the difference in the use of the items *this essay* and *be discussed*. *This essay* appeared five times more frequently in the NNS than in NS corpus, both in terms of the number of essays and its overall frequency in the NNS corpus. In addition, *be discussed* was used in 10 % of the essays in the NNS corpus in comparison to 0 % in the NS corpus.

An interesting difference in the use of FM shift topic was that out of 10 markers observed in the NNS corpus, only 2 of them appeared in the NS corpus. One of them was *now*, which the native speakers used four times as frequently as the non-native speakers in terms of the number of essays in which it was used, as well as its frequency in the NS corpus.

This notable absence of frame markers belonging to FM announce goals and FM shift topic subcategories in native speakers' writing again seems to indicate that the native writers could have trouble in announcing goals and shifting topic, which does not corroborate the findings of the previous research reporting to have found that non-native writers might have problems with announcing goals and shifting topic (Yüksel & Kavanoz, 2018). However, the absence of frame markers that announce goals and shift topic in the native speakers writing could again be attributed to the fact that comparisons in this study were made only for those items identified in the non-native speakers' writing. This may further suggest that the native speakers did not have difficulties in announcing goals and shifting topic but achieved it in a different way or employed metadiscourse items that were not initially found in the NNS data.

Overall, the results regarding the use of frame markers in the NNS and NS corpora seem to point to a mechanical and excessive use of a limited number of FM sequencing and FM label stages by the NNS writers on one hand, and the absence of frame markers that announce goals and shift topic in the NS writing on the other.

Finally, as for the ranking order of transition markers, two most favored items in both corpora were *and* and *but*, followed by *because* in the NNS corpus and *also* in the NS corpus (see Table B5 in Appendix B). This is in line with the previous research (e.g. Hinkel, 2002; Yüksel & Kavanoz, 2018; Pavičić Takač, et al., 2020). The following examples (205 to 210) illustrate the use of the most frequent transition markers in the NNS and NS corpus.

205) *Also, it helps in developing social skills* ***and*** *it encourages interactions with other people.* (E11 NNS)

206) ***But****, the problem is that almost every university puts focus on theoretical knowledge.* (E13 NNS)

207) *People no longer have a need for adventure and spontaneity,* ***because*** *if they did, they would remind themselves that the greatest motivation for our vulnerable souls are empathy, passion and creativity.* (E81 NNS)

208) *There would be few, if any, doctors supervising the contests,* ***and*** *if a boxer was seriously injured he would have much less chance of surviving.* (BOX8 NS)

209) *According to additional opponents, this claim was not based on a realistic study,* ***but*** *one where the high school principal reported figures of the number of students who admitted to the counselor that they were pregnant.* (ICLE42 NS)

210) *This makes it hard,* ***because*** *if they don't, they are looked down upon by their peers.* (ICLE59 NS)

A detailed analysis of the use of transition markers indicated that both the native and non-native speakers tended to use simpler markers, i.e. those that have fewer constraints and as a result a wider coverage, which corroborates the previous findings (Li & Wharton, 2012; Yüksel & Kavanoz, 2018; Pavičić Takač, et al., 2020). Despite similarities in the use of these simpler forms, the native writers, in contrast to the non-native writers, also used forms such as *even though, furthermore, moreover, even though, on the other hand* less frequently, but did not use forms such as *conversely, nonetheless, notwithstanding.* In a similar vein, Ha (2014) reports that Korean EFL learners overused certain types of additive adverbials (e.g. *moreover*, *besides*, *furthermore*). This may suggest that the non-native speakers may have a wider repertoire of transition markers. However, a closer look at transition markers chosen by the non-native speakers and their frequency shows that the forms such as *conversely*, *nonetheless* and *notwithstanding* were used only once in the NNS corpus, and *nonetheless* and *notwithstanding* were even used once in the same essay, which means that the non-native speakers' repertoire may not be as wide, i.e. it may be idiosyncratic, meaning that some NNS writers have a wider repertoire, while the others tend to use a limited number, or that they may avoid using items they do not feel confident they can use appropriately. Examples 211 to 213 illustrate the use of *conversely, nonetheless, notwithstanding* found in the NNS corpus.

211) ***Conversely****, one may argue that all humans are equal, because everyone has been given the opportunity to live.* (E89 NNS)

212) ***Nonetheless**, there is a cause for all the evils attributed to money which lies much deeper in the history of society.* (E45 NNS)

213) ***Notwithstanding**, hunter-gatherers existed for more than 200 000 years without private property; they had social property, i.e. they held property in common so there was no exchange.* (E45 NNS)

Since the category of transition markers includes the highest number of types (53 types), there were more differences between the two corpora in the use of individual transition markers. *Furthermore* was used twenty times more frequently by the non-native than by the native speakers, i.e. it was used in 41 % of the NNS essays in comparison to 2 % in the NS essays. *Moreover* was used fifteen times more frequently by the non-native than by the native speakers, i.e. it was used in 33 % of the NNS essays in comparison to 2 % in the NS essays. Transition markers *even though* and *on the other hand* were used five times more frequently by the non-native speakers in terms of both the number of essays in which they occurred and their frequency in the NNS corpus. Similarly, *in addition* and *while* were used three times more frequently by the non-native speakers. However, the native speakers used transition markers *though* and *yet* twice as frequently as the non-native speakers in respect to the number of essays and their frequency in the NS corpus.

As for the use of individual interactional metadiscourse markers, the most frequently employed attitude markers in both corpora were *main X, important* and *agree,* in addition to a frequent use of *even X* and *unfortunately* in the NNS corpus (see Table C1 in Appendix C). Examples 214 to 219 illustrate the use of the most frequent attitude markers in both the NNS and NS corpus.

214) *The **main arguments** I can think of for trying to defend the claim that dreaming and imagination are an anachronism because of modern inventions is that, the more things exist, the less of a chance we have of inventing something new, because it might already exist in some way, shape or form and being imaginative enough to think of something new requires some serious out-of-the-box thinking, which many people do not have access to.* (E21 NNS)

215) *It is also **important** to mention that through theoretical education, students learn many things that they will never be able to do by themselves, but are crucial for understanding their scientific field or just important to learn and gain general knowledge.* (E20 NNS)

216) *From my perspective, I **agree** with the thesis how some people are more equal than others.* (E74 NNS)

217) *One of the **main advantages** is the ability to tailor other organisms' genetic makeup towards man's needs.* (GENM13 NS)

218) *Another **important benefit** of legalizing drugs would be that it would help to enhance public health.* (ICLE139 NS)

219) *I tend to **agree** with the radical view that there must be some restrictions, for example, there must always be rules laid down as to the manner and form of Parliament, otherwise anybody could pass any law and that would simply be ludicrous.* (EU1 NS)

Previous research indicated that L2 writers tended to use fewer proportions of attitude markers than L1 writers (Abdollahzadeh, 2011; Lee & Deakin, 2016; Musa et al., 2019). Musa et al. (2019) reported that the least frequent attitude markers employed in Yemeni advanced L2 writing were attitude verbs such as *agree, hope,* etc. The present results, however, seem to indicate that both the non-native and native speakers used a limited set of attitude markers, but they used them quite frequently. In fact, the above mentioned three markers were far more frequent than any other marker observed in this category. This might suggest that both the non-native and native writers in the present study preferred a more detached and impersonal style (Lee & Deakin, 2016). When explicitly signaling their attitudes, instead of showing their intended mood, the NNS writers seemed to put more effort in commenting on the importance of information and their agreement with propositions. As for the attitude markers, no significant differences between the corpora were observed regarding the frequency of individual markers in terms of both the number of essays and their frequency in one of the two corpora. In other words, when the differences in their frequency did exist, they were not striking in either the number of essays in which attitude markers occurred or their frequency in one of the two corpora.

Next, the results showed that the non-native and native speakers' choices regarding the use of boosters differed noticeably (see Table C2 in Appendix C). The most frequently used boosters in the NNS corpus were *always, never* and *actually*; however, the native speakers mostly used *believe, show,* and *always.* Examples 220 to 225 illustrate their use in both the NNS and NS corpus.

220) *There is **always** this hypocrisy surrounding the term equality, we should all be equal, but equality is granted by someone who is ruling us.* (E63 NNS)

221) *This will **never** change, unless humanity realizes that they are being exploited by the few rich elites.* (E70 NNS)

222) *Such "blessings" can lead to forgetting simple tasks like writing, calculating and even though it seems as a small disadvantage, it* ***actually*** *brings long term problems because it prevents brain activity, makes the brain "slow" and we gradually lose more and more cognitive capabilities.* (E99 NNS)

223) *I* ***believe*** *that the public has a right to be informed about anything and everything that they want to be informed about, and people want to be informed about the death penalty; therefore, media should have access to report on executions.* (ICLE27 NS)

224) *All this* ***shows*** *that, by the orthodox, traditional approach, as it is considered impossible to bind subsequent governments as to the procedure or manner and form of legislation, it is impossible for entrenchment of statute to occur.* (EU20 NS)

225) *This form of unification will affect Britain especially, since Britain's position in Europe has* ***always*** *been made slightly different by the fact that it is an island.* (EU26 NS)

Moreover, the most striking differences in the use of boosters between the two corpora were evident in the use of six boosters – the NNS writers used *think* ten times more frequently, *never* three times more frequently, and *actually* and *always* twice as frequently as the native speakers. In contrast, the native speakers used *believe* and *in fact* three times more frequently than the non-native speakers.

Additionally, the study by Ho and Li (2018) demonstrated that L2 writers commonly used emphatic verbs such as *show* and *demonstrate* when they marked certainty of their claims. They reported that these forms were the most frequent emphatic expressions, even more frequent than all the other emphatic expressions they altogether observed. In the present study, this preference for the booster *show* was observed in the NS corpus. However, somewhat in line with the findings reported by Musa et al. (2019), items such as *in fact, no doubt, of course* as well as the emphatic modal *must* were found among the least frequent emphatic markers used by the non-native writers. Musa et al. (2019) argue that writers tend to avoid using emphatics such as *of course* as they quite probably view the use of these markers as being restricted to spoken language. Unlike in Musa et al.'s (2019) study, the booster *of course* was among more frequently used boosters in both corpora. Nevertheless, they also argue that the use of such emphatic expression is frequent in both spoken and written discourse, and thus can be used, when appropriate, to create a persuasive effect on audience. The high frequency of the booster *of course* in both corpora supports this. Examples 226 to 229 illustrate the use of the booster *of course* in the NNS and NS corpus.

226) ***Of course****, there is also a small percentage of humanity that is working very hard and earning a lot.* (E48 NNS)

227) *This* ***of course*** *depends on the university you're attending, for example if you're studying philosophy, like I am, there won't really be any practical parts, but that doesn't mean it's worthless, it just gives its value in a different way.* (E3 NNS)

228) ***Of course****, once this is done, the computer can quickly calculate millions of (pseudo) random numbers far more quickly than a human.* (TECH2 NS)

229) *These sorts of disagreements and cultural differences may seem banal but only serve to illustrate what would happen in the political sphere, but* ***of course*** *the consequences of disaccord there would be much more far reaching.* (EU33 NS)

As for engagement markers, *one*, *apply*, *see* and *we* were the most frequently used engagement markers in the NNS corpus, and *analyze*, *consider* and *you* in the NS corpus. Examples 230 to 236 illustrate the use of the most frequent engagement markers in both corpora.

230) *Since* ***one*** *cannot choose which family they are born into, this is another assertion why people cannot be said to be completely equal.* (E33 NNS)

231) *However, taking this quote out of context, it* ***can be applied*** *to multiple issues that the 21st century world is faced with.* (E53 NNS)

232) *This* ***can be seen*** *mostly in the rise of the entertainment industry, mainly video games and such, in which the creative aspect of the human mind is put to the test alongside the "mechanical" and calculated part.* (E40 NNS)

233) ***We*** *need to ask ourselves when did mankind first start to use money?* (E19 NNS)

234) *The focus of this essay is to* ***analyze*** *the conflicting arguments concerning the death penalty and to show how the value of human life is affected by these arguments.* (ICLE3 NS)

235) *One issue to* ***consider*** *as a loss is the type of capital loss illustrated above.* (ICLE53 NS)

236) *As* ***you*** *can imagine this has had a tremendous influence on sales in places such as fast food restaurants where beef burgers are the main item on the menu.* (BSE14 NS)

In comparison to the NS corpus, engagement markers were quite infrequent in the NNS corpus (see Table C3 in Appendix C). This seems to be consistent with the results of the previous research reporting that L2 writers tended to employ a limited range of engagement features in academic writing (Lee & Deakin, 2016). As the use of engagement markers indicates the extent to which writers show sensitivity to the audience, it seems that the NNS

writers should be encouraged to make use of these features in their academic writing. Moreover, the distinctive frequencies of the three most preferred engagement markers in this study's both corpora are not consistent with the findings of the previous studies (Li & Wharton, 2012). Li and Wharton (2012) found that in the writings of L2 Chinese undergraduate students among the most frequent items were items that were among the least frequent or did not occur in this study's NNS corpus such as *should, must, I, my*. The infrequent use of these items in this study's NNS corpus indicated that the NNS writers did not opt for strong persuasive engagement markers to address the reader and to assertively present their claims. In addition, the present findings indicated an infrequent use of reader pronouns, which is in contrast to the previous findings (e.g. Kobayashi, 2016; Musa et al., 2019). The frequent use of inclusive *we* by Arabic writers, as Musa et al. (2019) put it, could be attributed to the common use of this pronoun in the Arabic rhetorical culture to seek solidarity with audience and point to a collective commitment that should be fulfilled. Limited use of reader pronouns and the frequent use of the impersonal form such as the pronoun *one* in both corpora in the present study, might indicate, unlike what was observed in the previous studies (Kobayashi, 2016; Musa et al., 2019), the preference of both writer groups not to seek solidarity with audience or point to a collective commitment but to engage with readers by referring to people in general and probably view the use of this marker as a way of making generalizations characteristic of more objective and formal written styles such as argumentative writing. The following examples (237 to 240) illustrate the use of engagement marker *one* in the NNS and NS corpus.

237) *The claim that most university degrees are mostly theoretical and therefore useless for the labor market and general day-to-day existence is just as correct as it falls completely flat if **one** takes into consideration the very nature of different scientific fields.* (E15 NNS)

238) *Also, **one** has to take into account that the "real world" is a globalized world where the importance of lifelong learning education is continuously stressed, and that there is no "perfect degree" which will combine and balance theory and practice in a suitable way.* (E68 NNS)

239) *If **one** considers whether, by adopting this Act, the U.K. has lost some sovereignty, or ????? "loaned" it, it will be possible to predict what effect subsequent legislation pertaining to the formation of "a single Europe" would have on the sovereignty of this country.* (EU20 NS)

240) *How can **one** make an effective argument without establishing what, exactly, one is fighting against?* (ICLE38 NS)

Although the previously mentioned study by Bašić and Veselica Majhut (2017) in the Croatian context did not investigate the use of metadiscourse in student discourse, it seems important to note that their findings suggested that the use of more objective impersonal forms is one of the conventions of Croatian academic writing. This might suggest that Croatian MA students' familiarity with the Croatian academic writing conventions might have influenced their choice of metadiscourse markers when writing the argumentative essays.

Moreover, engagement markers were noticeably more frequent in the NS corpus both in terms of the number of essays and their overall frequency. The native speakers used *analyze* seven times more frequently and *must* and *should* four times more frequently than the non-native speakers. The pronoun *you* was used in 9 % of the essays in the NS corpus in comparison to 1 % in the NNS corpus, and the native speakers used it eleven times more frequently than the non-native speakers. *We* was the only engagement marker used more frequently by the non-native speakers who used it three times more frequently than the native speakers: the non-native speakers seemed to choose to present themselves collectively rather than as individuals. The following examples (241 to 243) illustrate the use of engagement marker *we* in the NNS corpus.

241) ***We*** *need to ask ourselves when did mankind first start to use money?* (E19 NNS)

242) *On the other hand,* ***we*** *need to ask ourselves - how would we know that we have reached full equality in all segments of life?* (E53 NNS)

243) *On the other hand, if* ***we*** *take a step back and consider the bigger picture, we can notice that much evil stems from ideas that aren't necessarily connected with money.* (E26 NNS)

With respect to the use of hedges in both corpora, the non-native and native speakers showed similar choices. In line with the previous research (e.g. Hyland, 2004b; Huh & Lee, 2016; Lee & Deakin, 2016; Yüksel & Kavanoz, 2018; Musa et al., 2019), modal verbs *may* and *would* were among the highest frequency items in both the NNS and NS corpus. The examples below (244 to 249) illustrate the use of the most frequent hedges in both corpora: *would* and *may,* in addition to *often* in the NNS corpus, and *could* in the NS corpus (see Table C4 in Appendix C).

244) *Finally, I think that our degree has its value, but with some improvements, that value* ***would*** *be much higher.* (E68 NNS)

245) *This preconception **may** not be true for every individual, but it certainly exists in everyday life and might be useful to those who do have a university diploma.* (E67 NNS)

246) *It is **often** described as a root of all evil because of people becoming worse when they have it, but also when they lose it.* (E24 NNS)

247) *It **would** also however deprive us of the right to independently govern ourselves and manage our affairs, as we have effectively been doing for over 200 years.* (EU3 NS)

248) *This **may** seem to be a cold hearted viewpoint but it is important to look clinically at the facts and not be carried away with emotion when discussing this emotive subject.* (BOX6 NS)

249) *This **could** result in a distortion and/or deterioration of proper standards for warfare routines.* (ICLE159 NS)

The limited variety of hedging devices used by both the native and non-native speakers (e.g. the frequent use of the modal verbs *may* and *would*) might suggest that they "lack linguistic repertoire of hedging expressions" (Lee & Deakin, 2016, as cited in Musa et al., 2019, p. 23). However, modal verbs *could, may* and *would* were much more frequently used by the native than non-native speakers. This is congruent with the findings of the previous studies which found that "native speakers of English employ significantly more epistemic modals than ESL/EFL learners or users" (Chen & Zhang, 2017, p. 21). Even though the overall usage of hedges was similar between the NNS and NS group, the difference in the use of modal verbs *could, may* and *would* between the NNS and the NS corpus may suggest that the NS writers' more frequent use of modal verbs indicating uncertainty of the content seems to be a very important feature of stance-taking in native speakers' student writing. The present findings may imply that there is still space for Croatian NNS writers to enhance their L2 pragmatic competence as the "use of epistemic modals is one of the important parameters of ESL/ EFL learners' L2 pragmalinguistic competence" (Chen & Zhang, 2017, p. 21). Since the category of hedges included the highest number of types, there were more differences between the two corpora in the use of individual hedges in terms of the number of essays and their overall frequency in the two corpora. In comparison to the native speakers, the non-native speakers used *often* seven times more frequently, *should* five times more frequently, *seem* four times more frequently, *in general, in my opinion* and *tend to* three times more frequently and *usually* twice as frequently as the native speakers. Moreover, *relatively* was used in 10 % of the NNS essays and in 0 % of the NS essays, *mostly* was used in 17 % of the NNS essays and in 2 % of the NS essays, and *sometimes* was used in 17 % of the NNS essays and in only 1 % of the NS essays. The native speakers, however, used *appear* five times more frequently, *could* four times

more frequently and *may* twice as frequently as the non-native speakers. In addition, *perhaps* was used in 17 % of the NS essays and in 2 % of the NNS essays.

Lastly, the most frequently used self-mention markers in both corpora were *I*, *my* and *me* (see Table C5 in Appendix C). Examples 250 to 255 illustrate the use of self-mention markers in both the NNS and NS corpus.

250) *In this essay, **I** will discuss the importance of a university degree and how it dictates your life as opposed to other career paths or life decisions that can, too, upgrade your life quality.* (E80 NNS)

251) *In **my** opinion, even though money is one of the main causes of evil and unrest in the world, I wouldn't call it the root of all evil but I would call it the root of most.* (E91 NNS)

252) *If you ask **me**, thinking that money is the root of all evil is completely absurd because the evil already exists in every human nature and it is the human mind that can make the money evil not the other way around.* (E14 NNS)

253) *One of the main reasons why **I** think that the sport will not get banned is that there is such a large amount of money at stake.* (BOX15, NS)

254) *Speaking from **my** experience living in the United States, I have come to feel that technology has become a large detriment to our youth in particular.* (ICLE85 NS)

255) *It seems very obvious to **me** that murders don't consider the form of punishment when killing another human being, so deference couldn't increase with the death penalty in effect.* (ICLE169 NS)

The most obvious discrepancy in the use of self-mentions between the two corpora was the frequency of *I*, which was much higher in the NS corpus. The scarcity of self-representation in the NNS corpus could suggest that the NNS writers still believe that academic writing should be objective and faceless (Hyland, 2005a) and that the use of personalization should be avoided as much as possible. However, this may be attributed to the instructional practices in teaching English as a foreign language in Croatia. Namely, learners are trained to observe the guidelines for writing argumentative essays which instruct them to maintain objectivity when supporting the thesis statement and presenting arguments and counterarguments, refrain from evaluative judgements, and express their final thoughts on the subject in the concluding paragraph. It can be therefore speculated that the NNS students who wrote the essays for the current study had been warned against using *I*-statements in parts other than the conclusion.

The use of the self-mention *my* was also avoided by both the NS and NNS student writers in this study, although the information about the number of essays in which *my* was

used seems to suggest that some students felt comfortable about expressing their personal voice in this way, even though most did not. However, *my* was used almost twice as frequently by the non-native speakers, both in terms of the number of essays in which it appeared and its frequency in the NNS corpus. As already mentioned, the present findings showed that self-mention markers were highly frequent in the concluding paragraphs in the NNS corpus, while they were more evenly distributed across the three essay parts in the NS corpus. This corroborates the findings of the previous research (e.g. Lee & Deakin, 2016; Musa et al., 2019) which indicated that L2 writers tended to avoid marking self-representation, especially the first -person singular pronoun. In a similar vein, Li and Wharton (2012) found that Chinese writers tended to be hesitant in expressing a direct authorial persona. This hesitation was attributed to the influence of traditional Chinese rhetoric, which places a higher emphasis on collectivism rather than individualism, but also to the educational context and institutional culture, which may also have impacted this aspect of metadiscourse usage. Yakhontova (2006) pointed out that Slavic texts, too, often avoid personal pronouns and favor agentless passive constructions. This may have affected the NNS writers' choices in this study.

The present results seem to suggest that the non-native writers have a larger repertoire of different linguistic items used to realize interactive and interactional metadiscourse functions than the native speakers. However, it must be stressed that, as previously mentioned, the differences observed in the variety of forms used by the NS and NNS writers and the absence of certain metadiscourse markers in the native speakers' writing may emanate from the fact that comparisons in this study were made only for those items identified in the non-native speakers' writing. This suggests that the native speakers used metadiscourse items that were not found in the NNS corpus. It would be wrong, therefore, to conclude that the native speakers in the present study had a narrow repertoire of metadiscourse markers.

However, a closer analysis of metadiscourse markers chosen by the non-native speakers showed that out of 303 different metadiscourse markers, 96 were used only once in the NNS corpus. This could mean that, on the whole, NNS writers' repertoire may not be as wide or that they may not feel confident about using some metadiscourse markers. As expected, in line with the previous research (cf. Pavičić Takač, 2018; Pavičić Takač & Vakanjac Ivezić, 2019), the findings pointed to the NNS writers' overreliance on a small number of examples, particularly frame markers, such as *firstly*, *secondly* and *to conclude*. This could be attributed to two main factors associated with the Croatian instructional context (discussed earlier in Chapter 4). Firstly, the fact that L2 learners' initial exposure to the non-discipline specific genre of argumentative essay usually occurs in foreign language secondary school classes, and

secondly, the predominant explicit teaching of simplistic lists of English metadiscourse devices without adequate explanations and demonstration of their meanings and functions. This may have led to learners acquiring a small number of examples from a specific category of metadiscourse that they employ somewhat haphazardly, without comprehending the nuanced distinctions in meaning among similar items. As a result, other types of devices are often overlooked or ignored. However, NNS writers' overuse of, for example, frame markers does not necessarily imply that the native speakers underuse them. As already mentioned above, the native speakers may have selected other means of, for example, framing their arguments than the non-native speakers. In addition, as writing an argumentative essay is one of the tasks at the National School-leaving Exam in Croatia, the potential washback effect should also be considered. The implied reader, i.e. the evaluator, as pointed out by Ädel (2006), significantly influences the writer, and, as a result, the text itself. Thus, the NNS students' overuse of, for example, frame markers and/or other metadiscourse markers, such as the hedging marker *argue* in the introduction paragraph, may be understood as the test taking strategy of meeting the task requirements and aiming to reach the required number of words (cf. Ädel, 2006).

5. GENERAL DISCUSSION

The overall objective of this section is to summarize and discuss the outcomes of the analyses of metadiscourse markers in both the non-native speaker (NNS) and native speaker (NS) corpora. The research initially formulated its hypotheses based on the analysis of previous research and emerging findings, lending greater reliability to the foundation of the study.

5.1 Overall findings of interactive and interactional metadiscourse markers in the NNS corpus

The non-native corpus consisted of 99 argumentative essays and 64.228 words. The mean length of the NNS essays was 648.77 words. The analysis of the corpus showed there was one metadiscourse marker in 14 words. The TTR value showing the ratio between the total number of both interactive and interactional metadiscourse markers and different types of interactive and interactional metadiscourse markers indicated a relatively low lexical variation in the NNS corpus. The present study considered the frequency of metadiscourse markers in combination with the measure of dispersion. Both interactive and interactional metadiscourse markers were mostly fairly evenly distributed in the NNS corpus with Juilland's *D* values ranging from 0.7 to 0.9 indicating a relatively low variation, thus corroborating the results for the TTR value. This suggests that NNS writers relied on a limited range of metadiscourse markers that they recycled throughout their writing.

The results of the frequency analysis showed an overall higher frequency of interactive metadiscourse compared to the interactional metadiscourse in the NNS corpus. The analysis of the two dimensions of metadiscourse showed that the non-native speakers used interactive metadiscourse (n/1000=43.49) more frequently than interactional metadiscourse (n/1000=25.61). In respect to individual categories of interactive metadiscourse, the results indicated that transition markers were significantly more frequent (constituting 73.6 % of the overall interactive category) compared to all other categories of metadiscourse markers. The frequencies of the remaining categories were not nearly as notable. Code glosses were the second most frequent category, followed by frame markers and endophoric markers. The least frequent markers in the NNS corpus were evidentials. As for the level of subcategories of frame markers, FM sequencing were the most frequently used markers in the NNS corpus, followed by FM label stages, FM announce goals and FM shift topic. The results of the analysis of the distribution patterns of interactive metadiscourse in the NNS corpus showed that the non-native

speakers used them more frequently in the body and conclusion paragraphs compared to the introduction paragraph.

The most frequently used interactional markers by the NNS writers were hedges (n/1000=12.97). The next most frequent markers were boosters, followed by self-mention markers, attitude markers, and engagement markers as the least frequently used interactional category. The results of the analysis of the distribution patterns of interactional metadiscourse in the NNS corpus indicated that the NNS writers used interactional metadiscourse much more frequently in the conclusion paragraph compared to the introduction and body paragraphs.

A total of 303 individual linguistic items used to realize metadiscourse functions were found in the NNS corpus. The interactive categories included 151 metadiscourse markers in total: frame markers comprised 61 markers, transition markers 54, code glosses 28, endophoric markers 7, and evidentials 1 marker. With respect to frame markers sub-categories, FM sequencing comprised 26, FM label stages 13, FM announce goals 12, and FM shift topic 10 markers. The interactional categories included 152 metadiscourse markers in total: hedges included 51 markers, boosters 43, attitude markers 33, engagement markers 21, and self-mention 4 markers. The most frequently used marker in the NNS corpus was the transition marker *and* (n/1000=7.6), 96 markers were used only once (n/1000=0.02) in the NNS corpus. The frequencies of all markers used in the present analysis are presented in Tables B1 – B5 in Appendix B and Tables C1 – C5 in Appendix C.

Overall, the findings indicating that non-native writers prefer using interactive to interactional metadiscourse seem to follow general tendencies in the non-native speakers' use of metadiscourse (e.g. Boshrabadi et al., 2014; Park & Oh, 2018). The results revealed clear tendencies in the use of interactive and interactional metadiscourse in the non-native speaker dataset. The most frequently used categories fall into three interactive types: transition markers, code glosses, and frame markers, and two interactional types: hedges and boosters. In contrast, endophoric markers, evidentials, self-mention markers, and engagement markers were significantly less frequently used than the former metadiscourse markers categories.

In sum, the overall findings showed that the NNS student writers in the present study preferred putting greater effort into creating textual congruity to explicit interpersonal relations with the audience, but that they used a limited set of linguistic means to realize interactive and interactional metadiscourse functions.

5.2 Overall findings of interactive and interactional metadiscourse markers in the NS corpus

The native corpus consisted of 100 argumentative essays and 65.025 words. The mean length of the NNS essays was 650.25 words. The analysis was a partial (or one-way) contrastive interlanguage analysis, focusing on frequency and statistical comparisons solely for the items identified in the non-native speakers' corpus. The analysis of the corpus showed there was one metadiscourse marker in 15 words. The TTR value for both interactive and interactional metadiscourse in the NS corpus indicated a relatively low lexical variation. In respect to the measure of dispersion of metadiscourse markers in the NS corpus, both interactive and interactional metadiscourse markers were mostly fairly evenly distributed, with Juilland's *D* values ranging from 0.7 to 0.9, indicating a relatively low variation, thus corroborating the results for the TTR value.

The results of the frequency analysis showed an overall higher frequency of interactive metadiscourse compared to the interactional metadiscourse in the NS corpus. The analysis of the two dimensions of metadiscourse showed that the native speakers used interactive metadiscourse (n/1000=36.25) slightly more frequently than interactional metadiscourse (n/1000=29.45). In respect to the individual categories of interactive metadiscourse, the results indicated that transition markers were significantly more frequent (constituting 72.3 % of the overall interactive category) compared to all other categories of metadiscourse markers. The frequencies of the remaining categories in the NS corpus were notably lower. Code glosses were the second most frequently used category, followed by frame markers, and endophoric markers. The least frequently used markers in the NS corpus were evidentials. As for the level of subcategories of frame markers, FM sequencing were the most frequently used markers in the NS corpus, followed by FM label stages, and FM announce goals and FM shift topic which shared the same number of occurrences in the NS corpus. The analysis of the distribution patterns of interactive metadiscourse in the NS corpus showed that interactive markers were evenly distributed across the whole essay structure.

The most frequently used interactional markers by the native speakers were hedges (n/1000=14.47). The next most frequently used interactional markers were boosters, followed by self-mention markers, attitude markers, and engagement markers as the least frequently used interactional category. The results of the analysis of the distribution patterns of interactional metadiscourse in the NS corpus indicated that the NNS writers used interactional metadiscourse much more frequently in the conclusion paragraph compared to the introduction and body paragraphs.

A total of 216 metadiscourse markers divided into five interactive and five interactional metadiscourse categories were found in the NS corpus. The interactive categories included 96 metadiscourse markers in total: transition markers comprised 42, frame markers 26, code glosses 22, endophoric markers 5 and evidentials 1 marker. With respect to frame markers sub-categories, FM sequencing comprised 13, FM label stages 7, FM announce goals 4 and FM shift topic 2 markers. The interactional categories included 120 metadiscourse markers in total: hedges included 44, boosters 34, attitude markers 22, engagement markers 17 and self-mention 3 markers. The most frequently used marker in the NS corpus was transition marker *and* (n/1000=6.97), 36 markers were used only once (n/1000=0.02) in the NS corpus. The frequencies of all markers used in the present analysis were presented in Tables B1 – B5 in Appendix B and Tables C1 – C5 in Appendix C.

Overall, the findings indicated the prevalence of interactive metadiscourse in the NS corpus, which is a commonly observed phenomenon in academic writing (e.g. Hyland, 1998b; Hyland, 2004b; Li & Wharton, 2012; Mu et al., 2015). However, the use of interactive and interactional metadiscourse was more balanced in the NS than in the NNS corpus, implying that the native speakers tended to maintain an appropriate level of personal expression within their arguments. The most frequent interactive categories were transition markers and code glosses, and the most frequent interactional categories were hedges and boosters. On the opposite pole are other interactive and interactional categories whose overall frequencies were noticeably lower as compared to the former group of metadiscourse markers.

5.3 Comparison of the overall NNS and NS findings

As the findings indicated, there were both differences and similarities between the non-native and native speaker corpora in terms of their use of interactive and interactional metadiscourse markers. The present study considered the frequency of metadiscourse markers in combination with the measure of dispersion. Both interactive and interactional metadiscourse markers were mostly fairly evenly distributed in the NNS and the NS corpus with Juilland's *D* values ranging from 0.7 to 0.9, indicating a relatively low variation, thus corroborating the results for the TTR value which indicated a relatively low lexical variation in both the NNS and the NS corpus. These results suggested that the range of metadiscourse markers used in the texts was limited, with a high tendency for recycling certain items. The potential implications of low lexical variation in the use of metadiscourse for the NNS writers may be significant. It indicates that this study's NNS writers relied on a limited number of metadiscourse markers, suggesting that

they may struggle to express themselves effectively, which can negatively impact their academic writing performance. Additionally, a limited range of metadiscourse markers can make a text seem repetitive and monotonous, which can negatively impact its readability and comprehensibility. This can make it difficult for readers to engage with the text and understand its intended meaning. Therefore, it is important for language learners to develop a wider range of metadiscourse markers and use them appropriately in order to improve their writing skills and effectively communicate their ideas. In addition, it is important to strike a balance between lexical diversity and clarity in order to create a text that is both engaging and easy to understand.

The results of the frequency analysis showed an overall higher frequency of interactive metadiscourse compared to the interactional metadiscourse in both corpora. The findings showed that the non-native speakers used interactive metadiscourse (n/1000=43.49) more than interactional metadiscourse (n/1000=25.61). The same was observed in the NS corpus. The native speakers displayed slightly heavier reliance on the interactive resources (n/1000=36.25) than the interactional resources (n/1000=29.45). The comparison of the overall NNS and NS findings showed that the non-native speakers (n/1000=43.49) used interactive metadiscourse more frequently than the native speakers (n/1000=36.25). However, the corpus findings showed the opposite results in the use of interactional metadiscourse, with interactional resources being more frequently employed by the native (n/1000=29.45) than by non-native writers (n/1000=25.61). Moreover, the native and non-native speakers exhibited different patterns in their use of interactive and interactional metadiscourse. In the NNS corpus, interactive metadiscourse constituted 63 % and interactional metadiscourse accounted for 37 % of the overall metadiscourse usage, resulting in a notable 26 % difference. Conversely, in the NS corpus, interactive metadiscourse represented 55 % of the total metadiscourse, while interactional metadiscourse comprised 45 %, resulting in a smaller difference of only 10 %. This indicates that the distribution of interactive and interactional metadiscourse was more balanced for the NS writers as well as that the NS writers, while striving for text cohesion, also prioritized engaging the reader more than the NNS writers.

The distribution patterns of interactive and interactional metadiscourse categories in the two corpora showed both similarities and differences. With respect to the interactive categories, the findings indicated that the overall higher frequency of interactive metadiscourse in the NNS corpus compared to the NS corpus was the result of the significantly more frequent use of transition markers and frame markers by the NNS writers. However, the results showed a predominance of a single interactive category in both corpora. The overall frequencies of the interactive categories indicated that the highest density was clustered around transition

markers, which were by far the most frequently used interactive markers in both corpora. Likewise, the second most frequent interactive category in both corpora were code glosses, followed by the categories of frame markers, endophoric markers, and evidentials. Furthermore, the frequencies of FM subcategories indicated that the most frequently used frame markers in both corpora were FM sequencing, followed by FM label stages, FM announce goals, and FM shift topic. Moreover, the results showed that the non-native speakers used transition markers significantly more frequently than the native speakers. In addition, the NNS writers used frame markers more frequently than the NS writers. In respect to FM sub-categories, they also used FM label stages and announce goals significantly more frequently than the NS writers. The remaining interactional categories and FM subcategories did not show significant differences in their use between the two corpora.

With respect to the interactional dimension, as discussed earlier, the findings pointed to a predominance of two interactional categories in both corpora. The overall frequencies of the interactional categories indicated that the highest density was clustered around hedges and boosters. The third most frequently used category of interactional markers were self-mention markers followed by attitude markers in both corpora. However, the NS corpus exhibited a significantly more frequent use of the self-mention category. The remaining interactional categories showed different patterns of use between the two corpora; however, not significantly different. The native speakers used hedges and engagement markers more frequently than the non-native speakers but the discrepancy in the relative frequency between the two corpora showed that there was no significant difference in their use. Overall, these findings suggest that the NNS writers may have different preferences and tendencies when it comes to using metadiscourse markers compared to the NS writers, as well as that the differences in the use of metadiscourse between the NNS and NS writers may reflect differences in their writing styles.

As for the analysis of the distribution patterns of interactive and interactional metadiscourse markers in individual essays or, in other words, with respect to the number of essays in which metadiscourse markers were used, there were again some differences as well as similarities between the NNS and NS corpora. As for the use of interactive metadiscourse markers, the distribution patterns were fairly similar between the two corpora. However, there were more essays in which frame markers were not used in the NS corpus compared to the NNS corpus. In that respect, the present findings indicated a more balanced use of interactive metadiscourse in the NNS corpus. In terms of interactional metadiscourse, boosters and engagement markers occurred slightly differently in individual essays in the two corpora. The difference was also observed in the use of self-mention markers, which were used less

frequently in the NNS corpus compared to the NS corpus. Additionally, self-mention markers were distributed across a smaller number of essays in the NNS corpus than in the NS corpus. Notable differences were also observed for hedges, which were used more frequently in the NNS corpus than in the NS corpus. The findings regarding the distribution pattern of hedges in individual essays may suggest that the most notable difference in their use between the non-native and native speakers in the present study was reflected in a less balanced use by the non-native speakers as opposed to a more balanced use of these devices by the native speakers.

With respect to the distribution patterns of metadiscourse use across the whole essay structure, there were yet again both differences and similarities between the native and non-native speakers. Interactive markers were evenly distributed across the whole essay structure in the NS corpus, while the NNS corpus showed an uneven distribution. The difference in the distribution patterns of interactive markers between the native and non-native speakers was observed in the body (although not statistically significant) and conclusion paragraphs. The non-native speakers used interactive markers more frequently in the body and conclusion paragraphs compared to the native speakers. Moreover, they used interactive metadiscourse considerably more frequently than the native speakers in the conclusion paragraph, which ultimately affected the results of the whole essay structure indicating overall that the non-native speakers used interactive metadiscourse more frequently than the NS writers. There was no significant difference in the distribution patterns of interactive metadiscourse between the native and non-native speakers in the introduction and body paragraphs. The p-values for both paragraphs were 0.100 and 0.319, respectively, indicating that there was no statistically significant difference in the use of interactive metadiscourse between the two corpora.

All in all, unlike the interactive metadiscourse, which was more or less evenly distributed in all paragraphs in the NS corpus, interactional metadiscourse was much more frequently used in the conclusion paragraph in both corpora. The non-native speakers used interactional metadiscourse much more frequently in the conclusion, while the native speakers used interactional resources more frequently in the body paragraph. If we observe the use of interactional metadiscourse across the whole essay structure, the results indicated that, overall, the native speakers (n/1000=29.45) used interactional metadiscourse more frequently than the non-native speakers (n/1000=25.61). As already discussed, the results regarding the distribution of interactional metadiscourse indicated that native speakers using interactional metadiscourse more frequently than the non-native speakers was the consequence of their frequent use in the body paragraph in the NS corpus.

In regard to the distribution of the interactive and interactional metadiscourse across the three-part structure, i.e. individual essay paragraphs, the findings pointed to a less congruent distributional patterns of the use of metadiscourse markers when comparing the two corpora. In general, there was either no distinction between the two corpora in the distribution of interactive categories, or if there was, they were more frequent in the NNS than the NS corpus, regardless of the paragraph of the essay in which they appeared. The only instance where this pattern deviated was with evidentials, which the native speakers tended to use more frequently in the conclusion paragraph. Moreover, the findings revealed that the NNS writers used frame markers consistently more frequently than the NS writers throughout the entire essay structure. The discrepancies between the two corpora were evident regarding FM subcategories as well. The non-native speakers tended to use FM sequencing more frequently in the body paragraph, FM label stages more frequently in the conclusion paragraph, and FM announce goals more frequently in the introduction paragraph. Particularly noteworthy was the significant difference in the use of FM label stages in the conclusion paragraph between the two corpora. The NNS writers used FM label stages in the conclusion so frequently that it affected the overall essay structure, leading to a considerable contrast with the native speakers' corpus. Similarly, the use of FM announce goals in the introduction paragraph was significantly more prominent in the NNS corpus compared to the NS corpus. In fact, the frequency of FM announce goals in the introduction paragraph in the NNS corpus influenced the entire essay structure. However, there was no significant difference between the non-native and native speakers' choices regarding the use of these frame markers in other parts of the essay. Additionally, no significant differences were observed in the distribution patterns of the shift topic subcategory across all three parts of the essay between the two corpora.

The findings further pointed to distinct patterns in the usage of transition markers between the NNS and NS corpora. Transition markers were significantly more prevalent in the NNS corpus within the body and conclusion paragraphs. This suggests a noteworthy difference in their distribution pattern compared to the NS corpus. However, there was no significant disparity in the introduction paragraph between the two corpora regarding the use of transition markers. As for the distribution patterns of evidentials, the findings demonstrated that they were much more frequently employed in the NNS corpus specifically within the conclusion paragraph. This discrepancy signified significant difference in the usage of evidentials between the two corpora. However, no significant differences were observed in their use within the introduction and body paragraphs. Overall, these results shed light on variations in the use of transition markers and evidentials between the non-native and native speakers. While transition

markers were more prevalent in the NNS corpus in the body and conclusion paragraphs, evidentials exhibited a higher frequency in the NNS corpus specifically within the conclusion paragraph. The absence of significant differences in their usage within the introduction and body paragraphs, as well as the absence of significant differences between the two groups in the distribution patterns of code glosses and endophoric markers in any of the individual essay paragraphs indicated a level of similarity between the two corpora in the distribution patterns of interactive metadiscourse categories.

Overall, the analysis of distributional patterns of interactional metadiscourse revealed contrasting findings compared to interactive metadiscourse. The findings showed no significant differences in the distribution of attitude markers between the non-native and native speakers throughout the entire essay structure. However, disparities arose when examining the use of boosters, engagement markers, and hedges. The non-native speakers tended to employ boosters more frequently than the native speakers in the conclusion paragraph. Additionally, the native speakers displayed a higher frequency of engagement markers in the body paragraph compared to the non-native speakers. The use of self-mention markers was notably more prominent in the introduction and body paragraphs for the native speakers, while the non-native speakers employed them more frequently in the conclusion paragraph. The comparison of hedges revealed that the non-native speakers used them more frequently in the introduction, while the native speakers used them more frequently in the body paragraph. Overall, the native speakers demonstrated a greater use of interactional markers across the essay structure, indicating differences in the distribution patterns of interactional metadiscourse between the two groups.

In general, when it comes to the variation in the use of interactional metadiscourse between the non-native and native speakers, the higher occurrence of interactional metadiscourse in the NS corpus can be explained by two observations. Firstly, the NS corpus showed a higher frequency of using hedges, engagement markers, and self-mention categories. Secondly, the native speakers tended to use interactional metadiscourse more often in the body paragraph. It can be argued that these two factors contributed to an overall, although not statistically significant, higher relative frequency of interactional markers in the NS corpus compared to the NNS corpus.

The differences in the overall findings between the corpora examined in this study was much more noticeable when focusing on specific linguistic elements used for expressing metadiscourse functions. Regarding the use of individual metadiscourse markers, the non-native writers employed a total of 303 distinct metadiscourse markers, while the native

speakers used 216 different metadiscourse markers in their essays. This may indicate that the non-native writers utilized a greater variety of metadiscourse markers compared to the native speakers, suggesting that they may be relatively more at ease with employing various linguistic elements for interactive and interactional metadiscourse functions than the native speakers. However, the already mentioned tendency by the non-native speakers to recycle certain metadiscoursal elements as well as a large number of metadiscourse markers used only once in the NNS corpus do not speak in favor of this. Instead, this might suggest that, on the whole, their repertoire may not be as wide or that they may not be secure in using metadiscourse. This could also point towards the negative washback effect of the National School-leaving Exam as it contains a writing task designed to assess the ability to write an argumentative essay, as well as that they may struggle to understand the purpose of using metadiscourse beyond just enhancing the text.

The preceding discussion has aimed to present the comparative findings with respect to the use of the metadiscourse markers analyzed in the two corpora in the present study. In sum, despite different distributional patterns of metadiscourse markers in the NNS and NS corpus, the fact that there were both similarities and differences between the two groups of writers as well as that the results seem to suggest that the non-native speakers seem to be more at ease when it comes to using different linguistic elements to fulfill interactive and interactional metadiscourse functions compared to native speakers, merits further attention. However, prior to drawing a conclusion that the NNS writers have a more diverse repertoire of metadiscourse markers compared to the native speakers, it is crucial to highlight that this study specifically examined a particular set of metadiscourse markers within the context of NNS student academic writing and as mentioned earlier, it only performed a partial (or one-way) contrastive interlanguage analysis, focusing on frequency and statistical comparisons solely for the items identified in the non-native speakers' corpus. Consequently, the results might give the impression of a limited range of metadiscourse markers for the native speakers.

Due to the limited scope of this study, it is not possible to draw definitive conclusions regarding the characteristic features of metadiscourse use in the examined student writing. Instead, the results obtained can indicate certain tendencies and preferences in the use of interactive and interactional metadiscourse markers within the analyzed student academic corpora. In this context, the higher frequency of interactive as compared to interactional metadiscourse in both corpora seem to follow general tendencies in the use of metadiscourse in academic writing (e.g. Hyland, 1998b; Hyland, 2004b; Li & Wharton, 2012; Boshrabadi et al., 2014; Mu et al., 2015; Park & Oh, 2018; etc.). Moreover, the higher frequency of

interactional metadiscourse observed in the native writing compared to the non-native writing aligns with the previous research findings (see Chapter 2). These findings consistently demonstrate that interactional metadiscourse is more prominent in Anglo-American academic writing compared to other languages such as Norwegian, French, Bulgarian and Chinese, as well as L2 English writing (e.g. Vassileva, 1998; Zarei & Mansoori, 2010; Hu & Cao, 2011). Furthermore, the previous research also indicated that the Anglo-American writing style tends to be more personalized, with a greater emphasis on the writer's presence within the text, in contrast to writing styles in languages such as Bulgarian, Finnish, Spanish, Persian, Croatian and L2 English texts (Mauranen, 1993; Vassileva, 1998; Dueñas, 2011; Mirshamsi & Allami, 2013; Varga, 2016; Bašić & Veselica Majhut, 2017). As discussed earlier, the present findings corroborate this by revealing a higher frequency of self-mention markers in the native language writing compared to the non-native texts.

Overall, as already emphasized, the absence of relevant literature and similar empirical research regarding academic writing in the Croatian context restricts linking the current findings to specific characteristics of the Croatian student academic style concerning the utilization of interactive and interactional metadiscourse markers and their pragmatic functions. However, based on the present findings, it can be argued that the native writers demonstrated a preference for using personal forms, as well as appeared to invest more effort into effectively managing the appropriate level of personal engagement in their argumentation compared to the non-native speakers. In Croatian academic writing, as previously mentioned, impersonal forms are generally favored over personal forms (Bašić & Veselica Majhut, 2017). Regarding the higher frequency of interactional markers observed in the native writing in comparison to the non-native writing, these results correspond with the overall conventions of the Croatian academic style. However, it cannot be definitively inferred from this study that the academic writing analyzed strictly conforms to the dominant norms of the Croatian academic writing style, apart from these noted observations.

The final section of this study brings together the main findings pertaining to the research objectives, acknowledges the limitations of the current study, and suggests potential implications for future research and teaching practices.

6. CONCLUSION

The objective of this study was to explore how both the non-native and native English writers utilize interactive and interactional metadiscourse to structure their argumentative essays and express their position on the content they are discussing. In this regard, the study can be considered as a genre-based investigation into the use of metadiscourse in student academic writing in L2 English. The analysis was based on the perspective that academic writing is a form of language use that is situated within a social context, where the interaction between the writer and reader contributes to the construction of knowledge (Hyland, 2004a; 2005a; 2019). This perspective is particularly relevant in the context of academic writing in English. It is important to note that since the study examined the use of metadiscourse markers within a single academic genre, it did not attempt to provide a comprehensive characterization of student academic writing in either L2 or L1 English. Rather, it focused on investigating how the specific metadiscourse markers were employed by the non-native and native speakers across the three-part structure of an argumentative essay. Specifically, the study has addressed the three research questions put forward in Chapter 3, presented here again for ease of reference:

1. What was the frequency of metadiscourse markers in the argumentative essays of Croatian foreign language users compared to native English users?
2. What were the metadiscourse features of argumentative essays written by non-native speakers compared to essays written by native speakers?
3. What were the distribution patterns of metadiscourse markers in the individual paragraphs of argumentative essays by native and non-native speakers?

What follows are the key findings of the comparisons of the metadiscourse use in the non-native and native speakers' argumentative essays. The issues addressed include the similarities and differences in metadiscourse use between the non-native and native speakers. Despite the relatively small sizes of the two corpora, which restricts from making any general conclusions, noticeable patterns became evident.

With respect to the first research question, the comparison of the findings provided valuable insights into the similarities and differences between the NNS and NS writers in terms of their employment of metadiscourse markers. The hypothesis that the relative frequency of tokens was significantly higher in written essays by the non-native speakers compared to native speakers was not confirmed. The analysis of the overall frequency of metadiscourse markers

showed that, although the difference was not statistically significant, the non-native speakers showed more frequent use of all metadiscourse markers (tokens) than the native speakers. This appears to align with some common patterns observed in the overall use of metadiscourse and agrees with the previous findings that non-native writers exhibited overall a greater metadiscourse density compared to native writers (e.g. Lee, 2009; Boshrabadi et al., 2014; Kim, 2014; Byun, 2015; Park & Oh, 2018). Moreover, the results revealed that both the non-native and native speakers exhibited a relatively low lexical variation in their use of metadiscourse markers suggesting that the variety of metadiscourse markers employed in their texts was restricted.

With respect to the second research question and the frequency of the interactive and interactional categories, similarity in the use of metadiscourse markers across the two corpora concerns the use of both interactive and interactional metadiscourse. Hypothesis that the non-native speakers most frequently used interactive markers, and that the frequency of their use was significantly higher among the non-native speakers was partially confirmed. The non-native speakers used interactive markers more than interactional markers; however, the difference between the two groups of speakers was not significant. In fact, both groups of speakers demonstrated a preference for the use of interactive metadiscourse, indicating a shared emphasis on textual congruity rather than explicit interpersonal relations with the audience. This is a commonly observed phenomenon in academic writing, and the studies have consistently reported a higher frequency of interactive metadiscourse usage compared to interactional metadiscourse in various forms of academic writing (e.g. Lee, 2009; Kim, 2014; Park & Oh, 2018; etc.). Moreover, the hypothesis that the frequency of interactional markers was significantly lower in the non-native speakers' essays was not confirmed. However, although the difference between the two groups of speakers was not significant, the findings indicated overall a more frequent use of interactional metadiscourse in the NS corpus than in the NNS corpus implying that the native speakers tended to put greater effort on the management of controlling the appropriate level of personality in their argumentation than the non-native speakers. This aligns with the previous research indicating that native writing exhibits a larger proportion of interactive resources in comparison to non-native writing (e.g. Lee & Deakin, 2016; Park & Oh, 2018).

Another similarity between the two groups of writers concerns the order of frequency of both interactive and interactional metadiscourse. Hypotheses that the non-native and native speakers most frequently used transitions, and that the frequency of their use was significantly higher among the non-native speakers, as well as that the differences in the use of endophoric

markers, evidentials and code glosses between the non-native and native speakers were not significant were both confirmed. In both corpora transition markers were strikingly the most frequent category, which is in line with the previous studies reporting the same observation (e.g. Li & Wharton, 2012; Anwardeen et al., 2013; Mu et al., 2015; Huh & Lee, 2016). The high frequencies in transition markers pinpoint to both the non-native and native speakers' concern in guiding readers through arguments in the discourse and helping them to shape their understanding of the text. Additionally, the hypothesis that the next most frequent interactive category in the essays of the non-native and native speakers were frame markers, and that the frequency of their use was significantly higher in the non-native speakers' corpus was partially confirmed. In both corpora transition markers were followed by code glosses, frame markers, endophoric markers and evidentials. However, the differences between the two corpora observed in the use of interactive categories concern the use of transitions and frame markers. As reported in the previous research, the non-native speakers used transition markers and frame markers significantly more frequently than the native speakers (e.g. Park & Oh, 2018). What is more, the findings indicated that the overall higher frequency of interactive metadiscourse in the NNS corpus was the result of the non-native speakers' overuse of transition markers and frame markers. The overuse of frame markers in the non-native writing as compared to the native writing corroborates the finding from the previous research (e.g. Park & Oh, 2018; Yüksel & Kavanoz, 2018; Pavičić Takač & Vakanjac Ivezić, 2019).

With respect to the order of frequency of interactional metadiscourse categories, in both corpora hedges were the most frequently used interactional markers followed by boosters, self-mention markers, attitude markers and engagement markers. Earlier studies have also confirmed the saliency of hedging markers in both L1 and L2 writing (e.g. Lee & Deakin, 2016; Musa et al., 2019). However, the hypothesis that the frequency of attitude markers, boosters, engagement markers, hedges and self-mention markers was significantly lower in the non-native speakers' essays was not confirmed. Apart from self-mention markers, which were significantly more frequently used by the native speakers, there were no significant differences in the frequency regarding the use of hedges, engagement markers, boosters and attitude markers between the non-native and native speakers. Moreover, the overall higher frequency of interactional metadiscourse in the NS corpus was the result of the significantly more frequent use of the self-mention markers by the native speakers. Similarly, the higher occurrence of self-mention markers in the NS writing, compared to the NNS writing, corresponds to the previous research findings that demonstrated that L2 student essays contained significantly fewer instances of self-mentions compared to L1 essays (e.g. Leedham, 2015; Lee & Deakin, 2016).

With respect to the third research question, another similarity between the two corpora was observed regarding the distribution patterns of interactive and interactional metadiscourse in individual essays. The findings regarding distribution patterns of interactive metadiscourse indicated overall a quite similar or slightly different patterns of distribution in individual essays in both corpora. The variation between the two corpora emerged from the frequency of essays where interactive markers were absent in the NS corpus, suggesting a more balanced use of interactive metadiscourse in the NNS corpus. In addition, with respect to interactional metadiscourse, the findings pointed to notable differences in the distribution patterns of self-mention markers and hedges. In that respect, despite the fact that hedges were the most commonly employed interactional markers in both corpora, and despite the fact that there was no significant variation in their use between the two corpora, the analysis indicated that the distinction in the use of hedges between the non-native and native speakers in this study is reflected in a less balanced utilization of these devices in the NNS corpus, as opposed to a more balanced one in the NS corpus.

Furthermore, in respect to the distribution patterns of interactive and interactional metadiscourse and rhetorical strategies employed in different paragraphs of the essay, the present study uncovered some novel insights that expand upon previous research. Hypotheses that there was no significant difference in the distribution of interactive markers in all parts of the essay between the non-native and native speakers, and that the native speakers used interactional markers more frequently in all parts of the essay were both partially confirmed. The only differences in the distribution patterns of interactive and interactional metadiscourse concern the following. While the native speakers evenly distributed interactive metadiscourse markers throughout their essays, the non-native speakers concentrated the use of these markers in the conclusion. As for the use of interactional metadiscourse, the non-native speakers used interactional metadiscourse significantly more frequently in the conclusion, while the native speakers used interactional resources significantly more frequently in the body paragraph. Overall, with respect to the differences in the distribution patterns of both interactive and interactional metadiscourse between the NNS and NS corpus, the results pointed to an interesting finding that the NNS writers concentrated the use of both interactive and interactional markers in the conclusion paragraph, indicating a higher degree of engagement with the reader and emphasis on their arguments in the final paragraph of the essay. This finding provides valuable insights into structural and rhetorical differences between the NNS and NS writing and adds a new dimension to the existing literature by highlighting the distinct metadiscourse strategies employed by the non-native speakers in the conclusion paragraph.

This suggests that the non-native speakers may have a different approach to organizing their essays and signaling the end of their arguments than the native speakers.

Regarding distributional patterns of interactive metadiscourse categories, significant differences between the two corpora were the result of the more frequent use of interactive categories by the non-native speakers in all three parts of the essays. Transition markers were significantly more frequently used by the NNS writers in the body and the conclusion paragraphs. In addition, the findings showed that the NNS writers used frame markers significantly more frequently than the NS writers consistently across the whole essay structure. Moreover, the presence of FM announce goals was significantly more pronounced in the introduction paragraph while the use of FM label stages was more prominent in the conclusion paragraph in the NNS corpus as compared to their use in the NS corpus, which, in fact, reflected on the non-native speakers' use of frame markers throughout the entire essay structure.

In regard to distributional patterns of interactional metadiscourse categories, significant differences between the two corpora, were more often the result of the significantly more frequent use of interactional markers by the native speakers. The analysis revealed differences in the use of hedges between the two corpora, with the non-native speakers employing hedges considerably more frequently in the introduction paragraph. In contrast, a considerably higher discrepancies between the two corpora were observed in the use of engagement markers and hedges in the body paragraph where these markers were more frequently used by the native speakers. Furthermore, the findings revealed a notable disparity in the use of self-mention markers, with a significantly higher prominence observed in the introduction and body paragraph in the NS as compared to their use in the NNS corpus. This indicates a more balanced use of self-mention markers by the native speakers, unlike the non-native speakers who demonstrated a high frequency of self-mention markers in the concluding paragraph. This was attributed to educational guidelines in the Croatian context instructing the learners that this particular style of writing does not involve making evaluative judgments, and instead, the writers' concluding remarks about the topic are presented in the final paragraph. The present result aligns with the previous research that suggested a frequent use of self-mention markers in the concluding paragraphs of argumentative writing as they serve to convey the writer's position (Ho & Li, 2018).

The divergence in the overall findings between the corpora in this study was particularly evident when examining the particular linguistic items employed to realize metadiscourse functions. While it is challenging to fully explain all the differences between the two corpora observed in the findings, the results pointed that both the non-native and native writers

demonstrated a limited as well as recycled use of certain metadiscourse markers. The findings indicating that the non-native speakers demonstrated a higher level of comfort in using linguistic elements for interactive and interactional metadiscourse functions compared to the native speakers may be the consequence of the study's one-way comparative analysis. Therefore, it is important to note that the differences observed in the forms used by the native and non-native writers, as well as the absence of certain metadiscourse markers in the native speakers' writing, may be attributed to focusing solely on the items identified in the non-native speakers' writing. This may further suggest that the native speakers may employ a wider variety of metadiscourse markers, demonstrating a more sophisticated and extensive use of these markers in their writing, including forms that are less common or not frequently observed in the non-native speakers' writing.

In line with the previous research, the findings of this study support the notion that L2 writers demonstrate a mechanical and excessive use of a limited number of specific metadiscourse markers, especially frame markers such as *firstly*, *secondly* and *to conclude* (e.g. Pavičić Takač, 2018; Pavičić Takač & Vakanjac Ivezić, 2019). This finding contributes to the current body of literature by providing insights into on the distinct rhetorical strategies utilized by non-native speakers when structuring their arguments. The phenomena of limited variability and overuse are intertwined because language learners are frequently instructed with sets of interchangeable metadiscourse markers, often without a thorough examination of their nuanced meanings or usage restrictions (Bagarić Medve & Pavičić Takač, 2013b). Learners commonly opt to learn just one or two instances from each category of metadiscourse markers and employ them without discrimination. Consequently, this results in an overuse of a limited set of metadiscourse markers. Nevertheless, the analysis revealed that the non-native speakers exhibited a limited range of metadiscourse markers, indicating potential challenges in acquiring and utilizing these linguistic resources effectively. It suggests that the non-native speakers may face difficulties in expressing their ideas and engaging with the reader through the use of metadiscourse.

In addition, the findings suggest a significant disparity in the frequency of engagement markers between the NS and NNS corpus, with engagement markers being notably scarce in the latter. This aligns with the previous studies indicating that L2 writers often exhibit a restricted utilization of engagement features in academic writing (Lee & Deakin, 2016). Since engagement markers reflect a writer's attentiveness to the audience, it appears important to encourage the NNS writers to incorporate these features into their academic writing.

Moreover, the limited use of reader pronouns and the frequent adoption of impersonal forms, such as the pronoun *one*, observed in both writer groups, may indicate a departure from previous findings. Unlike what has been observed before, it may indicate a preference for generalizing statements and maintaining an objective and formal tone. While the aforementioned study by Bašić and Veselica Majhut (2017) focused on the Croatian context without specifically examining metadiscourse in student discourse, their findings suggested the convention of using more objective and impersonal forms in Croatian academic writing. This implies that Croatian students may possess some familiarity with the conventions of academic writing in their native language, which could have influenced their choice of metadiscourse markers when composing argumentative essays in L2 English.

One of the most notable differences in the use of interactional metadiscourse between the two writer groups was the limited presence of self-representation, particularly the scarcity of the first-person pronouns *I* and *my* among the non-native writers indicating their tendency to adhere to notions of objectivity and impersonality. This preference may stem from cultural influences such as avoidance of personal pronouns and favoring agentless passive constructions (e.g. Yakhontova, 2006; Li & Wharton, 2012), and educational guidelines promoting objectivity in supporting the thesis statement and presenting arguments, which emphasizes the need to consider context-specific factors when analyzing metadiscourse usage.

The significance of the present study and its contribution to the existing body of knowledge may, arguably, be regarded in two main aspects. The first concerns the findings that provide insights into commonalities as well as variations in the linguistic strategies employed by both the non-native and native speakers in academic writing context. It concerns the insights gained with respect to the use of interactive and interactional metadiscourse in L2 and L1 learner English. These findings can contribute to our understanding of the complex interplay between language proficiency, cultural background, and metadiscourse usage in written discourse. Present findings have pointed to both similarities as well as differences in frequency of the use and distribution patterns of metadiscourse between the two corpora examined. The observed similarities and differences contribute to understanding of the nuanced differences in metadiscourse usage between the non-native and native learner writers.

In addition, in terms of the main focus of the study, the significance of this research can be seen in relation to L2 English student academic writing in the Croatian context. The previous studies in Croatia have had a limited scope, focusing only on specific aspects of interactive metadiscourse usage in student writing (e.g. Pavičić Takač, 2018; Pavičić Takač & Vakanjac Ivezić, 2019; Pavičić Takač, et al., 2020; Bogdanović, et al., 2023) and the available evidence

regarding use of metadiscourse in its entirety, which includes both interactive and interactional aspects remains relatively inconclusive. This study has not only corroborated some previous findings concerning variations in the use of metadiscourse among the non-native and native speakers, but it also provides new evidence of similarities and differences between the non-native and native writing by focusing on a wider range of metadiscoursal resources as well as their distribution patterns. It provides valuable insights into the use of metadiscourse in the specific genre-based writing in L2 English, offering information about how both interactive and interactional metadiscourse markers are employed in student argumentative essays. As a result, it contributes to the field of cross-cultural research on academic writing, particularly in relation to student academic writing.

Before discussing further implications of this research for future linguistic studies and teaching practices, it is important to highlight some significant limitations that should be considered when interpreting the present findings and conclusions.

6.1 Limitations of the present study

The primary limitation of the present study relates to the linguistic aspect of the analysis. As discussed in Chapter 2, this mainly concerns the lack of clarity in existing literature regarding the definition of metadiscourse and the challenge posed by the multifunctionality of metadiscourse elements, which can serve different purposes in different texts and contexts, as well as by items of analysis which can be viewed as individual metadiscourse units with one general function or interpreted as units encompassing two or three distinct types of metadiscursive functions. It is worth noting that the interpretation of metadiscourse markers may have varied if more than two researchers had been involved.

Another aspect relates to the taxonomy of the metadiscourse markers employed in the analysis. As pointed out by Hyland (2005a), an analysis that aims to shed light on specific textual features can never be open-ended and exhaustive, but rather focuses on a particular set of items, inevitably excluding others from consideration. Given the lack of literature in the Croatian context relevant to this research, the analysis in this study relied on Hyland's (2005a) list of metadiscourse items, encompassing both interactive and interactional metadiscourse. However, additional metadiscourse markers not included in Hyland's list were identified during the examination of the texts. Nevertheless, it is believed that the selected items identified in the non-native corpus represent some of the most central interactive and interactional

metadiscourse markers. Their significance in L2 English student academic writing within the Croatian context requires confirmation through further empirical studies.

One of the main limitations of the present study is that a partial (or one-way) Contrastive Interlanguage Analysis (CIA) (Granger, 1993) was conducted focusing on frequency and statistical comparisons solely for the items identified in the non-native corpus. Consequently, as discussed earlier, the observed differences in the range of forms used by the NS and NNS writers, as well as the absence of certain metadiscourse markers in the writing of the native speakers, can be attributed to the fact that the comparisons in this study were only made for the items found in the non-native speakers' writing. Therefore, a more comprehensive study may entail a detailed comparison of all types of metadiscourse items identified in both non-native and native corpora and tackle this limitation to provide a better understanding of the underlying issue.

Furthermore, the present findings and their implications should be regarded with reference to the constraints dealing with the corpus compilation. The NNS corpus consisted of the argumentative essays written by a particular group of L2 students. This means that the current results reflect some of the potentially characteristic features of metadiscourse use only in regard to the L2 writing of this particular group of students and single educational context. It is likely that the congruent genre-based analysis including more than one educational context would yield different results. Of no less importance when considering the limitations regarding the corpus is the fact that the current study uses a small-scale corpus which is intended for specific contextual research purposes and thus may limit the generalizability of the findings. Secondly, it focuses on one specific genre; therefore, the results may not be applicable to student academic writing in general. Thirdly, the study did not take into account other factors such as proficiency or successful vs. less-successful argumentative essays that may have affected the results of the analysis.

Even though learner-produced texts are typically "[…] spiced with deviant uses of language" (Thomas, 2015, p. 12), the final issue that was not dealt with in the present study was the treatment of errors in the texts such as a wrong choice in terms of the function of metadiscourse markers or redundant use of metadiscourse markers leading to coherence breaks. These are some of the issues which future research on the use of metadiscourse in student academic writing might take into account.

6.2 Recommendations for further research and implications for teaching practice

The present study provides various possibilities for further research in different directions. Since the present study was based on a partial (or one-way) Contrastive Interlanguage Analysis (CIA) (Granger, 1993), it could not provide comprehensive evidence about the use of metadiscourse markers in student academic writing. Future studies building upon the current research could address this issue by identifying metadiscourse elements in both L1 and L2 English.

In addition, the model and methods presented here may be applied to the analysis of metadiscourse use not only with respect to argumentative essays but to other student genres as well. As previously mentioned, research on academic discourse within the Croatian context is still scarce. Therefore, empirical research is still required to gain a better understanding of academic writing conventions in this context. Consequently, the available evidence regarding the overall use of metadiscourse remains inconclusive, highlighting the growing necessity for genre-based research that can provide valuable insights into the characteristics of student academic discourse in Croatia.

Given the increasing significance of international publishing and the prominence of English in that context, the findings of this research could have meaningful implications for future studies on academic writing conventions in L2 English. As demonstrated in this study, academic writing in different languages often displays unique conventions that non-native English students and scholars may not be fully aware of when writing in L2 English. Therefore, research in intercultural rhetoric plays a crucial role in identifying the distinct features of academic writing, as these insights can prove beneficial to non-native students, scholars and educators.

In addition, the insights obtained from the research can have significant implications for academic writing instruction. The findings could serve as an empirical foundation for designing targeted teaching materials that focus on the areas where the examined languages differ (Sanderson, 2008) and the areas where non-native speakers may face challenges in using metadiscourse effectively. For example, the current study's results have highlighted discernible trends in the usage of self-mentions, indicating a more frequent and balanced occurrence in the L1 English corpus compared to the L2 English corpus. Thus, the development of students' academic writing skills holds particular importance in this context. Mastering the appropriate and effective use of metadiscourse can be challenging for L2 writers. According to Crismore et al. (1993), this stems from the assumption that, despite potential similarities between languages, metadiscourse is used differently in different languages. What is more, the

multifunctionality of metadiscourse items poses another difficulty for learners. In their attempt to translate such items, learners may struggle to accurately convey their intended meaning and function. Consequently, comprehensive and systematic studies on metadiscourse, like the present study, can be valuable in identifying areas in need of intervention aiming at enhancing L2 learner writing skills.

The L2 writers in the present study demonstrated a relatively limited lexical variation in their use of metadiscourse markers suggesting a tendency to reuse certain items. This suggests that both teachers and learners may fail to grasp the conception that metadiscourse is not a superficial embellishment of the text but serves specific pragmatic functions. The present analysis revealed significant issues related to the teaching of metadiscourse markers. In practical terms, the main implication is that instruction should prioritize the pragmatic functions of metadiscourse. Explicit teaching of metadiscourse should encompass the explanation of the concept itself, its categories, functions, and multifunctionality. While there are concerns about using native speakers' language performance as the normative model for English language learning (Ellis, 1994), comparisons with native-speaker corpora are necessary as they offer real-life language usage examples. To foster learners' acquisition of writing skills applicable to their future professional or academic endeavors, they must be exposed to good models (Shaw, 2009). Learner corpus, such as the one used in this study, and its comparison with native-speaker corpus can serve as a starting point for the analysis. Such comparisons can reveal patterns of transfer from L1 to L2 as well as the challenges in L2 learners' use of metadiscourse.

Furthermore, the potential washback effect should also be considered. It can be positive if learners enhance their range of metadiscourse markers and use them more frequently. However, it can also lead to negative consequences, as they might overuse these markers, employing them solely as a test-taking strategy to fulfill the evaluation criteria, without a clear grasp of when and how to use them appropriately. On the other hand, teachers, in their role as evaluators, may also require a deeper understanding of metadiscourse. They might not be fully aware of the specific pragmatic functions and subtleties of meaning associated with these markers. Consequently, they might unintentionally overlook their erroneous usage and simply count the number of markers as evidence of meeting the evaluation standards.

These issues, among others, should be systematically addressed in future research. A more comprehensive study entailing a detailed comparison of all types of metadiscourse items identified in both native and non-native writing, can contribute to a deeper understanding of the underlying matters. With respect to the Croatian context, it is believed that the findings of

the present study might serve as motivation for further research on academic writing in general and contribute to a deeper understanding of the student academic writing in the L1 and L2 English.

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8. APPENDICES

Appendix A The list of metadiscourse markers found in the corpus

INTERACTIVE METADISCOURSE

Code glosses:
( )
among other things
as a matter of fact
as such
called
clarify
e.g.
example(s)
for example
for instance
i.e.
illustrate
indeed
in fact
in other words
in the sense that
in that way
known as
mean
namely
say
specifically
such as
that is
this/that means
this is not to say
what is more
which means

Endophoric markers:
X above
aforementioned
X before
X earlier
in the introduction
in the X paragraph
previously

Evidentials:
according to

Frame markers:
Sequencing:
add
another X
at last
finally
first
firstly
first of all
last
lastly
further X
initially
next
one of the X
on top of that
second
secondly
second of all
then
the next X
third
thirdly
to begin
to begin with
to continue
to start with
the following

Label stages:
all in all
at the end of the day
in conclusion
in the end
in short
on the whole
overall
so far
to conclude
to summarize
to sum up
to wrap it all up
with that said

Announce goals:
answer
going to argue
in this essay
in the main part of the essay
this essay
this paper
the aim of this essay/paper
talk about
refer to
be discussed
as counter arguments
would like to
Shift topic:
back to
before
in contrast
in regard to
now
on the plus side
regarding
opposing arguments
this brings us to
to counter

Transition markers:
accordingly
additionally
again
and
also
along with
after all
although
as a result
as well as
at the same time
because
besides
but
consequently

contrarily
conversely
ergo
even so
even though
for that reason
further
furthermore
hence
however
in addition
in contrast
instead of
in turn
in spite of
lead to
likewise
moreover
nevertheless
nonetheless
notwithstanding
on the contrary
on the other hand
other than that
rather
result in
similarly
since
so
still
then again
thereby
therefore
though
thus
whereas
while
yet

INTERACTIONAL METADISCOURSE

Attitude markers:
agree
appropriate
astonishing
basic
be inclined to
disagree
essential
essentially
even x
expected
fair
hopefully
good
important
importantly
inclined to X
judging by
interesting
subject to
logical
luckily
natural
naturally
notable
main X
popular
prefer
preferable
shocking
striking
unfortunately
unusual
usual

Boosters:
above all
actually
always
based on
believe
bet
certain
certainly
clear
clearly
definitely
establish
evidence
evident
evidently
find
in fact
indeed
indisputably
know
must
never
no doubt
obvious
obviously
of course
prove
realize
really
show
showcase
sure
surely
the fact is
think
to a certain degree
truly
true
undeniable
undeniably
undoubtedly
unquestionable
without a doubt

Engagement markers:
assume
apply
analyze
choose
consider
find
let's
let us
look at
need to
refer
remember
must
see
should
take a look
think about
one
us
you
we

Hedges:
almost
apparent
appear
approximately

argue
around
assume
certain amount
certain level of
claim
could
essentially
frequently
from my perspective
generally
imply
indicate
in general
in most cases
in my opinion
in some cases
in some ways
largely
likely
mainly
may
maybe
might
mostly
not clear
often
on the whole
ought
perhaps
plausible
possible
possibly
presumably
probably
quite
rather
relatively
seem
should
sometimes
somewhat
suggest
supposed to
tend to
usually
would

me
my
we

Self-mention:
I

Appendix B List of interactive metadiscourse types, number of essays containing/not containing interactive metadiscourse types, number of tokens, frequency and relative frequency of interactive metadiscourse, Juilland's D values for interactive metadiscourse types in the NNS and the NS corpus

Table B1 Code glosses

Code glosses types	NNS					NS				
	essays using	essays not using	tokens (*f*)	*rf*	JD	essays using	essays not using	tokens (*f*)	*rf*	JD
( )	21	78	58	0.90	0.73	42	58	107	1.65	0.78
among other things	1	98	1	0.02	-0.01	0	100	0	0.00	-
as a matter of fact	2	97	2	0.03	0.29	0	100	0	0.00	-
as such	5	94	6	0.09	0.53	1	99	1	0.02	-0.01
called	8	91	10	0.16	0.64	8	92	9	0.14	0.64
clarify	1	98	1	0.02	-0.01	0	100	0	0.00	-
e.g.	1	98	1	0.02	-0.01	6	94	8	0.12	0.54
example(s)	10	89	13	0.20	0.66	13	87	16	0.25	0.71
for example	28	71	41	0.64	0.82	33	67	43	0.66	0.84
for instance	13	86	17	0.26	0.71	6	94	6	0.09	0.60
i.e.	7	92	12	0.19	0.58	12	88	16	0.25	0.71
illustrate	2	97	4	0.06	0.29	7	93	7	0.11	0.63
indeed	7	92	8	0.12	0.61	14	86	15	0.23	0.74
in fact	7	92	7	0.11	0.63	18	82	23	0.35	0.75
in other words	7	92	9	0.14	0.61	2	98	2	0.03	0.29
in the sense that	3	96	3	0.05	0.43	1	99	1	0.02	-0.01
in that way	2	97	2	0.03	0.29	0	100	0	0.00	-
known as	3	96	3	0.05	0.43	1	99	1	0.02	-0.01
mean	26	73	32	0.50	0.81	22	78	42	0.65	0.77
namely	3	96	3	0.05	0.43	4	96	4	0.06	0.50
say	49	50	87	1.35	0.87	46	54	82	1.26	0.85
specifically	4	95	7	0.11	0.45	0	100	0	0.00	-
such as	33	66	58	0.90	0.81	36	64	57	0.88	0.84
that is	3	96	3	0.05	0.43	5	95	5	0.08	0.56
this/that means	10	89	11	0.17	0.68	8	92	9	0.14	0.64
this is not to say	2	97	2	0.03	0.29	1	99	1	0.02	-0.01
what is more	2	97	2	0.03	0.29	0	100	0	0.00	-
which means	6	93	8	0.12	0.57	1	99	1	0.02	-0.01

Table B2 Endophoric markers

Endophoric markers types	NNS					NS				
	essays using	essays not using	tokens *(f)*	*rf*	JD	essays using	essays not using	tokens *(f)*	*rf*	JD
X above	4	95	4	0.06	0.51	5	95	5	0.08	0.56
aforementioned	3	96	3	0.05	0.43	0	100	0	0.00	-
X before	1	98	1	0.02	-0.01	3	97	3	0.05	0.42
X earlier	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
in the introduction	1	98	1	0.02	-0.01	0	100	0	0.00	-
in the X paragraph	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
previously	4	95	4	0.06	0.51	2	98	2	0.03	0.29

Table B3 Evidentials

Evidentials types	NNS					NS				
	essays using	essays not using	tokens *(f)*	*rf*	JD	essays using	essays not using	tokens *(f)*	*rf*	JD
according to	8	91	9	0.14	0.64	15	85	25	0.38	0.70

Table B4 Frame markers – sequencing, label stages, announce goals and shift topic

FM Seguencing types	NNS					NS				
	essays using	essays not using	tokens *(f)*	*rf*	JD	essays using	essays not using	tokens *(f)*	*rf*	JD
add	3	96	3	0.05	0.43	0	100	0	0.00	-
another X	14	85	16	0.25	0.74	28	72	39	0.60	0.81
at last	1	98	1	0.02	-0.01	0	100	0	0.00	-
finally	11	88	11	0.17	0.71	4	96	4	0.06	0.50
first	11	88	12	0.19	0.70	14	86	15	0.23	0.74
firstly	16	83	18	0.28	0.76	11	89	12	0.18	0.70
first of all	7	92	8	0.12	0.61	1	99	2	0.03	-0.01
last	2	97	2	0.03	0.29	1	99	1	0.02	-0.01
lastly	5	94	6	0.09	0.53	1	99	1	0.02	-0.01
further X	1	98	2	0.03	-0.01	0	100	0	0.00	-
initially	1	98	1	0.02	-0.01	0	100	0	0.00	-
next	2	97	4	0.06	0.21	2	98	2	0.03	0.29
one of the X	3	96	4	0.06	0.39	11	89	12	0.18	0.70
on top of that	2	97	2	0.03	0.29	0	100	0	0.00	-
second	4	95	4	0.06	0.51	4	96	4	0.06	0.50
secondly	16	83	16	0.25	0.77	7	93	7	0.11	0.63
second of all	2	97	3	0.05	0.25	0	100	0	0.00	-
then	6	93	7	0.11	0.58	12	88	13	0.20	0.72
the next X	1	98	1	0.02	-0.01	0	100	0	0.00	-
third	1	98	1	0.02	-0.01	0	100	0	0.00	-
thirdly	4	95	4	0.06	0.51	1	99	1	0.02	-0.01
to begin	1	98	1	0.02	-0.01	0	100	0	0.00	-
to begin with	6	93	6	0.09	0.60	0	100	0	0.00	-
to continue	2	97	2	0.03	0.29	0	100	0	0.00	-
to start with	3	96	3	0.05	0.43	0	100	0	0.00	-
the following	1	98	1	0.02	-0.01	0	100	0	0.00	-
FM Label stages types	**NNS**					**NS**				**JD**
	essays using	**essays not using**	**tokens *(f)***	***rf***	**JD**	**essays using**	**essays not using**	**tokens *(f)***	***rf***	
all in all	12	87	13	0.20	0.72	0	100	0	0,00	-
at the end of the day	7	92	7	0.11	0.63	2	98	2	0.03	0.29
in conclusion	23	76	23	0.36	0.82	9	91	9	0.14	0.68
in the end	5	94	5	0.08	0.56	3	97	3	0.05	0.42
in short	1	98	1	0.02	-0.01	3	97	3	0.05	0.42
on the whole	1	98	1	0.02	-0.01	2	98	2	0.03	0.29
overall	1	98	1	0.02	-0.01	2	98	2	0.03	0.29
so far	1	98	1	0.02	-0.01	0	100	0	0.00	-
to conclude	25	74	25	0.39	0.83	4	96	5	0.08	0.47
to summarize	1	98	1	0.02	-0.01	0	100	0	0.00	-
to sum up	13	86	13	0.20	0.74	0	100	0	0.00	-
to wrap it all up	1	98	1	0.02	-0.01	0	100	0	0.00	-
with that said	1	98	2	0.03	-0.01	0	100	0	0.00	-

FM Announce goals types	NNS					NS				
	essays using	essays not using	tokens *(f)*	*rf*	JD	essays using	essays not using	tokens *(f)*	*rf*	JD
answer	1	98	1	0.02	-0.01	3	97	3	0.05	0.42
going to argue	1	98	1	0.02	-0.01	0	100	0	0.00	-
in this essay	7	92	7	01.1	0.63	1	99	1	0.02	-0.01
in the main part of the essay	1	98	1	0.02	-0.01	0	100	0	0.00	-
this essay	15	84	16	0.25	0.75	3	97	3	0.05	0.42
this paper	4	95	6	0.09	0.43	0	100	0	0.00	-
the aim of this essay/paper	3	96	3	0.05	0.43	0	100	0	0.00	-
talk about	1	98	1	0.02	-0.01	0	100	0	0.00	-
refer to	2	97	2	0.03	0.29	0	100	0	0.00	-
be discussed	10	89	11	0.17	0.68	0	100	0	0.00	-
as counter arguments	1	98	1	0.02	-0.01	0	100	0	0.00	-
would like to	2	97	2	0.03	0.29	2	98	4	0.06	0.29
FM Shift topic types	**NNS**					**NS**				
	essays using	essays not using	tokens *(f)*	*rf*	JD	essays using	essays not using	tokens *(f)*	*rf*	JD
back to	1	98	1	0.02	-0.01	0	100	0	0.00	-
before	1	98	1	0.02	-0.01	0	100	0	0.00	-
in contrast	3	96	3	0.05	0.43	0	100	0	0.00	-
in regard to	1	98	1	0.02	-0.01	0	100	0	0.00	-
now	2	97	3	0.05	0.25	8	92	8	0.12	0.66
on the plus side	1	98	1	0.02	-0.01	0	100	0	0.00	-
regarding	2	97	3	0.05	0.25	0	100	0	0.00	-
opposing arguments	1	98	1	0.02	-0.01	0	100	0	0.00	-
this brings us to	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
to counter	1	98	2	0.03	-0.01	0	100	0	0.00	-

Table B5 Transition markers

Transition markers types	NNS					NS				
	essays using	essays not using	tokens *(f)*	*rf*	JD	essays using	essays not using	tokens *(f)*	*rf*	JD
accordingly	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
additionally	4	95	4	0.06	0.51	0	100	0	0.00	1.00
again	1	98	1	0.02	-0.01	4	96	5	008	0.47
and	95	4	488	7.60	0.94	94	6	453	6.97	0.93
also	76	23	185	2.88	0.91	76	24	206	3.17	0.90
along with	4	95	4	0.06	0.51	8	92	8	0.12	0.66
after all	3	96	3	0.05	0.43	8	92	10	0.15	0.63
although	17	82	31	0.48	0.74	29	71	43	0.66	0.81
as a result	4	95	4	0.06	0.51	13	87	17	0.26	0.71
as well as	11	88	16	0.25	0.69	17	83	23	0.35	0.75
at the same time	5	94	5	0.08	0.56	6	94	6	0.09	0.60
because	78	21	225	3.50	0.90	57	43	133	2.05	0.86
besides	4	95	4	0.06	0.51	7	93	7	0.11	0.63
but	88	11	358	5.57	0.93	87	13	269	4.14	0.93
consequently	7	92	7	0.11	0.63	5	95	7	0.11	0.49
contrarily	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
conversely	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
ergo	2	97	2	0.03	0.29	0	100	0	0.00	1.00
even so	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
even though	31	68	48	0.75	0.82	6	94	9	0.14	0.58
for that reason	2	97	2	0.03	0.29	0	100	0	0.00	1.00
further	1	98	2	0.03	-0.01	0	100	0	0.00	1.00
furthermore	41	58	54	0.84	0.85	2	98	2	0.03	0.29
hence	8	91	8	0.12	0.66	4	96	4	0.06	0.50
however	48	51	94	1.46	0.87	66	34	122	1.88	0.90
in addition	17	82	21	0.33	0.75	6	94	6	0.09	0.60
in contrast	2	97	2	0.03	0.29	0	100	0	0.00	1.00
instead of	14	85	20	0.31	0.72	11	89	12	0.18	0.70
in turn	1	98	1	0.02	-0.01	7	93	8	0.12	0.61
in spite of	2	97	2	0.03	0.29	1	99	1	0.02	-0.01
lead to	15	84	17	0.26	0.75	4	96	8	0.12	0.44
likewise	1	98	1	0.02	-0.01	1	99	5	0.08	-0.01
moreover	33	66	38	0.59	0.85	2	98	3	0.05	0.25
nevertheless	8	91	10	0.16	0.64	3	97	3	0.05	0.42
nonetheless	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
notwithstanding	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
on the contrary	2	97	2	0.03	0.29	4	96	4	0.06	0.50
on the other hand	57	42	64	1.00	0.90	11	89	12	0.18	0.70
other than that	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
rather	26	73	35	0.54	0.80	27	73	41	0.63	0.80
result in	8	91	9	0.14	0.64	10	90	12	0.18	0.68
similarly	1	98	1	0.02	-0.01	5	95	5	0.08	0.56

since	20	79	28	0.44	0.76	18	82	21	0.32	0.77
so	42	57	64	1.00	0.85	37	63	66	1.01	0.82
still	6	93	6	0.09	0.60	3	97	3	0.05	0.42
then again	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
thereby	2	97	2	0.03	0.29	1	99	1	0.02	-0.01
therefore	42	57	67	1.04	0.86	37	63	63	0.97	0.83
though	7	92	10	0.16	0.58	20	80	25	0.38	0.78
thus	13	86	16	0.25	0.72	13	87	18	0.28	0.69
whereas	4	95	4	0.06	0.51	6	94	6	0.09	0.60
while	42	57	69	1.07	0.86	15	85	21	0.32	0.72
yet	10	89	14	0.22	0.66	22	78	35	0.54	0.77

Appendix C List of interactional metadiscourse types, number of essays containing/not containing interactional metadiscourse types, number of tokens, frequency and relative frequency of interactional metadiscourse, Juilland's D values for interactional metadiscourse types in the NNS and the NS corpus

Table C1 Attitude markers

Attitude markers types	NNS					NS				
	essays using	essays not using	tokens *(f)*	*rf*	JD	essays using	essays not using	tokens *(f)*	*rf*	JD
agree	8	91	11	0.17	0.61	12	88	15	0.23	0.71
appropriate	2	97	3	0.05	0.25	1	99	1	0.02	-0.01
astonishing	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
basic	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
be inclined to	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
disagree	6	93	6	0.09	0.60	1	99	1	0.02	-0.01
essential	2	97	2	0.03	0.29	1	99	1	0.02	-0.01
essentially	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
even x	8	91	8	0.12	0.66	11	89	13	0.20	0.69
expected	3	96	3	0.05	0.43	6	94	6	0.09	0.60
fair	4	95	4	0.06	0.51	6	94	7	0.11	0.58
hopefully	2	97	2	0.03	0.29	2	98	2	0.03	0.29
good	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
important	17	82	26	0.40	0.73	15	85	22	0.34	0.73
importantly	1	98	1	0.02	-0.01	3	97	3	0.05	0.42
inclined to X	3	96	3	0.05	0.43	0	100	0	0.00	1.00
judging by	1	98	1	0.02	-0.01	0	100	0	0.00	100
interesting	1	98	1	0.02	-0.01	1	99	2	0.03	-0.01
subject to	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
logical	3	96	3	0.05	0.43	5	95	5	0.08	0.56
luckily	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
natural	2	97	2	0.03	0.29	6	94	7	0.11	0.58
naturally	2	97	2	0.03	0.29	3	97	5	0.08	0.33
notable	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
main X	25	74	32	0.50	0.81	13	87	20	0.31	0.70
popular	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
prefer	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
preferable	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
shocking	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
striking	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
unfortunately	8	91	9	0.14	0.64	8	92	11	0.17	0.63
unusual	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
usual	1	98	1	0.02	-0.01	0	100	0	0.00	1.00

Table C2 Boosters

Boosters types	NNS					NS				
	essays using	essays not using	tokens (f)	rf	JD	essays using	essays not using	tokens (f)	rf	JD
above all	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
actually	27	72	38	0.59	0.81	12	88	14	0.22	0.71
always	43	56	78	1.21	0.85	19	81	28	0.43	0.77
based on	1	98	2	0.03	-0.01	3	97	4	0.06	0.39
believe	13	86	17	0.26	0.72	42	58	66	101	0.85
bet	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
certain	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
certainly	9	90	11	0.17	0.66	17	83	21	0.32	0.76
clear	5	94	6	0.09	0.53	4	96	6	0.09	0.42
clearly	4	95	4	0.06	0.51	9	91	10	0.15	0.66
definitely	8	91	11	0.17	0.61	2	98	2	0.03	0.29
establish	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
evidence	1	98	1	0.02	-0.01	10	90	13	0.20	0.66
evident	3	96	4	0.06	0.39	2	98	3	0.05	0.25
evidently	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
find	3	96	3	0.05	0.43	10	90	10	0.15	0.70
in fact	5	94	5	0.08	0.56	18	82	23	0.35	0.75
indeed	9	90	11	0.17	0.64	14	86	17	0.26	0.72
indisputably	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
know	3	96	3	0.05	0.43	3	97	4	0.06	0.39
must	2	97	2	0.03	0.29	7	93	11	0.17	0.59
never	28	71	47	0.73	0.80	10	90	10	0.15	0.70
no doubt	1	98	1	0.02	-0.01	2	98	2	0.03	0.29
obvious	11	88	12	0.19	0.70	12	88	13	0.20	0.72
obviously	6	93	7	0.11	0.58	5	95	5	0.08	0.56
of course	14	85	19	0.30	0.72	20	80	23	0.35	0.79
prove	13	86	16	0.25	0.72	14	86	17	0.26	0.73
realize	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
really	7	92	9	0.14	0.61	5	95	8	0.12	0.44
show	18	81	19	0.30	0.78	22	78	38	0.58	0.72
showcase	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
sure	6	93	6	0.09	0.60	10	90	12	0.18	0.68
surely	10	89	14	0.22	0.66	9	91	12	0.18	0.64
the fact is	3	96	8	0.12	0.39	2	98	2	0.03	0.29
think	24	75	36	0.56	0.80	2	98	6	0.09	0.14
to a certain degree	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
truly	4	95	4	0.06	0.51	2	98	2	0.03	0.29
true	20	79	24	0.37	0.78	14	86	17	0.26	0.72
undeniable	2	97	2	0.03	0.29	0	100	0	0.00	1.00
undeniably	4	95	4	0.06	0.51	0	100	0	0.00	1.00
undoubtedly	4	95	4	0.06	0.51	5	95	6	0.09	0.53
unquestionable	3	96	3	0.05	0.43	0	100	0	0.00	1.00

without a doubt	3	96	3	0.05	0.43	2	98	2	0.03	0.29

Table C3 Engagement markers

Engagement markers types	NNS					NS				
	essays using	essays not using	tokens *(f)*	*rf*	JD	essays using	essays not using	tokens *(f)*	*rf*	JD
assume	2	97	3	0.05	0.25	2	98	2	0.03	0.29
apply	8	91	9	0.14	0.64	4	96	4	0.06	0.50
analyze	3	96	3	0.05	0.43	21	79	31	0.48	0.76
choose	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
consider	2	97	3	0.05	0.25	7	93	14	0.22	0.51
find	1	98	1	0.02	-0.01	2	98	2	0.03	0.29
let's	1	98	1	0.02	-0.01	0	100	0	0.00	1.00
let us	2	97	3	0.05	0.25	2	98	2	0.03	0.29
look at	4	95	4	0.06	0.51	4	96	7	0.11	0.38
need to	4	95	5	0.08	0.48	0	100	0	0.00	1.00
refer	1	98	2	0.03	-0.01	1	99	1	0.02	-0.01
remember	1	98	1	0.02	-0.01	2	98	2	0.03	0.29
must	2	97	2	0.03	0.29	7	93	10	0.15	0.58
see	7	92	7	0.11	0.63	7	93	7	0.11	0.63
should	2	97	2	0.03	0.29	7	93	8	0.12	0.61
take a look	3	96	3	0.05	0.43	0	100	0	0.00	1.00
think about	1	98	1	0.02	-0.01	1	99	1	0.02	-0.01
one	13	86	17	0.26	0.65	11	89	13	0.20	0.69
us	3	96	4	0.06	0.39	2	98	2	0.03	0.29
you	1	98	2	0.03	-0.01	9	91	22	0.34	0.53
we	6	93	9	0.14	0.58	2	98	3	0.05	0.25

Table C4 Hedges

Hedges types	NNS					NS				
	essays using	essays not using	tokens *(f)*	rf	JD	essays using	essays not using	tokens *(f)*	rf	JD
almost	23	76	29	0.45	0,80	18	82	19	0.29	0.78
apparent	2	97	3	0.05	0,25	3	97	3	0.05	0.42
appear	2	97	2	0.03	0,29	11	89	11	0.17	0.71
approximately	1	98	1	0.02	-0,01	1	99	1	0.02	-0.01
argue	24	75	31	0.48	0,81	24	76	40	0.62	0.77
around	1	98	1	0.02	-0,01	3	97	3	0.05	0.42
assume	2	97	4	0.06	0,21	1	99	2	0.03	-0.01
certain amount	1	98	1	0.02	-0,01	0	100	0	0.00	1.00
certain level of	3	96	3	0.05	0,43	0	100	0	0.00	1.00
claim	15	84	25	0.39	0,72	18	82	34	0.52	0.71
could	15	84	21	0.33	0,72	54	46	105	1.61	0.87
essentially	1	98	1	0.02	-0,01	1	99	1	0.02	-0.01
frequently	4	95	7	0.11	0,38	3	97	3	0.05	0.42
from my perspective	2	97	2	0.03	0,29	0	100	0	0.00	1.00
generally	5	94	6	0,09	0,53	5	95	5	0.08	0.56
imply	4	95	4	0.06	0,51	5	95	6	0.09	0.53
indicate	1	98	1	0.02	-0,01	0	100	0	0.00	1.00
in general	20	79	30	0.47	0,76	7	93	8	0.12	0.61
in most cases	7	92	9	0.14	0,58	2	98	2	0.03	0.29
in my opinion	27	72	28	0.44	0,83	6	94	8	0.12	0.57
in some cases	3	96	3	0.05	0,43	6	94	6	0.09	0.60
in some ways	1	98	1	0.02	-0,01	1	99	1	0.02	-0.01
largely	5	94	5	0.08	0,56	1	99	1	0.02	-0.01
likely	8	91	10	0.16	0,64	15	85	20	0.31	0.69
mainly	5	94	6	0.09	0,53	7	93	8	0.12	0.61
may	30	69	55	0.86	0,80	60	40	144	2.21	0.87
maybe	10	89	13	0.20	0,68	10	90	15	0.23	0.60
might	24	75	50	0.78	0,73	19	81	23	0.35	0.77
mostly	17	82	20	0.31	0,76	2	98	2	0.03	0.29
not clear	1	98	1	0.02	-0,01	1	99	1	0.02	-0.01
often	45	54	83	1.29	0,85	7	93	7	0.11	0.63
on the whole	1	98	1	0.02	-0,01	2	98	2	0.03	0.29
ought	1	98	1	0.02	-0,01	0	100	0	0.00	1.00
perhaps	2	97	3	0.05	0,25	17	83	23	0.35	0.75
plausible	1	98	1	0.02	-0,01	3	97	3	0.05	0.42
possible	1	98	1	0.02	-0,01	7	93	11	0.17	0.55
possibly	3	96	3	0.05	0,43	5	95	5	0.08	0.56
presumably	2	97	2	0.03	0,29	0	100	0	0.00	1.00
probably	13	86	13	0.20	0,74	13	87	19	0.29	0.71
quite	3	96	4	0.06	0,39	11	89	13	0.20	0.69
rather	6	93	6	0.09	0,60	5	95	5	0.08	0.56
relatively	10	89	1	0.02	-0,01	0	100	0	0.00	1.00

seem	21	78	37	0.58	0,77	5	95	6	0.09	0.53
should	11	88	13	0.20	0,70	2	98	2	0.03	0.29
sometimes	17	82	24	0.37	0,75	1	99	1	0.02	-0.01
somewhat	2	97	2	0.03	0,29	6	94	6	0.09	0.60
suggest	1	98	1	0.02	-0,01	6	94	7	0.11	0.58
supposed to	5	94	8	0.12	0,51	4	96	4	0.06	0.50
tend to	15	84	20	0.31	0,74	5	95	6	0.09	0.53
usually	21	78	29	0.45	0,77	10	90	14	0.22	0.68
would	71	28	207	3.22	0,89	74	26	335	5.15	0.87

Table C5 Self-mention

	NNS					NS				
Self-mention types	**essays using**	**essays not using**	**tokens *(f)***	***rf***	**JD**	**essays using**	**essays not using**	**tokens *(f)***	***rf***	**JD**
I	43	56	90	1.40	0.83	65	35	256	3.94	0.87
me	4	95	5	0.08	0.48	8	92	13	0.20	0.62
my	40	59	56	0.87	0.83	22	78	37	0.57	0.77
we	1	98	1	0.02	-0.01	0	100	0	0.00	1.00

10. SUMMARY

The present study is a cross-cultural, corpus-based, genre-based study. The main objective of the study is to examine the use of metadiscourse in student academic writing and examine the possible variations in the use and distribution patterns of both interactive and interactional metadiscourse between the non-native and native speakers of English. To that aim, two comparable corpora of argumentative essays written by non-native and native English speakers are compared.

The overall results show that that the non-native speakers tend to use metadiscourse markers more frequently than the native speakers, though not significantly so. A shared characteristic among the non-native and native writers is a relatively low lexical variation in the use of metadiscourse, indicating tendency to reuse specific markers, rather than diversifying their usage. With respect to preferences for interactive versus interactional metadiscourse categories, another notable parallel emerges in the shared emphasis on interactive metadiscourse. The results show that the non-native corpus demonstrates a more frequent use of interactive metadiscourse while the native corpus demonstrates a more frequent use of interactional metadiscourse. Although the difference in the use of both interactive and interactional metadiscourse is not significant between the two groups of speakers, this contrast still highlights differences in the two groups' rhetorical strategies. Another parallel trend between the two corpora is evident in the order of frequency of interactive and interactional metadiscourse categories, with transition markers being most common among interactive categories and hedges among interactional categories. However, the non-native writers use transition markers and frame markers more frequently than the native writers, while self-mention markers are more common in the native speakers' writing.

With respect to distribution patterns across individual essays, a noticeable distinction emerges in a more balanced use of all interactive markers by the non-native writers and a more balanced use of the interactional category of hedges by the native speakers. Differences in distribution patterns also reveal that while the native writers distribute interactive and interactional metadiscourse markers more or less evenly throughout their essays, the non-native writers exhibit an intriguing preference for using both interactive and interactional markers more frequently in the concluding paragraph. Additionally, the analysis of distribution patterns of interactive metadiscourse categories shows no significant differences between the two groups of speakers apart from the use of transition markers which are significantly more frequently used by the non-native speakers in

the body and conclusion paragraphs. Frame markers are another category where the non-native writers exhibit a significantly higher frequency consistently across all three paragraphs. In terms of distribution patterns of interactional metadiscourse categories, the results reveal significant discrepancies. While the non-native speakers employ hedges more frequently in the introduction paragraph, the use of hedges is more balanced throughout all three paragraphs by the native writers. Engagement markers display a considerably higher frequency in the body paragraph in the native speakers' essays compared to the non-native speakers' essays. Self-mention markers also show notable differences, with the native writers using them more frequently in the introduction and body paragraphs, while the non-native writers prominently use them in the concluding paragraph. The study also highlights disparities the particular linguistic items employed to realize metadiscourse functions, particularly in the use of frame markers, engagement markers, hedges, and self-mention markers. The non-native speakers rely more heavily on a limited set of frame markers and lack engagement markers. Both groups prefer generalizing statements and maintaining objectivity by using impersonal forms and avoiding self-representation. The pronounced scarcity of self-representation in the non-native writing as compared to the native writing is speculated to be influenced by cultural factors and educational guidelines emphasizing objectivity.

In sum, this research provides a comprehensive examination of similarities and differences in the frequency and distribution patterns of metadiscourse markers between the non-native and native speakers and how these variations impact the structural and rhetorical elements of argumentative essays. The study is likely to motivate further research into academic writing conventions in L2 English and their comparison with those in L1 English.

Key words: academic discourse, argumentative essays, interactive and interactional metadiscourse, non-native and native speakers of English

11. SAŽETAK

Glavni cilj ovog međukulturnog, korpusnog i žanrovski utemeljenog istraživanje jest istražiti uporabu metadiskursnih oznaka u studentskom akademskom pisanju te moguće varijacije u uporabi i obrascima distribucije interaktivnih i interakcijskih metadiskursnih oznaka među neizvornim i izvornim govornicima engleskog jezika. U tu svrhu uspoređuju se korpusi raspravljačkih eseja neizvornih i izvornih govornika engleskoj jezika.

Rezultati pokazuju da su neizvorni govornici skloni učestalijem korištenju metadiskursnih oznaka u odnosu na izvorne govornike, iako ne statistički značajno. Zajednička karakteristika neizvornih i izvornih govornika jest relativno niska leksička varijacija u uporabi metadiskursnih oznaka, što ukazuje na tendenciju opetovanog korištenja specifičnih oznaka, umjesto diverzifikacije njihove uporabe. S obzirom da kod obje skupine govornika prednjače interaktivne metadiskursne kategorije, još jedna važna značajka obaju korpusa jest naglasak na uporabi interaktivnih metadiskursnih oznaka.

Rezultati također pokazuju da korpus neizvornih govornika odlikuje učestalija uporaba interaktivnih metadiskursnih oznaka, dok je uporaba interakcijskih metadiskursnih oznaka u većoj mjeri prisutna kod izvornih govornika. Iako razlika u korištenju interaktivnih i interakcijskih metadiskursnih oznaka nije značajna među dvjema skupinama govornika, ovo ipak naglašava razlike u retoričkim strategijama kojima se koriste. Paralelni trend dvaju korpusa također je uočljiv u redoslijedu učestalosti interaktivnih i interakcijskih metadiskursnih kategorija, pri čemu su *prijelazi* najčešći među interaktivnim kategorijama, a *ograđivači* među interakcijskim kategorijama. Međutim, neizvorni govornici koriste *prijelaze* i *označivače okvira* učestalije od izvornih govornika, dok su oznake *autoreferiranja* u većoj mjeri prisutne u pisanju izvornih govornika.

S obzirom na obrasce distribucije kroz pojedinačne eseje, zamjetna razlika pojavljuje se u ravnomjernijem korištenju svih interaktivnih oznaka u esejima neizvornih govornika te u ravnomjernijoj uporabi interakcijske kategorije *ograđivači* u esejima izvornih govornika. Razlike u obrascima otkrivaju da izvorni govornici rabe interaktivne i interakcijske metadiskursne oznake uglavnom ravnomjerno kroz svoje eseje, dok neizvorni govornici pokazuju znakovitu sklonost učestalije uporabe interaktivnih i interakcijskih oznaka u završnom odlomku. Dodatno, analiza distribucijskih obrazaca interaktivnih metadiskursnih kategorija ne pokazuje značajne razlike

među dvjema skupinama govornika osim uporabe *prijelaza* koji su kod neizvornih govornika znatno češće upotrjebljivani u glavnom dijelu i zaključku eseja. *Označivači okvira* još su jedna kategorija znatno učestalija u cijeloj strukturi eseja neizvornih govornika. U pogledu distribucijskih obrazaca interakcijskih metadiskursnih kategorija, rezultati pokazuju značajna odstupanja. Uporaba *ograđivača* ravnomjernije je raspoređena u strukturi eseja izvornih govornika, dok ih neizvorni govornici najčešće koriste u uvodnom dijelu. U usporedbi s esejima neizvornih govornika, *označivači odnosa prema čitatelju* učestaliji su u glavnom dijelu eseja izvornih govornika. Značajne razlike uočljive su i u uporabi oznaka *autoreferiranja*. Izvorni govornici češće ih koriste u uvodnom i glavnom dijelu, dok ih neizvorni govornici redovitije koriste u završnom dijelu.

Istraživanje također naglašava nejednakosti u uporabi pojedinačnih jezičnih stavki korištenih za realizaciju metadiskursnih funkcija, osobito u uporabi *označivača okvira, označivača odnosa prema čitatelju, ograđivača i autoreferiranja.*

Neizvorni govornici uglavnom se oslanjaju na ograničen skup *označivača okvira*, dok im u esejima manjka *označivača odnosa prema čitatelju*. Obje skupine karakterizira uopćavanje izjava i održavanje objektivnosti uporabom neosobnih oblika i izbjegavanjem samoreprezentacije. Pretpostavlja se da je naglašena nedostatnost samoreprezentacije u esejima neizvornih govornika u usporedbi s esejima izvornih govornika, rezultat kulturnih čimbenika i obrazovnih smjernica koje naglašavaju objektivnost u pisanju.

Zaključno, ovo istraživanje omogućilo je sveobuhvatno ispitivanje sličnosti i razlika u učestalosti i obrascima distribucije metadiskursnih oznaka u raspravljačkim esejima izvornih i neizvornih govornika te kako te varijacije utječu na strukturalne i retoričke elemente eseja.Pretpostavka je da bi ovo istraživanje moglo potaknuti daljnja istraživanja normi akademskog pisanja u engleskom kao drugom ili stranom jeziku i njihovu usporedbu s onima u engleskom jeziku kao prvom jeziku.

Ključne riječi: akademski diskurs, raspravljački eseji, interaktivne i interakcijske metadiskursne oznake, neizvorni i izvorni govornici engleskog jezika.

12. BIOGRAPHY

Sanja Vakanjac Ivezić was born in Osijek on 7 November in 1981. She finished the grammar school in Osijek and enrolled English and German Language and Literature at the former Faculty of Pedagogy in Osijek. In 2006 she earned her graduate degree in English and German Language and Literature from the Faculty of Humanities and Social Sciences in Osijek. For several years she was working as an English and German language teacher at primary and secondary schools in Osijek as well as at the Foreign Language School in Osijek where she taught English and German to learners of different age groups. Since 2007 she has been appointed a permanent court interpreter for English and German language. From 2008 to 2021 she was employed as an English and German teacher in the School of Economics and Administration Osijek. She is a trained assessor and since 2010 to 2021 she was appointed a member of assessment group for the National School-leaving Exam in English language. Since 2021, she has been employed at the Croatian Academic and Research Network - CARNET in the Education Support Sector, where she is involved in implementing activities related to the application of digital technologies in learning and teaching. In 2008, she enrolled the PhD studies in Linguistics at the Faculty of Humanities and Social Sciences in Osijek. Her major interests include academic writing with the focus on features of metadiscourse in student academic writing.