

**AN ANALYSIS OF EVIDENTIALITY
IN ELT DISSERTATION DISCUSSIONS
BY NATIVE AND NON-NATIVE
ENGLISH WRITERS
PhD DISSERTATION
Mustafa YILDIZ
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**AN ANALYSIS OF EVIDENTIALITY IN ELT DISSERTATION
DISCUSSIONS BY NATIVE AND NON-NATIVE ENGLISH WRITERS**

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PhD DISSERTATION

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ABSTRACT

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Anadolu University, Graduate School of Educational Sciences, January 2018
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Different genres both vary with one another in the use of reliable knowledge as content and show a variety of tendencies in speaker/writer commitment to the validity of the proposition. A piece of rumor and a report based on a scientific observation, for example, consist of neither knowledge with an equally high degree of reliability nor an equally high degree of speaker/writer commitment. Genres differ in terms of the choice of formal vs. informal lexical items, the use of tense, aspect and temporal reference, evidential and epistemic markers. In this study, evidentiality is investigated in its broadest sense (Chafe, 1986) in the present study. Chafe's taxonomy (1986) revised by taking Ifantidou's (2001) suggestions has been applied to three different groups of datasets, including one group of native speakers of English and two groups of non-native speakers; those who have Turkish L1 and other languages as L1 backgrounds. These three groups of data sets are examined to investigate whether the native language of the learner would make any differences in the choice of evidential markers. The results show that the native speakers of English use evidential markers more frequently compared to the non-native authors. In addition, regarding the Native Language/Interlanguage comparison in Contrastive Interlanguage Analysis (Granger, 1996, 1998), the overall use of evidentiality reveals that the non-native authors do not show native-like features in the use of evidentiality. As for the Interlanguage/Interlanguage comparison, Turkish authors of academic texts differ in terms of the use of evidentiality from the authors with various native language backgrounds.

Keywords: Evidentiality, Epistemic modality, Contrastive interlanguage analysis, Academic genre

ÖZET

İNGİLİZCE'Yİ ANADİL VE YABANCI DİL OLARAK KONUŞAN YAZARLARIN DOKTORA TEZLERİNDEKİ KANITSALLIK KULLANIMININ ÇÖZÜMLEMESİ

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Farklı türler, hem içerik olarak güvenilir bilgi kullanımında birbirlerinden farklılaşmaktadırlar, hem de önermenin doğruluğuna dair konuşmacı/yazar üstlenmesine dair çeşitli eğilimler göstermektedirler. Örneğin, söylenti ve bilimsel gözleme dayalı bir rapor, ne eşit derecede yüksek güvenli bilgi, ne de eşit derecede yüksek konuşmacı/yazar üstlenmesi içermektedirler. Resmi ve resmi olmayan sözcük seçimi, zaman, bakış ve zamansal göndermenin yanı sıra, mevcut çalışmada en geniş anlamlarıyla ele alınan Kanıtsallık ve Bilgisel Kiplik (Chafe, 1986), farklı içeriklerde farklılık yaratan kavramlardır. Bu çalışmada, akademik yazının bir örneği olarak, doktora tezleri kanıtsallık kullanımını açısından analiz edilmiştir. Biri İngilizce'nin anadil konuşuru, diğer ikisi İngilizce'nin anadil konuşuru olmayan, biri Türkçe ve diğeri farklı anadillere sahip toplamda üç farklı gruba ait veri setine, Ifantidou'dan (2001) önerilerle gözden geçirilen Chafe'in sınıflandırması (1986) uygulanmıştır. Bu üç veri seti grubu, anadilin kanıtsallık işaretleyicisi kullanımında herhangi bir farklılığa neden olup olmadığını araştırmak amacıyla incelenmiştir. Sonuçlar kısaca anadili İngilizce olanların, anadili İngilizce olmayan yazarlara kıyasla daha sık kanıtsallık belirteci kullandıklarını göstermektedir. Ek olarak, Karşılaştırmalı Aradil Analizi'ndeki Anadil/Aradil Karşılaştırması açısından (Granger, 1996, 1998) genel kanıtsallık kullanımı, anadili İngilizce olmayan yazarların anadili İngilizce olan yazarlarla, kanıtsallık kullanımı açısından, benzerlik göstermediklerini ortaya koymaktadır. Aradil/Aradil Karşılaştırması açısından, anadili İngilizce olmayan veritabanlarındaki kanıtsallık kullanımı birbirlerine benzememektedir.

Anahtar Sözcükler: Kanıtsallık, Bilgisel kiplik, Karşılaştırmalı aradil analizi,
Akademik tür

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Having inspired by the topic of my dissertation, writing the page of acknowledgments at that moment turns into a kind of evidence letting me infer that I am about to reach the end of pursuing a PhD degree, which switches a poker face with a grin from ear to ear. I am happy to have learned a lot throughout my PhD education process in the last five years, and happier to know that I am at the gate of departure for the new issues to learn and investigate.

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Mustafa YILDIZ
Eskişehir 2018

In Memory of My Parents,
Dear Mother, Şerife YILDIZ
Dear Father, Ömer YILDIZ
My First and Best Teachers ever!

05/01/2018

STATEMENT OF COMPLIANCE WITH ETHICAL PRINCIPLES AND RULES

I hereby truthfully declare that this dissertation is an original work prepared by me; that I have behaved in accordance with the scientific ethical principles and rules throughout the stages of preparation, data collection, analysis and presentation of my work; that I have cited the sources of all the data and information that could be obtained within the scope of this study, and included these sources in the references section; and that this study has been scanned for plagiarism with “scientific plagiarism detection program” used by Anadolu University, and that “it does not have any plagiarism” whatsoever. I also declare that, if a case contrary to my declaration is detected in my work at any time, I hereby express my consent to all the ethical and legal consequences that are involved.

Mustafa YILDIZ

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LIST OF ABBREVIATIONS

NSE	: Native Speakers of English
NST	: Native Speakers of Turkish
NSEd	: Native Speakers of English Database
NSTd	: Native Speakers of Turkish Database
WEd	: World English Database
LL	: Log-Likelihood
L1	: First Language
PhD	: Philosophy of Doctorate
Edd	: Doctorate in Education
MA	: Master of Arts
ESP	: English for Specific Purposes
NL	: Native Language
IL	: Interlanguage

CHAPTER ONE

1. INTRODUCTION

1.1. Background to the Study

English has become *Lingua Franca* among academics to convey the results of scientific research or a scientific observation to large masses. In the last few decades, it has gained a gradual improvement in becoming a leading language in the academic field, especially in international contexts. English started to develop as the dominant language in the field of science with the transfer of economic and political power to English speaking countries after World War II. Since then, it has been a medium for international communication among academics (Benfield&Howard, 2000; Crystal, 2003; Tardy, 2004).

A vast majority of scientific journals publish academic works in English. For example, even in 2003, 74 percent of 40.770 academic journals indexed in Ulrich's Periodical Directory were released in English (Curry&Lillis, 2004, p. 663). The escalation in the number of English articles in the field of medicine surged from 72.2% to 88.6% between the years of 1980 and 1986; whereas the decline of the number of German articles weakened from 5.8% to 2.2% in the same field between the same years (Benfield & Howard, 2000, p. 643). These are specific examples referring to the dominance of English in the scientific area. Concerning another journal database, in addition to the Ulrich's Periodical Directory, Van Leeuwen et al. (2001) contribute supportive information by stating that the Science Citation Index (SCI) considerably lacks the non-English medium journals published in relatively big countries such as Germany and France where English is not the primary language (p. 336). To take this point further, the vast majority of English-medium journals published in non-English speaking countries implicitly draw attention to the hegemony of English in academic writing.

In order to supply the flow of information between the researchers and the audiences, the use of English in an efficient way in academic writing has a particular importance. The researchers have an impact on various audiences and get beyond the state lines by means of their scientific reports. For example, specifically, preferability of publishing an article in an international academic journal is highly coveted; in other words, academic recognition is obvious across academics so as to announce the results

of the studies submitted to a great number of readers from all around the world to the greatest possible degree. Huang (2010) carries the subject-matter one step further by underlining that “publication in international journals has become a prerequisite to PhD graduation (p. 33)”. At this point, it should be emphasized that researchers must be able to use English appropriately and efficiently in academic contexts. That is to say, a researcher must be competent enough in academic writing to fulfill some requirements such as the acceptance of a manuscript for review and publication, and to reach out the academics from all over the world to share the development in the field, and so forth. A manuscript or a scientific report should meet some requirements to be assumed acceptable. Namely, the academics’ written products should possess some kinds of features to be entitled as academic writing. The present study investigates one of these characteristics, evidentiality, and accounts for its importance for academic writing. Evidentiality, in the broadest sense, consists of not only the way the knowledge is attained, but also, the rate of reliability the author possesses in his/her proposition. It notifies the interlocutor about to what extent the input provided by the author is valid/reliable. Furthermore, the proposition in the text, in some ways, indicates how the author attains the knowledge.

As an important characteristic and requirement to be fulfilled, evidentiality in academic writing is an important issue the academic writers should utilize consciously in the writing process. Both the source of the knowledge and the rate of reliability are the elements informing the quality of the content. Academic writing differs from the rest of the genres with regard to both the source of the knowledge and the rate of the reliability of the text. The authors should pay strict attention to the exact use of these phenomena to provide both the formality in academic writing and the readers’ satisfaction with the content of the scientific report.

1.2. Statement of the Problem

Different genres necessitate different sources of information and different degrees of persuasiveness and reliability/certainty. While the third person narrator is easy to decode in fiction, people try to get to the bottom of the source of knowledge or information in a more realistic situation, for example, in academic texts. Moreover, gossip news and a report based on a scientific analysis do not leave the same impression on the readers/listeners in terms of the credibility and reliability. For example, while the

source of the information is based upon the grapevine in magazine news, the reader of an academic product is interested in not only the written information but also the sources of information. Citations and referring to some other authors as kinds of evidentials (Chafe 1986, pp. 268-269) are examples of evidentiality which is undoubtedly the linguistic means creating differences between different genres. Hyland (2005) defines evidentials in academic writing as “community-based literature” and they ensure an important support for the author’s argumentation with a persuasive effect on the reader (p. 51).

Academic writing, as a kind of genre, requires the authors to be clear and precise. Gillett, Hammond, and Martala (2009) underline that the writers in academic writing are “expected to produce logically-structured ideas with well-argued, substantiated points, taking different opinions into consideration (p. 88)”. Listing essays, reports, lab reports, case studies and dissertations as different genres of academic writing, they assert that, whichever the genre may be, the writer should utilize the same style in all kinds of academic writing (p. 88). There is no room for doubt in scientific speech and manuscript. What is written and spoken are under the academic’s responsibility in the light of conducted investigations. The question of to what extent the academics enable this certainty and reliability on the reader in their studies/texts is the underlying research problem of the present study.

With a wide variety of different forms, writing is one of the most efficient tools for exchanging ideas and for communication among human beings. In the academic field, academic writing is a means of exchanging ideas between academics and making contact with one another. Oshima and Hogue (2007) set apart academic writing from creative writing and personal writing. While they entitle creative and personal writing as informal, academic writing is entitled as the formal type. Therefore, the natural use of slang, abbreviations and contractions in creative and personal writing is prohibited in academic writing. They also add the necessity of using complete sentences not forgetting the sentence organization in academic writing (p. 3). Dealing with the grammatical complexity of academic writing, Biber and Gray (2016) suggest that the language of academic writing is unique and distinct from both everyday speech and other registers of English because the underlying aim is to turn it into a complex form and principally influencing the reader instead of communicating ideas (p. 1). It is

inferred that in just conveying messages in a simple way when it comes to academic writing this should not be a reason for preference.

Epstein, Kenway, and Boden (2005) draw attention to the importance of writing and publishing by admitting that academic activities provide rewards for academics at the end. They allege that “there is little more satisfying than getting your first article or book published and feeling that you have produced something of real value” and add that the writers have something entitled as a secret to learn in order to work as professionals (p. 10). Simply put, by addressing positive reinforcement feature of academic writing, the authors underline that academic writing is a learnable activity and a component of professionalism. If something is learnable, there must be some characteristics to study on in order to internalize. If academic writing is a profession, there must be some phenomena the academic writers are good at utilizing them. It can be put forward that evidentiality is a phenomenon whose effect on academic writing is undeniable. In its most clear-cut form, academic writing is a way of communication among academics about the new trends in the field. The writers have to reveal the source of the information they present and how they attain the knowledge, whether they come to a particular conclusion as a result of visual, auditory, perceptual, hearsay, or deduced evidence.

1.3. The Purpose of the Study

Evidentiality as a linguistic system is dealt with from many aspects. While some researchers investigate the issue under the narrow view of evidentiality (Kim, 2005; Hsieh, 2008; Clark, 2010), some keep track of the broad view to examine the current topic (Koutsantoni, 2005; Bednarek, 2006; Fetzer, 2014). Furthermore, the acquisition of evidentiality in various languages, (Aksu-Koç, 1988; 2000; O’Neill&Atance, 2000; Ifantidou, 2005 in Greek; Oztürk, 2008; Aydın&Ceci, 2009 in Turkish; Fitneva, 2008 in Bulgarian; Jeschull&Roeper, 2009; Rett&Hyams, 2014 in English; Koring&Mulder, 2014 in Dutch) is investigated. In addition to these studies, different genres become the subject of various research. Newspaper reportages (Bednarek, 2006 in English); newspaper corpora (Clark, 2010 in English); newspaper article (Sbisa, 2014 in English); newspaper reports (Hsieh, 2008 in Chinese); research articles (Fetzer, 2014 in English; Koutsantoni, 2005 in English and Greek; Yang, 2012 in English by Chinese and NSE authors; Yang, 2013; Yang, 2014) are the examples of various genres used as data

source for examining evidentiality in a diverse range of genres. Even though those investigations are predominantly based on the written data, very little research analyzes spoken data to bring the use of evidentiality to light (interview corpus in French-English bilingual discourse in King&Nadasdi, 1999; both spoken and written data in Dutch and German in Nuyts, 2001; telephone conversations in Korean in Kim, 2005; political quarrel in English in Berlin&Prieto-Mendoza, 2014).

As distinct from this research with regard to the type of the data investigated, the present study investigates the use of evidentiality under the broad view in ‘discussion’ or ‘discussion and conclusion’ chapters of the dissertations. The main aim of this study is to determine how PhD candidates express themselves in terms of evidentiality in conducting a dissertation as an academic genre. The study also attempts to reveal to what extent the certainty/uncertainty is conveyed in dissertations and to investigate the way PhD candidates put into words how they attain the knowledge. Furthermore, the present research both attempts to determine firstly whether the use of evidentiality in non-native texts differs when it is based on the L1 background of PhD candidates, and also investigates whether the non-native PhD candidates use features similar to the native speakers in the use of evidentiality.

1.4. Significance of the Study

The present study focuses on the use of evidential markers in PhD dissertations written in English by the native Turkish speaking authors, native English speaking authors, and the authors with various L1 backgrounds. It aims to contribute to the literature within the field of evidentiality in academic writing, dissertations in particular. It seeks for the frequency of use of evidential markers in each of the three databases to investigate the use of evidential markers. Furthermore, it attempts to reveal whether these three groups differ from one another in terms of the use of evidential markers. The present study may have implications for the teaching of academic writing at graduate and under-graduate levels by raising awareness in academic writing. It further attempts to raise consciousness on the writers to understand the use of evidential markers in the right place at the right time, and to give rise to the development of the conscious authors about academic writing.

1.5. Research Questions

1. What is the frequency of use of evidential markers defined in Chafe's taxonomy (1986) revised by taking Ifantidou's (2001) suggestions in the dissertation discussions of each of the three groups of writers?
 - 1a. What is the frequency of use of evidential markers in the Native Speakers of Turkish Database (NSTd)?
 - 1b. What is the frequency of use of evidential markers in the Native Speakers of English Database (NSEd)?
 - 1c. What is the frequency of use of evidential markers in the World English Database (WEd)?

2. Is there any statistical difference among the three groups of writers in terms of the use of evidentiality?
 - 2a. Is there any statistical difference between the NSEd and the NSTd with regard to the use of evidentiality?
 - 2b. Is there any statistical difference between the NSEd and the WEd with regard to the use of evidentiality?
 - 2c. Is there any statistical difference between the NSTd and the WEd with regard to the use of evidentiality?

1.6. Rationale for the Study

The present study investigates the dissertation discussions as a genre of academic writing to shed light on the three groups of writers' use of evidentiality and to reveal whether they differ with regard to the use of evidentiality. In other words, it attempts to reveal whether the non-native authors show native-like features in the use of evidentiality and whether their use of evidentiality differs from each other.

The nature of evidentiality is in harmony with some requirements of academic writing. There are several reasons of why the researcher prefers the use of dissertations as data, and several remarks indicating that evidentiality and academic writing are the two phenomena integrated into each other.

First, academic writing is based on evidence instead of opinion or thought. The researchers have to support their ideas with facts and evidence in academic writing. The evidence on its own means evidentiality. In academic writing, the authors collect data

through, for example, experiments, surveys, interviews, observations, etc; leading to a conclusion. On the one hand, researchers have first-hand knowledge in consequence of a laboratory experiment and write a scientific report based on visual evidence. Moreover, researchers may conduct an interview with participants to collect data. By processing the data of interviews, they draw up a report based on auditory evidence. Both visual and auditory evidence are the examples of direct evidence. Alternatively, researchers have a chance to make an investigation through the instrument of questionnaires or surveys. Examining the data attained through these instruments, they come to a conclusion based on inference or deduction. Inference and deduction are the indirect evidence types. (Detailed information about the evidence types is given in Section 2.3 in Chapter 2) That is to say, the results of a piece of academic writing should be based on direct or indirect evidence. The researchers cannot express their wishes and suppositions in academic writing. The evidence is an indispensable part of academic writing and it is the evidentiality itself.

Second, the importance of the source of knowledge is important for both academic writing and evidentiality. The researchers in academic writing, contrary to creative writing, put forward their claim and make a scientific explanation in a scientific research. However, creative writing, for example, is the product of imagination. As such, the difference between these two kinds of writing form is that one is based on the scientific source and the other is based on imagination. The implication of source with regard to evidentiality means the basis of the knowledge. Evidentiality refers to the source of the knowledge. It is interested in whether the knowledge is attained through visual, auditory, sensory, hearsay, etc. as evidence. The authors of academic writing should have a full command of using evidential markers in the process of scientific writing.

Third, referring to someone through citations in academic writing is an example of reportative evidentiality and shows the close association between academic writing and evidentiality. According to Chafe (1986), “in academic writing knowledge obtained through language is indicated with the formal device of citing a reference or personal communication”. These expressions are the examples of hearsay evidentials (pp. 268-269). Every statement put forward by the authors in academic writing should be supported by means of proofs and justifications. The readers of an academic sheet should be informed about how the author’s knowledge is achieved. The authors’

available knowledge is based on some other scientific reports prepared by other authors. It is fair to say that, the authors use evidentiality by referring to these scientific reports to persuade the readers. According to Hyland (2005), the evidentials in academic writing refer to “a community-based literature and provides important support for arguments (p. 51)”. It is worth noting that the authors in academic writing raise the value of reliability of their sayings by virtue of the use of evidentiality. Abdi (2009) lines up behind the importance of evidentiality by claiming that, in research articles, as a genre of academic writing, evidentiality ensures the credibility and the quality of the authors’ propositions. In the absence of evidentials, there is a high probability for research articles to be questioned or to be rejected (p. 10). Evidentiality for academic writing is of vital importance to persuade readers.

Fourth, objectivity is another feature academic writing possesses and directly related to evidentiality. Personal feelings, biases, prejudices do not have an impact on the researchers and the readers. This is somewhat similar to evidentiality. The knowledge available to the writers/speakers has a source. They cannot indicate personal feelings, biases or prejudices as evidence. As Sowton (2011) expresses, the academics are not interested in what you think or what you believe in, instead, they search for outputs you can present and for what you can “prove through evidence (p. 12)”.

Fifth, the use of modality in an efficient way is very important in academic writing. It sometimes serves as a hedging device in texts and to give readers an opportunity to interrogate the views of the authors. The use of *may*, for example, is an example of epistemic modality. It can be interpreted as having epistemic and evidential interpretations. It should be noted that epistemic modality and evidentiality are integrated into each other. The integration of epistemic modality into evidentiality is entitled as the broad view under the issue of evidentiality (Matlock, 1989; Chafe, 1986; Dendale&Tasmowski, 2001; Cornilie, 2009). Section 2.1.4 in Chapter 2 consists of detailed information about both the comparison of evidentiality and modality and the narrow/broad view of evidentiality.

In consideration of the rationale above, academic writing is a learnable activity which is thought at undergraduate and graduate levels. It requires the authors to be well-equipped with writing and to make use of some phenomena about academic writing in an efficient way. Evidentiality is one of these phenomena as the authors of academic writing ensure that they efficaciously utilize evidential markers in their academic

writing. Being knowledgeable with evidentiality the authors would definitely contribute to improving their qualification in academic writing. The present study with its thorough literature review content about evidentiality both raises an awareness on the readers about a more conscious use of evidentiality in academic writing, and contributes to the teaching and learning of academic writing by drawing attention to one of its essential building blocks. Studying on the dissertations as direct examples of academic writing, the present study helps the audiences as learners of academic writing see the actual use of evidentiality in academic data. It may be useful to be aware of the role of evidentiality in academic writing for linguists or applied linguists, which in itself can be illuminating for pedagogical purposes.

1.7. Limitations

The three groups of data come from Native Speakers of Turkish (NST), Native Speakers of English (NSE), and speakers with various L1 backgrounds (WEd), which forms the overall data of the present study, and the size of these three databases is limited to the data from these contributors' dissertations. The data is limited to dissertations within the scope of teaching English and conducted between the years of 2009 and 2016. The data is comprised of 'discussion', or 'discussion and conclusion' chapters of these dissertations. Hence, the results of the study cannot be generalized to the entire academic writing of the authors. Since the data comes from a limited period of time, the results cannot be generalized to a more extended time frame. The data consists of a particular part of dissertations. Hence, the results of the study cannot be extended to each genre of academic writing. The results are limited to the particular parts of dissertations conducted between the years of 2009 and 2016 by the authors with Turkish, English, and various L1s determined in Section 3.3 in Chapter 3.

1.8. Definitions of the Terms

Evidentiality: Evidentiality is the grammatical or lexical codification of the source of knowledge. "Marking one's information source indicates how one learnt something (Aikhenwald, 2004, p.1)". It accounts for how the knowledge shared with the interlocutor is attained. It searches for an answer for such questions: What is the basis of the information? Is it seen, heard, inferred, or deduced by the speaker/writer? How does the speaker/writer know this?

Epistemic Modality: Lyons (1977) defines epistemic modality as “any utterance in which the speaker explicitly qualifies his commitment to the truth of the proposition expressed by the sentence he utters (p. 797)”. In a similar vein, Vold (2006) describes epistemic modality markers as “linguistic expressions that qualify the truth value of a propositional content”, which mark “to what extent one can rely on the information which is being conveyed by the proposition (p. 65)”.

Academic Writing: Academic writing in the simplest form is a piece of text conveying some scientific information in the academic field. Graff and Birkenstein (2014) underline that academic writing cannot be defined as a writer’s expression of ideas. It requires writers to respond to other writers’ sayings (p. xvi). Contrary to the monologue of the author of a column in a newspaper, academic writing reflects the academics’ interaction on scientific research. Various genres as examples of academic writing serve academics with a chance of communication in different forms. According to Vallis (2010), academic writing comes into being in consequence of two things: a question and a problem, or an issue (p. 8). First of all, there should be an issue or a problem for the researcher to seek out. The researcher feels a requirement to carry an investigation on the issue. Then, there should be question(s) to find answer(s) at the end of the research process.

Genre: Genre is defined by Gillett, Hammond, and Martala (2009) as “different types of academic writing”. Although each genre has different purposes and forms, they have something in common as a part of academic writing. First, there should be evidence to support the ideas alleged by the author. Second, there should be metadiscourse markers to guide the audience through the text. Third, there should be citations from the other authors’ work (p.5). These are the features belonging not only to a definite but also to the whole genres of academic writing. They exemplify essay, report, lab report, case study, and dissertation as one of the several genres of academic writing (p. 88).

CHAPTER TWO

2. LITERATURE REVIEW

2.1. What is Evidentiality?

"The Wintu never say it *is* bread. They say, 'It looks-to-me bread' or 'It feels-to-me bread' or 'I-have-heard-it-to-be bread' or 'I-infer-from-evidence-that-it-is-bread' or 'I-think-it-to-be bread', or, vaguely and timelessly, 'according-to-my-experience-be bread' (Lee 1959, p. 137)". The quotation cited above informs the readers about the way of expressing the source of the information the speakers/writers utilize in daily use in Wintu. Evidence based on sensory perception, hearsay, and inference is some evidence types apparent in Lee's quotation.

Evidentiality, the grammatical or lexical codification of the source of knowledge, is a way of making the linguistic realization of expressing how the information or knowledge is attained. The definition of evidentiality goes back to the publication edited by Franz Boas (1911) in which Goddard noting "certain suffixes are used to show by which of the senses the fact stated was observed, or whether it was inferred from evidence (p. 124)". Aikhenvald, one of the most prominent researchers on grammatical evidentiality, states that "marking one's information source indicates how one learnt something (2004, p. 1)". In a similar vein, "evidentials express the kinds of evidence a person has for making factual claims (Anderson 1986, p273)". Evidentiality, "the linguistic marking of evidence" according to Bednarek (2006, p. 635), searches for an answer to the question of whether the speaker/writer has seen, heard or inferred what s/he speaks or writes.

Cornilie (2009) defines evidentiality as "the functional category that refers to the perceptual and/or epistemological basis for making a speech act (p. 45)". In line with Cornilie (2009), Mushin (2001) implies that evidential forms not only code the knowledge about how the speaker has acquired the information but also assess the reliability of that information (p. 1362). In her study, Bednarek (2006) somehow connects evidentiality with epistemological positioning, which works through the questions "Who is the source of information?, What is the basis of someone's knowledge?, How certain is their knowledge? (p. 635)". That is to say, "where a given piece of knowledge came from (McCready&Ogata 2007, p.149)", how the speaker/writer have knowledge about the case, and to what extent the speaker/writer

assigns the degree of reliability to the proposition are directly related to evidentiality. Clark (2010) defines evidentiality as “the key to how knowledge is presented to the reader, including how the writer has knowledge of what he or she is writing, how the source of knowledge is marked, and how the knowledge was acquired (p. 157)”.

2.1.1. Types of evidence

Sbisa (2014) asserts that:

“there are languages that distinguish whether the speaker has been a witness of what she says to be the case or not, whether the information her utterance conveys is firsthand, secondhand or thirdhand, and whether the source of that information is perceptual, inferential, or testimonial (pp. 463-464)”.

The way the speaker/writer attains the knowledge may show an alteration according to the circumstance. Different sources of the knowledge do not make an equal impact on the interlocutor. Chafe (1986) underlines that people are conscious about that “some things they know are surer bets for being true than others, that not all knowledge is equally reliable (p. 264)”. Likewise, different fields require different kinds of the information source to validate the information. Matsui and Fitneva (2009) underline that “the source can be decisive for the credibility of information. Courts disallow hearsay, academics sprinkle articles with citations... (p. 2)”.

Willett (1988, p. 96) puts the various types of evidence into frame at the end of his research on typological grammatical evidential languages as follows;

“I. Direct Evidence

- A. Visual
- B. Auditory
- C. Sensory

II. Indirect Evidence

- A. Reported
 - 1. Second-hand
 - 2. Third-hand
 - 3. From Folklore
- B. Inferring
 - 1. From results

2. From reasoning”

2.1.2. Direct vs. indirect evidence

The way the speaker/writer achieves the information determines the type of evidentiality. Krzyzanowska, Wenmackers, and Douven (2013) assert that:

“not all that we believe or assert rests on an equally solid footing. Some things we believe because we saw them with our own eyes. Other things we believe because we heard them from others, or we read them in the newspaper or on the Internet. And again other things we believe on the basis of inferences we made. The source of a belief typically will, and arguably also should, have an effect on the firmness with which we hold the belief (pp. 319-320)”.

In his research on English and German evidential perception verbs (2011) and on English and German auditory evidential perception verbs (2009), Whitt underlines that our five sense organs do not deliver an equal reliability. Vision supplies a richer context than taste with regard to information (2009, p. 1084; 2011, p. 348).

As rendered in Whitt (2010, p. 11), the evidence encoded for the proposition may appear in the form of direct or indirect. de Haan (2001) explains these two concepts as “the information of the action described either comes from the speaker him/herself (direct or firsthand) or the speaker received word of the action in the sentence through a second party (indirect or secondhand) (p. 195)”. Even though direct evidentiality expresses that the speaker/writer has a perceptual testimony about the event, the speaker/writer attains indirect information or knowledge in indirect evidentiality. Cornilie (2009) underlines that the direct evidential markers are utilized if “the speaker has witnessed the action (p. 45)”. In a similar vein, de Haan (2001) identifies the direct evidence as a situation in which the speaker personally witnesses the action (p. 193). The visual and aural information sources with the rest of the three sensory perceptions are the examples of the direct evidence (De Haan 2001, p. 195). In a similar way to de Haan (2001), Matlock (1989) notes that “a speaker’s direct visual, auditory, or other sensorial experience of a situation” refers to the direct experience (p. 215).

In his cross-linguistic research on perception verbs, Viberg (1983) puts forward a hierarchy as “Sight > Hearing > Touch > Smell, Taste (p. 136)”. He advocates that a verb giving a meaning related to a sense higher or left in the above-mentioned hierarchy can get a meaning in which it covers some or all of the meaning of the senses in the

lower or the right part of the hierarchy (pp. 136-137). Similarly, scalar hierarchies (direct>inferred>reported) of Schenner (2010, p. 168) demonstrate that the speaker/writer conveys an advanced level of commitment by courtesy of utilizing direct evidentiality. However, a low degree of commitment appears as the reporting evidential markers take in charge to convey evidential meaning in the proposition. Faller (2012) identifies reportative evidentials as a kind of information source both “specifying the speaker’s source of information for a statement as a report by someone else” and “conveying that the speaker does not have direct evidence for the proposition expressed (pp. 285-286)”. In addition to reportative evidential markers in which there is hearsay from the others, Cornilie (2009, p. 45) describes deduced knowledge, named as inferentials, and the actions the speaker has not witnessed personally as indirect evidentiality. According to Matlock (1989), reported (hearsay) and inferred information constitute the sources for indirect evidentiality (p. 215).

Mushin (2001, p. 21) highlights more subjective nature of the direct evidentiality just because of the speaker/writer’s direct involvement. Yet, indirect evidentiality is conveyed as less subjective because the coding of the information or knowledge is independent of the speaker/writer’s own experience.

Ozturk and Papafragou (2008) also touch upon the difference between semantic and pragmatic level evidential markers unveiled in a proposition. Although just the source distinction is expressed through the semantic level which is characterized as “universal and largely language-independent” by Plungian (2001, p. 350), some conversational implicatures come into view at the pragmatic level. The speaker/writer forming a proposition with indirect evidential marker *-MİŞ* does not use direct evidential marker *-DI* even though the latter is much more efficient than the former with regard to the information. The use of the indirect evidential marker *-MİŞ* leaves an impression on the interlocutor that the speaker/writer does not have a direct experience about the proposition.

In a similar way to Ozturk and Papafragou (2008), in their research on -another grammatical evidential language- Japanese, Matsui, Yamamoto, and McCagg (2006) assert that “information based on indirect (hearsay or secondhand) evidence is communicated with relatively less certainty than information that is based on direct evidence (p. 161)”. They claim that seeing is a reason to believe in something. If someone claims that s/he has seen something, this means that s/he has a direct

experience about what is being claimed. However, having hearsay evidence about someone else who has a direct experience about something is a reason to believe only that person has reportedly had direct experience about something. Hearsay knowledge is not necessarily a reason to believe in what we hear about someone else's assertions (p. 162).

2.1.2.1. Visual evidence

Sbisa underlines that (2014, p. 469) "seeing something is quite standardly taken as the paradigmatic case of acquaintance and therefore as a source of first-hand knowledge".

2.1.2.2. Auditory evidence

Oswalt (1986) defines auditory evidence as a kind of source about which the speaker has attained knowledge through hearing but not seeing (p. 37). Jacobsen (1986) defines auditory evidentials as a kind of source "relating to the reception rather than the production or description of sounds (p. 15)".

2.1.2.3. Perception

Clark (2010) describes 'perception' as a form of evidentiality expressed by means of visual and non-visual markers through which the speaker/writer acknowledges that s/he has seen/heard/felt the proposition, or information, or knowledge (p. 149). Viechnicki (2002) underlines "sensory evidentials mark that the epistemic basis is a sensory event (that the speaker heard or saw some event occur, e.g.) (p.4)". According to her, these evidentials have a tendency to "derive from perception verbs such as 'to see', 'to hear' and 'to feel' (p. 8)".

2.1.2.4. Reporting evidentiality

In his research on reporting evidentiality in English research articles, Yang (2013, p. 120) divides reporting evidentials into two as other-reporting and self-reporting evidentials. While the former indicates that the source of the information comes from an external contributor, the latter indicates that the information comes from the writer's own quotations.

2.1.2.5. Hearsay evidentiality

Mushin (2001) defines hearsay evidentiality as a kind of knowledge which is “in neither the speaker’s nor the hearer’s territory, but was acquired from someone else’s utterance (p. 1364)”. Clark (2010) defines hearsay evidence as “information or knowledge of which the writer has no direct experience, but which is based on what another party has said (or written) regarding an event, state of affairs or condition (pp. 145-146)”. According to Donabedian (2001), hearsay evidentials come in sight in two situations. First, hearsay evidentials are coded in the proposition in which the speaker conveys information heard before, and second, take part in utterances “when the source of information is neither identified nor recoverable, such utterances can have a polyphonous flavor, indicating, for example, that the speaker distances herself from claiming that the utterance is true (pp. 423-424)”. Similarly, Anderson (1986) identifies hearsay knowledge as “a more specific unreliability of the information, often from a weak or single source (p. 289)”.

2.1.2.6. Inference

de Haan (2001) identifies inference as “the grammaticalized way of showing that the speaker makes his/her statement based on a deduction from facts, and not on a direct observation of the action itself (p. 193)”. In a supporting manner towards de Haan, Viechnicki (2002) identifies inferentials as the source of knowledge which is based on exterior events apart from direct visual evidence (p. 4). However, Clark (2010) describes ‘inference’ as a kind of ‘perception’ knowledge which is “further elaborated, or processed mentally (p. 150)”. According to her, “this type of knowledge implies actively having ‘worked through’ observation, and having inferred a state of affairs from visible or tangible evidence (p. 150)”. In a similar vein, Mushin (1998) defines inference as a kind of information “as inferred or deduced based on some evidence or body of evidence” and “adopted when the speaker pieces together information acquired by direct perception to form a conclusion, a product of their own reasoning (p. 64)”. Although these above-mentioned definitions from the four authors are almost the same with regard to the occurrence of inference in consequence of the evaluation of evidence or a kind of situation further elaborated, the availability of visual evidence or direct

observation are the matter of dispute between Mushin (1998), de Haan (2001), Viechnicki (2002), and Clark (2010).

Yang (2013, p. 586) asserts that inferring evidentials function as the hedging device. According to Yang, the use of inferring evidentials both helps the writer proclaim the unreliability of the information and helps him/her take a stance as an abstainer and negotiate the proposition with the reader and share the responsibility. Yang (2014, p. 586) expresses that inferring evidentials through the use of *might*, *may*, *perhaps*, *possible*, *probably* serve as hedges by showing a lack of commitment to the acceptability of the information and enabling the reader joining to the negotiation. These evidential markers inform the reader about the uncertainty of the information and help the writer avoid defending the factual status of the information. Belief evidentials (p. 587) are other hedging devices through which the writer states his/her obvious thought about the information.

2.1.3. Grammatical vs. lexical evidentiality

World languages show various evidential strategies to account for the source of knowledge and are divided into two groups as grammatical or lexical evidential languages according to the way they express evidential meaning. According to Davis, Potts, and Speas (2007), the evidential systems termed as ‘grammaticized’ through “closed class, generally unmodifiable, often obligatory, frequently bound morphemes” are mostly dealt with; and evidentiality encoded through lexical markers of “adverbial, parenthetical, and particle constructions” is largely avoided (p. 2). Mushin (2000, p. 927) asserts that although evidentiality is expressed both in lexical categories and in grammatical constructions, the main aim of evidentiality research is semantic properties of evidential systems in grammaticalized languages. According to Cornilie (2009, p. 45), even though there is a discrimination between grammatical and lexical evidentiality, evidentiality may be taken into consideration as language universal because of its functional presence in most languages. On the one hand, grammatical evidential languages consist of obligatory evidential systems which label each of the uttered or written sentences with morphological suffixes or clitics denoting whether the proposition is seen/heard/inferred. On the other hand, lexical evidential languages convey evidential meaning through various lexical items.

Ozturk and Papafragou (2008, p. 297) conducted a research on the acquisition of evidentiality in Turkish, in which they underline that Turkish expresses evidential meaning through special grammatical markers. Especially, in all of the instances of the past references, it is obligatory to make a choice between the two suffixes -DI (direct experience) and -MIŞ (indirect experience). These two suffixes also integrate an evidential meaning into the proposition. The speaker/writer reveals that s/he has a direct or sensational experience about the proposition by means of using the suffix –DI. Aksu-Koç, Ögel-Balaban, and Alp underline that “direct experience is marked with –DI, which indicates the speaker’s direct access to knowledge about all phases of the asserted event through perception (2009, p. 14)”. However, the suffix –MIŞ expresses some kind of information attained through hearsay or inference (Aksu-Koç&Slobin, 1986); and according to Slobin and Aksu (1982), in addition to the inference and hearsay meanings, its meaning is “pragmatically extended to expressions of surprise, irony, and compliments (p. 185)”. Izvorski (1997) underlines that the inflected verb with the suffix –MIŞ “indicates the availability of indirect evidence for the truth of a proposition (p. 1)”. With regard to the obligation of the use of these two grammatical suffixes, Aydın and Ceci (2009) assert that speakers do not have a freedom of omitting these two “evidence-based information (p. 80)”.

As Aikhenvald (2004, p.1-2) underlines, speakers of grammatical evidential language Tariana, spoken in Northwest Amazonia, are obliged to enunciate whether they have visual, auditory, or reportative evidence about what they utter through grammatical particles. In the absence of these grammatical additions, the sentence turns into grammatically and semantically odd one.

Juse irida di-manika-ka

José football 3sgnf-play-REC.P.VIS

‘José has played football (we saw it)’

Juse irida di-manika-mahka

José football 3sgnf-play-REC.P.NONVIS

‘José has played football (we heard it)’

Juse irida di-manika-nihka

José football 3sgnf-play-REC.P.INFR

‘José has played football (we infer it from visual evidence)’

Aikhenvald’s examples (2004, p.2) help to summarize the obligatory evidential system. In the 1st example, by means of *-ka* marking the speaker proclaims that s/he has direct visual evidence about the realization of the football match activity. The 2nd example notifies to the reader that the speaker does not see Jose playing football; however, hears the cry Jose makes while playing football. The marking *-mahka* connotes auditory evidential meaning. In the 3rd example, the speaker has neither visual nor auditory evidence about the football match; however, s/he arrives at the conclusion through lawny crampons, muddy shorts or wet shin guards. The marking of *-nihka* takes the reader/listener to the inference on the basis of the visual evidence.

The way the speaker/writer conveys evidential meaning in lexical evidential languages is not by means of grammatical particles but of lexical constituents. In English as an optional evidential language, various lexical items, adverbs, and miscellaneous statements give quite different evidential meanings. Lazard (2001) notes that English and French serve as models for lexical evidential languages whose verb system does not contain any morphological evidential markers (p. 360). Visual evidence marking *-ka*, auditory marking *-mahka*, and inference marking *-nihka* in Tariana match up with ‘I see’, ‘I heard’, and ‘I infer’ in English, respectively.

For world languages with obligatory grammatical evidentiality, Aikhenvald (2007, p. 211) lists six subdomains of evidentiality in which several information sources are denoted through various grammatical additions;

‘Visual’ is the information source attained through seeing/direct observation.

‘Sensory’ is the evidence attained through the rest of four sense organs except the eyes.

‘Inference’ is made up of evidence seen and substantial.

‘Assumption’ is a kind of information source occurring by means of “logical reasoning (p. 211)” and philosophy of life.

‘Reported’ is the evidence based on no basis.

‘Quotative’ is a kind of reported evidence which explicitly cite a reference to the citation.

2.1.4. Evidentiality vs. modality

Even though they are two different terms, evidentiality and epistemic modality are mostly integrated into each other throughout the studies in the literature. According to Mushin (2000, p. 932), “evidentiality is a deictic category” because of its attributing some knowledge to the source of the information and to the factual status of that information. Palmer (2001) suggests a term as a propositional modality (p. 24) for these two terms and defines them by accepting that “with epistemic modality speakers express their judgments about the factual status of the proposition, whereas with evidential modality they indicate the evidence they have for its factual status (p. 8)”. The source of knowledge and its reliability assessment by the writer/speaker are sometimes dealt with separately and sometimes done together. These two notions, evidentiality and epistemic modality, are related to each other in three ways (Dendale and Tasmowski 2001, pp. 341-342; Cornilie 2009, p. 47): disjunction, inclusion, and overlap.

These three different perspectives define evidentiality in different ways. On the one hand, disjunction, the narrow view, refers to evidentials expressing only the source of the knowledge or information. In other words, the narrow evidentiality restrictively informs the reader/listener only about the source of the evidence and how the knowledge is attained. Instead of an overlapping relationship between evidentiality and epistemic modality, there is a conceptual difference between them in the narrow view. The following two examples from Clark (2010, pp. 140-141) explicitly exhibit the difference between these two terms.

Tony Blair must be happy.

Tony Blair said he is relatively happy.

The first sentence above is directly related to epistemic modality and informs the interlocutor about the extent to which the writer/speaker is confident in his/her proposition. However, in the second one, the interlocutor is informed not about the

writer's/speaker's degree of confidence but the source of the information. The narrow view discriminates evidentiality and epistemic modality very definitely.

On the other hand, as clarified in Chafe (1986, pp. 262-271) “not restricting it to the expression of evidence... and ...any linguistic expression of attitudes toward knowledge”, inclusion, the broad view, not only refers to the source of the knowledge or information but also evaluates the degree of certainty in the proposition. The discourse reveals to what extent the proposition by the speaker/writer is confident and reliable. Likewise, Matlock (1989) defines evidentials as “linguistic units comprising part of epistemic modality, code a speaker's source of information, and some degree of certainty about that information (p. 215)”. In inclusion, evidentiality and epistemic modality are “the two concepts being regarded as falling within the scope of the other (Dendale and Tasmowski 2001, p. 342)”. Therefore, if the broad view of evidentiality is adopted in a research, it not only refers to the source of the knowledge, but also to the reliability of the writer's/speaker's knowledge. Plungian argues the availability of evidentiality in epistemic modality in every case; however, the vice versa is not possible.

“While an evidential supplement can always be seen in an epistemic marker, the opposite does not always hold: not all evidential markers are modal in that they do not all necessarily imply an epistemic judgment. More generally, one can say that the reliability of information usually depends on how it was obtained: visual information is thought to be most reliable, whereas mediated information is the least reliable (2001, p.354)”.

Claiming “all evidential markers are said to be essentially epistemic, while not all epistemic markers are considered cases of evidentiality”, Alonso-Almeida and Cruz-Garcia (2011, p. 60) support the argumentation by Plungian (2001). In a similar vein, Jeschull and Roeper (2009) state the “elementary distinction” between evidentiality and epistemic modality by remarking that “while evidence can naturally produce some degree of certainty, a degree of certainty cannot produce nor should be taken as a form of evidence (p. 1)”. As seen in the quotations, the way the speaker/writer attains the knowledge affects to what extent the knowledge is reliable. However, it is also the fact that some reliable knowledge does not inform the listener/reader about the way the knowledge is acquired.

The third perspective, overlap, advocates an overlapping parallelism between evidentiality and epistemic modality by means of inferential evidentiality, “the evidence as based upon reasoning (Auwera&Plungian 1998, p. 85)”, which is a sub-type of evidentiality and has an epistemic function. They assert that “inferential evidentials often receive an English translation with epistemic *must*. Inferential evidentiality is thus regarded as an overlap category between modality and evidentiality (p. 86)”. In line with Auwera and Plungian, Faller (2002) advocates that inference is not only “a way of ‘acquiring’ information through reasoning” but also is a way of pointing out “the speaker's judgment that the proposition expressed is necessarily true (p. 10)”. Therefore, both evidentiality and epistemic modality consist of inference as a subset.

2.2. Related Studies

Past research deals with the present issue from a very large perspective. The acquisition of evidentiality and its use in different genres are the starting points of early studies. This part of the present study summarizes the early studies under the three main titles as the acquisition of evidentiality, the expression of evidential meaning in various genres, and in academic genre.

2.2.1. Acquisition studies

Öztürk and Papafragou (2008) conducted a study with Turkish speaking children between the ages of 5 and 7 to investigate the semantics and pragmatics of Turkish evidential markers. The results show that the two different morphemes –DI and -MIŞ for the past events are used in a correct way by the participants. In terms of the semantics of the evidential morphemes, the indirect evidential marker –MIŞ is understood after the marker –DI encoding direct evidence. Children’s performance in the pragmatics of evidential morphemes increases as they grow older. In another study with Turkish speaking children, Aydın and Ceci (2009) investigate how the Turkish children’s tendency to suggestion is affected by their acquisition of the linguistic expression of informational access. They conclude that even the young children with the age mean of 4;2 are capable of differentiating the direct witness morpheme –DI and the hearsay morpheme –MIŞ in a misinformation context. Hence, a person with the direct knowledge of an event is more trustworthy. As in Oztürk and Papafragou (2008) in

Turkish, Koring and Mulder (2014) found that the direct evidential term in Dutch is shown as a natural understanding by even the youngest age groups.

Fitneva (2008) investigates whether Bulgarian children's reliability judgment is influenced according to the cognitive or perceptual information and first-hand or second-hand information discriminations. She reveals that the way the children attain the information has an effect on their judgments. While the six-year old children correlate reliability with cognitive sources, the nine-year olds do the same with perceptual sources.

In Ifantidou's (2005) study, in which she analyzed if the evidentials in Greek show synchronous or sequential features during the acquisition process, the results refer to the sequential development of the evidential lexical elements.

O'Neill and Atance (2000) investigate how children express uncertainty with limited modal adjuncts *maybe*, *probably*, *possibly* and the modal verb *might*. While the most frequently used modal is determined as *maybe*, *possibly* shows no instance. As the children grow older, their utterances show a more frequent use of those target modal items. Uncertainty about the present and the future events instead of the past events appears earlier in the children talk.

Jeschull and Roeper (2009) search to discover whether children are capable of discriminating and producing the evidential *look like* and the certainty marker *probably*. The results based on the CHILDES data consist of the evidential use of *look like* before the age of 3. The certainty marker *probably* appears in more grown-up ages. In the 25% of the cases, the children correlate *probably* with the visual evidence while the adults show no similar instance.

Rett and Hyams (2014) investigate the syntactical distribution of the raised and unraised English perception verb similatives. Children as young as two are skilled in the association of the type of information they have and the syntax of the perception verb similatives as adults do. Another striking result is that the direct evidence scenarios show any instance with the raised PVS constructions.

2.2.2. Evidentiality in various genres

Berlin and Prieto-Mendoza (2014) analyze the political debates taking place before the 2010 US Midterm Congressional elections. Markers of deduction appear as

the most frequent evidential elements in this spoken corpus. However, markers of sensory evidence are very few in number in the entire data.

In Hsieh (2008), the news requiring objectivity such as the politics and the business reports frequently consist of reportative evidential markers; however, sensory evidentials come into view too often in the local news. That the context and the content of the news become in charge as the selective elements can be a rational inference.

Clark (2010) analyzes two different newspaper corpora to reveal whether any difference occurs in terms of the expression of evidentiality over a thirteen-year period. Increased use of evidentiality and an alteration towards the speculation-based knowledge reports and hearsay evidence in 2005 quality papers stand out as the most striking findings.

Kim (2005) investigates the daily telephone conversations and the face-to-face conversations in Korean to determine how the shift of evidential marking takes shape. The speaker gives form his/her sensitive evidential use with various alternative forms in the course of interaction.

2.2.3. Evidentiality in academic genre

A great deal of research constitute the academic genre as data to be analyzed.

Chafe (1986, p. 262) conducted a study in which the casual conversations and the academic written data are compared with regard to the frequency of evidential markers. The results show that the proportion of the overall evidential markers in conversational English and in academic writing is almost alike. The proportion of the evidential markers in academic writing, .64 per thousand words, slightly outnumbers the proportion of evidential markers in conversational English with .60 occurrences of evidential markers per thousand words. Even though there is not so much difference between academic writing and conversational English, as seen in the frequencies above, with regard to the overall frequency of evidential markers, there is a disparity in the occurrence of some specific kinds of evidentials. The author explains these disparities between the spoken and the written data with two differences. The first one is that the writing is at an advantage of having enough time to plan what to write and to edit what is written. It is worth reminding that a writer has a chance to take into consideration some kinds of the epistemological assessments a speaker cannot have. The second one is related to the involvement in the interaction. While the speaker experiences a direct

and face-to-face interaction with the interlocutor, the writer has to complete the writing process far away from his/her audience. Hence, the speaker has a chance to revise and update some of his speech acts to fulfill the listeners' expectations.

Yang (2012) compares and contrasts the native speakers of English and the native speakers of Chinese to determine whether any difference occurs in their evidential use in the research articles. That reporting and inferring evidential markings are the most frequently encountered evidential items, and belief and sensory evidentials are the least frequent evidential items come to the fore as a similarity in both of the corpora. While the most frequent use of evidential markers appears in the introduction parts, the data and the method sections consist of evidential markers the least in number.

Contrary to Yang (2012), Alonso-Almeida and Adams (2012), searching for the use of evidentiality both in English and Spanish medical research articles, state that, in both of the corpora, the introduction parts consist of the least evidential use in number. The discussion parts in both of the corpora consist of the highest frequency of use of both evidential use in general and of adverbial evidential markings.

Koutsantoni (2005) compares Greek authors with the native speaker of English authors with regard to their degree of certainty. Whether cultural characteristics have any effect on these two groups' certainty expression is the main subject matter. It is evaluated that a greater number of certainty markers appearing in the Greek writers' research articles result from some features of Greek culture, such as high power distance, high uncertainty avoidance, and collective nature.

Alonso-Almeida and Garcia (2011) examine the abstract sections of the medical research articles to determine whether *may* and *might* can be used as the grammatical markers of evidentiality. The modal *may* shows a dominant occurrence compared to the modal *might* with less than 5% of occurrences. While *may* is used with the meaning of both epistemic modality and evidentiality, *might* denotes just epistemic meaning.

Fetzer (2014) utilizes written academic genre to examine the patterned co-occurrences of perception verbs *seem* and *appear* in terms of inferential evidentiality, and of the modal auxiliaries *may*, *can*, and *must* with argumentative markers. While the sensory perception verb *seem* appears as the most restrictive one with the argumentative markers, *may* is the least restrictive co-occurrence item. The modal auxiliaries *may* and *can* show co-occurrence with the adverbs like *significantly* and *well*; however, *must*

never shows co-occurrence with any adverbs and is the least frequently encountered modal auxiliary in the analyzed data.

As seen in consideration of the above-mentioned studies, the use of evidentiality, except in the acquisition studies, is frequently investigated in both written forms and academic genre. A very diverse range of evidential markers are analyzed in various studies. As distinct from all of the above mentioned studies with regard to the type of its data, the present study investigates dissertations as a newly-analyzed genre both to see how PhD candidates put into words the way they attain the knowledge and the source of information they possess, and to reveal to what extent the certainty/uncertainty are conveyed in the dissertations. The present research further attempts to determine whether the use of evidentiality differs with regard to the L1 background of PhD candidates. Moreover, whether non-native authors show native-like features with regard to the use of evidentiality is investigated.

2.3. Taxonomy Used in the Present Study

Compared to the studies related to the grammatical evidential system, lexical evidentiality takes a small space in the literature. Despite the abundance of the evidential studies on the languages with grammatical evidential system, the studies on the languages with lexical evidential system are limited in number.

Contrary to the grammatical evidential system, various lexical items such as adverbials and modals express evidential meaning in lexical evidentiality. English as one of the European languages serves as a model for lexical evidentiality. Two studies in the literature come to the forefront with their comprehensiveness and up-to-dateness. First, Chafe (1986) with his seminal work ‘Evidentiality in English Conversation and Academic Writing’ is a pioneer in the field of English evidentiality. The study is the first research devoted to English evidentiality as a whole. It has a characteristic of consisting of the most comprehensive data about English lexical markers expressing evidential meaning. Second, Ifantidou (2001) in her book ‘Evidentials and Relevance’ gives an up-to-date and an elaborative content peculiar to English evidentiality. Because of the comprehensiveness and the currentness of the data of these two studies, a taxonomy is formed with Chafe’s and Ifantidou’s evidential items. The taxonomy is shared with the audience in Appendix B. In this section of the present study, English evidentiality will be discussed in the light of these two distinguishing works.

Both Chafe (1986) and Ifantidou (2001) address the issue under the broad view in which not only the source of the knowledge, but also the speaker's degree of certainty are handled in a way overlapping with the aim of this dissertation.

According to Chafe (1986), the way the knowledge is attained, named as *modes of knowing*, through *belief*, *induction*, *hearsay*, and *deduction* (p. 263). Similarly, Ifantidou (2001) divides the source of knowledge into four types namely, *observation*, *hearsay*, *inference*, and *memory* (pp. 6-7).

2.3.1. Markers of belief

Chafe (1986) underlines that *I think*, *I guess*, and *I suppose* are the English expressions forming the *belief* as a *mode of knowing*. According to Chafe, *belief* supplies downgraded evidence which means a weaker form of the source of the knowledge (p. 266). Ifantidou discusses these three lexical markers and additionally, *I know*, *I suspect* as “propositional attitude and parenthetical expressions (p. 7)”.

1. a) *I think* that a lot of the time I've been misjudging her.
 - b) *I guess* I was thinking about it in a different way.
 - c) The idea is that Christ followed this pattern, and Moses, *I suppose*
- (Chafe 1986, p. 266)

The following examples are from Ifantidou (2001, p. 7);

2. a) *I think* that John is in Berlin.
- b) *I know* John is in Berlin.
- c) *I suspect* that he is the burglar.
- d) *I guess* that he will have to resign.
- e) *I suppose* that he will have to resign.

Ifantidou (2001) expresses that through these lexical evidential constructions, the speaker unveils the degree of certainty.

Even though it is disputable for being epistemic or inferential evidential, Aikhenwald (2007, p. 216) states that some prepositional constructions such as *according to me* and *in my opinion* may give the meaning of *opinion*, *belief*, and *inference*.

2.3.2. Markers of induction

It is underlined in Chafe (1986) that the source of knowledge for inference is evidence, and English refers only the availability of induction without referring to the nature of the evidence (p. 266). A speaker/writer draws an inference based on some evidence which can be visual, auditory, direct, or indirect, etc. Chafe (1986, pp.266-267) asserts that *must* is a means of inference conveying a high degree of reliability. Similarly, Mithun (1986, p. 90) identifies *must* as a marker of inference and high probability.

3. a) Her coat is in the wardrobe. She *must* be at home.

The example above from Mithun (1986) implies that the speaker makes an inference based on the visual evidence. Seeing her coat in the wardrobe is the visual evidence for her being at home. Similar to *must* underlined by Mithun (1986), Anderson (1986, p. 274) gives *must have* as an indicator of the circumstantial inference. It is circumstantial because it depends on the type of the evidence.

4. a) John *must have* arrived (Anderson, 1986, p. 274)

The example above implies that the speaker/writer has some justifications to think that *John has arrived*. Seeing a belonging of John and perceiving the smell of John are the examples of circumstantial inference.

5. a) It *must* be raining.

The sentence above is an example by Peterson, Dechaine, and Sauerland (2010, p. 1) indicating *indirect inferential evidence* through the use of modal *must*. The speaker does not experience the rain at first-hand; however, s/he infers the rain in consequence of seeing the street get wet in the rain. According to Palmer (2001, p. 8), *must* as a means for *deduction* “suggests that the judgment was based on evidence”. The truth

familiar to the speaker directs him/her to make a deduction about the event about which the speaker does not have direct evidence.

6. a) John *must* be in his office (Palmer 2001, p. 25)

The sentence above expresses that the speaker does not have direct evidence about John's availability in his office; however, s/he makes this kind of deduction by means of some evidence such as e.g. John's absence at home, office's lights on.

According to Chafe (1986, pp. 266-267), *obvious* is another lexical marker similar to *must* with a high degree of reliability. *Seem* and *evidently* are the other lexical inference markers not as much certain as *must* and *obvious*. In addition to these lexical markers, Ifantidou (2001, p. 6) defines *presumably*, *must have*, *I gather*, *so*, *I deduce*, and *consequently* as the lexical inference markers in English.

The following examples based on inference are from Ifantidou (p. 6).

7. a) *Presumably*, he is capable of teaching 'A' levels.
b) John *seems to/must* be here now.
c) John *must have* arrived.
d) *I gather* that Tom's in town.

Mithun (1986) underlines that an item may function diversely and expresses various evidential meanings (p. 90). For example, *seem* expresses several evidential meanings according to the syntactical construction it occurs.

8. a) My sister *seems* happy.
b) *It seems that* my father is at home.

The sentence (8a) above consists of evidence as inference based on appearance. In this syntactical construction, *seem* expresses that *it is probable that my sister is happy*; however, the opposite situation should not be surprising for the interlocutor. Gurajek (2010, p. 66) interprets the structure of *seem-plus-adjective* as an example of deductive evidentiality in her thesis. The speaker infers from the observation of his/her sister's behavior that she is happy.

Seem appears in completely different syntactical construction in (8b). It implies that the truth that my father is at home is based on the knowledge attained through hearsay. Referring to the similar meaning with the syntactical construction of *seem-plus-adjective* with the following example, Dixon (2005, p. 203-204) exemplifies a sentence *It seems that Mary found the body* through which the speaker implies that s/he is not fully certain about his/her assertion and s/he does not possess enough evidence about the proposition. *It seems (to be) true that Mary found the body* with *seem-plus-adjective* syntactical construction has a similar meaning with *it seems that* construction. Aijmer (2009) also asserts that “*it seems that* can function as an adverbial hedge reducing the certainty expressed in the assertion (p. 76)”. Similarly, Cornilie (2009) underlines that inferential evidentials, through the use of e.g. *seem+infinitive*, are one of the most common evidential markers in the languages with the lexical evidential system (p. 46). Investigating to what extent the perception verbs *appear* and *seem* and the three modal auxiliaries *can*, *may*, and *must* contribute to the expression of evidentiality and epistemic modality, Fetzer (2014) states that *seem* and *appear* are used frequently in academic discourse and they appear in very similar linguistic contexts (p. 342).

2.3.3. Markers of sensory evidence

Observation as a source of knowledge in Ifantidou (2001) and *sensory evidence* as a source of knowledge in Chafe (1986) are absolutely the same notions referring to sensory/perceptual evidence.

Defining *I see*, *I hear*, and *I feel* are the sources of sensory evidence high in reliability, Chafe (p. 267) discriminates *looks like*, *sounds like*, and *feels like* as sensory evidence lesser in reliability.

The following three examples from Chafe (1986) underlines that the source of knowledge is based on perception and the rate of reliability the speaker possesses is very high.

9. a) I see her coming down the hall.
- b) I hear her taking a shower.
- c) I feel something crawling up my leg (p. 267).

The above-mentioned sentences consist of visual, auditory, and tactile evidence about the proposition, respectively.

However, the following three examples from Chafe (1986) do not consist of high speaker reliability although they are based on perceptual evidence.

10. a) She looks like she's asleep.
- b) He sounds like he's mad.
- c) It feels like the door is open (p. 267).

Chafe (1986) asserts that confidence in (9a-9b-9c) substitutes for a degree of doubt in (10a-10b-10c). The interlocutor should not be surprised if she is not asleep in (10a), he is not mad in (10b), the door is not open in (10c).

On the other hand, Ifantidou (2001, p. 5) adds *it tastes* to direct sensory/perceptual evidence with high speaker certainty and *smells like* as an evidence with lesser reliability.

11. a) It tastes good (p. 5).

The sentence (11a) above is based on gustatory evidence about the proposition and conserves a high degree of confidence. However, the following (12a) sentence from Ifantidou consists of to some extent doubt.

12. a) It smells like roasted chicken (p. 6).

The speaker in (12a) is not sure whether the entity smelling is roasted chicken or not.

Defining grammatical and lexical evidentiality as “two functionally equivalent but formally distinct sets of devices”, Mithun (1986, p. 89) lists several English lexical markers related to evidentiality. While the use of *I guess* and *must have been* refers to *inference* as the source of information, *looks* and *smells like* are the signal of perception.

The following three examples by Peterson, Dechaine, and Sauerland are related to the verbs giving evidential meaning (2010, pp. 1-2).

13. a) I *hear* that it is raining.
- b) It *looks like* it is raining.
- c) Lucy *told me* that it is raining.

The sentence (13b) has *visual evidence* about the rain. The speaker deduces the rain from someone in wet boots.

The sentence of (13c) expresses *indirect hearsay evidence* in which the speaker has reported knowledge from Lucy informing about the rain.

In (13a) sentence, two different evidential meanings leap to the eye. First, the speaker asserts that s/he has *direct perceptual evidence* about the rain due to hearing the sound of the raindrops. Second, s/he has *indirect hearsay evidence* and implies that s/he attains the knowledge of the rain through someone else. Dixon (2005) underlines that “one may become aware of some activity—using sight or hearing—either directly or indirectly. With attention verbs, THAT complements are used to refer to indirect knowledge (p. 270)”. The following four sentences by Dixon (2005, p. 270) try to clarify the difference.

14. a) I *heard* that John let off the fireworks.
- b) I *heard* John letting off the fireworks.
- c) I *noticed* that Mary had hit Jane.
- d) I *noticed* Mary hitting Jane.

In (14a), there is someone else transferring the news of John’s letting off the fireworks to the speaker. The speaker has not personally experienced the event at the time of the incident. However, in (14b), the speaker himself/herself witnesses the event happening. In (14c), the speaker implies that even though s/he does not attain direct evidence about Mary’s hitting Jane, s/he may have some visual evidence leading her/him to make this kind of conclusion. In (14d), the speaker asserts that s/he herself/himself has seen the quarrel between Mary and Jane, and Mary’s superiority.

In a similar way to Dixon (2005), Aikhenwald (2007, p. 213) defines this difference between auditory and hearsay evidence through different complement clauses by giving two examples in two different syntactical constructions.

15. a) I heard John cross the street.
- b) I heard that John crossed the street.

On the one hand, in (15a), the sentence reports that the act of the speaker’s hearing and the act of John’s crossing the street are taking place simultaneously. In

other words, the speaker has first-hand knowledge about John's crossing the street. On the other hand, in (15b), the sentence informs the reader/listener about the indirect hearsay knowledge about John's action. The speaker implies that s/he does not have *direct perceptual evidence* about John's action; however, s/he has indirect second-hand knowledge about his/her proposition.

16. a) I saw/heard John singing. (direct evidence: visual/auditory)
b) I see/hear (that) John was singing. (indirect evidence:
inference/report)

According to Izvorski (1997, p. 4), the two sentences (16a/b) above express various evidential meanings although they have the same main verb. In the first sentence (16a), the speaker witnesses the act of John's singing visually/auditorily and has direct evidence about the act. However, in the second sentence (16b), the speaker does not have direct evidence of the act. S/he either has hearsay evidence about the act of John's singing or comes to a conclusion in consequence of some possible clues letting/him/her make an inference.

Additionally, Aikhenwald (2003, p. 19), in one of her other publications, lists two different examples (17a/b) to differentiate auditory and hearsay evidence expressed through different syntactical constructions.

17. a) I heard France beating Brazil.
b) I heard that France beat Brazil.

As in the explanation of the previous examples (15a/b-16a/b), while (17a) implies auditory evidence in which the direct participation of the speaker occurs, (17b) consists of indirect hearsay evidence.

Similarly, de Haan (2005, p. 387) discusses the witness of the speaker to the event itself or to the result of the event.

18. a) John saw Mary cross(ing) the road.
b) John saw that Mary had crossed the road.

In (18a), John has direct, visual evidence and is the witness of the event. However, in (18b), there is inferential reading. John is not the witness of the whole

process of crossing the road, but the result of the action has been witnessed by John. Therefore, direct visual evidence is out of the question; however, an indirect inferential meaning is available in (18b).

2.3.4. Markers of hearsay

Hearsay is indirect evidence about the source of the information. The speaker acquires the knowledge through other people. Chafe (1986) lists several lexical items expressing hearsay evidence in English. *People say, they say, I've been told, X told me, X said* are the hearsay evidential markers conveying that the knowledge is attained through someone else indirectly (pp. 268-269). Mithun (1986) also defines *they say* and *I hear* as the source of hearsay (p. 89). Chafe (1986) adds that although *supposed to, it seems,* and *apparently* indicate different evidential meanings, these lexical markers sometimes may express hearsay evidential meaning. Additionally, citing a reference from the authors in academic writing is another example to hearsay evidentiality (pp. 268-269).

Being in full agreement with Chafe (1986) about the less direct hearsay markers; *supposed to, it seems,* and *apparently,* Ifantidou (2001) adds some lexical markers to hearsay evidential markers such as *X tells me, I hear, he is said, he is reputed, allegedly, and reportedly.*

19.
 - a. John tells me you got a job.
 - b. *I hear* you got a job.
 - c. *People say* he's trustworthy.
 - d. He is *said* to have done it.
 - e. He is *reputed* to be very learned.
 - f. *Allegedly,* the computer has been stolen.
 - g. *Reportedly,* he is the burglar (p. 6).

All of the above-mentioned examples (19a-g) inform the interlocutor that the speaker does not have direct experience about the case and indirectly learn the knowledge from someone else. In line with Chafe (1986) and Ifantidou (2001), Mithun (1986, p. 90) defines *suppose* as the marker of *hearsay* and *inference*.

20.
 - a) The teacher is *supposed* not to come to school today.
 - b) *I suppose* you will not invite me to the party.

In (20a), hearsay knowledge is insisted. The students presumably are happy to hear that the teacher will not come to school today. The speaker infers that his/her interlocutor will not invite him/her to the party in (20b) sentence.

Izvorski (1997, p. 2) underlines that without taking into account the syntactic construction *apparent, supposed, alleged, and reported* appear in, the meaning of *report* and *inference* are always available in all cases as a part of their lexical denotations.

21. a) John is an *apparent/supposed/alleged/reported* thief.
 b) John is *apparently/supposedly/allegedly/reportedly* a thief.

Both the adjective and the adverb form of these lexical items give the evidential meanings of *hearsay* and *inference*.

2.3.5. Markers of deduction

According to Chafe (1986, p. 269), *deduction* is a kind of reasoning which leads the individual to deduce a conclusion about the evidence. On the one hand, *should* and *presumably* are the lexical deduction markers conveying a high degree of reliability, on the other hand, *can, could, and would* express a lesser degree of reliability.

The following sentences from Chafe (1986) exemplify the lexical markers of deduction.

22. a) He or she *should* take longer to respond following exposure to inconsistent information than when exposed to no information at all.
 b) Adults *presumably* are capable of purely logical thought.
 c) One *can*—at least in principle—provide the experience that is needed to bring readiness about.
 d) No normal phonological rules *could* account for the loss of this h.
 e) This claim does not address other retrieval influences that *would* be consistent with the obtained results.

Chafe adds that the source of knowledge for *deduction* is a *hypothesis* (1986, p. 269). Although *deduction* as a *mode of knowing* seems similar to *induction*, they differ from each other in terms of the source of knowledge. The speaker/writer deduces something on the basis of hypothesis letting him/her make reasoning; however, s/he makes an inference at the end of evaluation of evidence. This evidence may be visual, auditory, direct, indirect, etc.

2.3.6. Epistemological devices

Except for the source of information and how the knowledge is attained, evidentiality deals with the reliability of the information. Chafe (1986) underlines that “not all knowledge is equally reliable (p. 264)”. By means of some modals and adverbs, the speaker/writer, in some ways, confesses the degree of reliability of his/her knowledge. In conversational English, the use of the adverbs *maybe*, *probably*, *certainly* serves this aim. Apart from these, there are some additional adverbs which are used less in conversational English such as *possibly*, *undoubtedly*, *surely*, *perhaps*, *basically*, *by definition*, *essentially*, *exactly*, *generally*, *in some sense*, *invariably*, *literally*, *normally*, *particularly*, *primarily*, *specifically*, *virtually* used in academic writing. The modals *may* and *might* are used both in conversational and academic English (pp. 264-265). Ifantidou (2001, p. 7) adds *obviously* to the reliability markers identified in Chafe (1986).

In addition, three different hedging devices are shared with the reader by Chafe (1986, p. 270); *sort of*, *kind of*, and *about*. According to Chafe (1986), the knowledge conveyed to the listener/reader undergoes a process of matching this knowledge with the schema available on the side of the interlocutor. These above-mentioned three markers indicate to what extent the verbal resources of the speaker/writer are good at expressing the knowledge to the listener/reader (p. 263).

Apart from these (pp. 270-271), some lexical markers such as *of course* indicating parallelism with expectations, *oddly enough* showing disagreement, *in fact* and *actually* referring to mirativity, and *at least*, *even*, *only*, *but*, *however*, and *nevertheless* relating to expectations are epistemological devices Chafe (1986) asserts as the lexical evidential markers hedging or boosting the proposition. According to him, there is also a process of matching the speaker’s/writer’s knowledge with their own or someone else’s expectations (p. 263).

Ifantidou (2001, pp. 7-8) underlines that certain adverbials such as *probably*, *certainly*, *possibly*, *undoubtedly*, *surely*, *evidently*, and *obviously* are the additional lexical markers to the Chafe's lexical evidential markers hedging and boosting proposition. The following examples (23a-g) from Ifantidou (2001) express a various degree of speaker's certainty.

23. a) He is *probably* the best actor of the year.
- b) It is *certainly* very beautiful.
- c) John is *possibly* coming tonight.
- d) The answer is *undoubtedly* 'no'.
- e) *Surely*, you know what I mean.
- f) *Evidently*, the ball was over the line.
- g) The ball was, *obviously*, over the line (p. 7).

According to Mithun (1986, p. 90), while *maybe* and *it is highly improbable* are a means to lower probability, *sure* functions as a marker to heighten probability.

Clarifying adverbial expressions, modals, and verbs as the lexical markers conveying evidential meaning, Peterson, Dechaine and Sauerland (2010, p. 1) exemplify some lexical items (24a-c) expressing evidential meaning.

24. a) Actually, it is raining.
- b) Apparently, it is raining.
- c) Reportedly, it is raining.

Above mentioned three adverbs (24a-c) express the evidential meaning of *direct perceptual evidence*, *indirect inferential evidence*, and *indirect hearsay evidence*, respectively. *Actually* assigns a meaning of the speaker's direct involvement in the incident. However, *apparently* means that the speaker does not directly perceive the rain, but s/he infers it from someone, for example, rain-soaked. Lastly, *reportedly* states that the speaker has neither *direct perceptual evidence* nor *indirect inferential evidence*. It implies the speaker attains the knowledge through the third person.

Besides these adverbial lexical markers, Ifantidou (2001) mentions epistemic modals such as *may*, *might*, *can*, *could*, *must*, *will*, *ought to/should* as indicators of the speaker's degree of certainty.

25. a) I *may* not come tonight.
- b) He *might* tell us the truth.
- c) She *can* claim that you were there.
- d) He *could* be ill.
- e) Helen *must* be better today.
- f) That'll be the postman.
- g) He *ought to/should* be there (p. 8).

As mentioned by Ifantidou (2001), the examples above (25a-g) refer to the rate of reliability the speaker possesses in his/her proposition.

Fetzer (2014) analyzes *can*, *may*, and *must* named as modal auxiliaries with regard to logical reasoning and probability/possibility. *Might* and *could*, the past form of *may* and *can*, are never used in evidential form; however, they just appear in the form of epistemic meaning (p. 344-345). *Must* never co-occurs with any adverbs and is the least frequently used modal auxiliary in the data. The researcher comments that the high degree of certainty that the modal *must* expresses is the main reason for that finding (p. 346).

Alonso-Almeida and Adams (2012) examine the use of evidentiality by the native speakers of English and the native speakers of Spanish research article writers in the two different medical register corpora. The data is classified according to the grammatical categories and to the generic sections evidential markers appear in the body of the research article. Different genres in academic writing give different results in terms of the use of evidentiality. The authors even indicate that different sections in the body of the articles show different frequencies of use of evidentiality. In terms of the modal verbs, *may* is the most frequently used evidential verb in English, especially in the discussion section of the articles. The authors state that the discussion parts in academic reports consist of the argumentation of the findings attained at the end of the

analyses. The use of *may* consists of the meaning of inferential reasoning aiming to hedge the proposition. Substitution of *may* with deductive or cognitive verbs such as *deduce*, *infer*, *suppose*, and *think* does not pose a problem (p. 19).

Aiming to demonstrate that English modals *may* and *might* may steal a role from the grammatical evidential system, Alonso-Almeida and Cruz-Garcia (2011, p. 59-60) reveal that the past studies cannot reach a consensus about whether the modal verbs as grammatical units denote evidential meaning or not.

CHAPTER THREE

3. METHODOLOGY

3.1. Research Design

The present study adopts the Contrastive Interlanguage Analysis (CIA) as the research methodology, which (Granger 1996, pp. 43-44; 1998, pp. 12-13-14) enables the researcher to do a comparison between the two or more major groups, such as;

1. NL vs. IL comparison
2. IL vs. IL comparison

The former refers to the comparison of the native language and the interlanguage while the latter comparison refers to the comparison of different interlanguages. According to Granger, the NL/IL comparison examines the non-nativeness of the learner language. This kind of comparison helps to reveal the different frequency of use of particular lexical items and the structures which are more frequent or less frequent at times. This comparison requires a native speaker corpus/database as a control group. It is worth noting that the researchers should keep in mind the comparability of the text types. Because of the style-sensitiveness of many language features, it is vital to utilize the same genres as the content of the control corpora/databases (1996, pp. 43-44; 1998, pp. 12-13-14).

As mentioned in Section 1.2 in Chapter 1, different texts such as magazine news and a report based on a scientific research do not have the same characteristics of persuasiveness and reliability in consequence of using and requiring different linguistic features. Comparing two different databases, including these kinds of irrelevant contents, does not make sense. There should be the same kind of content to make a comparison between them. Granger (2015) clarifies the reason of using a native speaker corpus/database as a control group as the acceptance of native speaker data being the ultimate attainment of learning a foreign or second language (p. 8).

The latter IL/IL comparison requires the comparison of interlanguages of the same language or different ones. Different varieties such as age, proficiency level, L1 background, task type, learning setting, medium, etc. can be used to investigate their effect on the learner outputs (Granger, 1998, pp. 13-14; 2015, p. 8).

The present study contains both the features of the NL vs. IL comparison and the IL vs. IL comparison within itself. As mentioned previously in Section 1.3 in Chapter 1, the present study is based on the analysis of the three databases, through which the researcher investigates the use of evidentiality in the dissertations of the native and the non-native academic writers of English. In both of the two research questions, the focus is on whether the NSE, the NST and the speakers with various L1 backgrounds differ significantly with regard to their use of evidentiality. On the one hand, the present study compares interlanguages of English with different L1 backgrounds with the native speaker database as the control group; therefore, it fulfills the requirement of the NL vs. IL comparison. On the other hand, it compares the databases of the native speakers of Turkish and the speakers with various L1 backgrounds to test the variety of different L1 backgrounds. Hence, the present study meets the expectations of the IL vs. IL comparison. To validate this, CIA (Granger, 1996; 1998) constitutes the main research methodology of the present study by its very nature.

The present study consists of both quantitative and qualitative analyses. The determination of the frequency of each marker in the taxonomy forms the quantitative analyses. The investigation of how these markers function in context forms the qualitative analyses. In the light of the two research questions presented in Section 1.5, the procedure of the data analysis is carried out in the following way.

First, the frequency of the evidential markers in the dissertations of each of the three groups will be determined based on the taxonomy given in Table 3.1. below. Each of the markers in the taxonomy has a function in the text. While evidential markers inform the reader about both the source of knowledge and the rate of reliability the author possesses, epistemic markers function only as the determinant factor of to what extent the author is reliable. They do not denote the source of knowledge. The present study attempts to determine the frequency of each of these evidential and epistemic markers to reveal the groups which convey low/high degree of commitment to the validity of the proposition in the text. Section 4.11 in Chapter 4 consists of the findings based on the frequency of these markers in the taxonomy.

Table 3.1 illustrates all of these evidential markers to be analyzed in the present study.

Table 3.1: *Chafe's Taxonomy (1986) revised by taking Ifantidou's (2001) suggestions*

Markers of Reliability	Markers of Belief	Markers of Induction	Markers of Hearsay	Markers of Deduction	Markers of Sensory Evidence	Markers of Matching Knowledge against Verbal Resources	Markers of Matching Knowledge against Expectations
Certainly	I think	Must	People say	Should	I see	Kind of	Of course
Undoubtedly	I guess	Obvious	They say	Can	I hear	About	In fact
Surely	I suppose	Seem	I've been told	Could	I feel	Sort of	Actually
By definition	I know	Evidently	X told me	Would	Looks like		At least
Exactly	I suspect	Seems to	X said	Presumably	Sounds like		Even
Invariably		Must be	Supposed to		Feels like		Only
Literally		Must have	Apparently		It tastes		But
Particularly		So	It seems		Smells like		However
Specifically		I deduce	Have been said				Nevertheless
Basically		consequently	I hear				Oddly enough
Essentially			He is said				
Generally			He is reputed				
Primarily			allegedly				
Maybe			reportedly				
Probably			X tells me				
Might							
May							
Possibly							
Perhaps							
In some sense							
Normally							
Virtually							
Obviously							

As illustrated in Table 3.1, the taxonomy used in the present study consists of 8 different types. 79 different markers will be analyzed whether they have an evidential interpretation in the broadest sense or not.

As seen in the taxonomy, first, markers of reliability consist of various lexical items. While some of these markers increase the rate of reliability in the text, some of them decrease it. These markers do not inform the reader about the source of knowledge. They do not denote how the author attains the information. Second, markers of belief imply that the knowledge is acquired through the author's belief. These markers not only affect the speaker commitment in the text but also denote how the knowledge is attained. Third, markers of induction indicate that the knowledge is

acquired through induction and its source is evidence. That is to say, the authors come to an inference based on some evidence. It is a kind of indirect evidence. The proposition in the text does not imply the direct involvement of the author. On the contrary, the author arrives at a conclusion from some evidence. Fourth, markers of hearsay imply that the author acquires the knowledge through hearsay from the third party. Namely, the knowledge is acquired via other people. Fifth, markers of deduction indicate that the author attains the knowledge through deduction, the source of which is hypothesis. In other words, the author deduces something based on some hypotheses. Sixth, markers of sensory evidence are related to the perception of the authors. They indicate some perceptual evidence such as visual, auditory, tactile or gustatory evidence. These markers imply the source of knowledge of the author. Seventh, markers of matching knowledge against verbal resources have a downgrading function for the reliability in the text. They lower the speaker commitment in the proposition. However, they do not inform the reader about how the author acquires the knowledge. Eighth, markers of matching knowledge against expectations increase the rate of reliability of the text; however, they do not denote how the knowledge is attained. See Section 2.3 in Chapter 2 for more detailed information about the taxonomy used in the present study.

Second, the frequency of the evidential markers in the native speakers of Turkish and in the native speakers of English databases will be compared to reveal whether they differ significantly. This comparison is the example of Granger's (1996, 1998, 2002, 2015) NL vs. IL comparison.

Third, the frequency of the evidential markers by both the native speakers of English and the speakers with various L1 backgrounds will be compared as an example of NL vs. IL comparison to reveal if the difference is significant or not. This comparison will help to find out whether the non-native authors show native-like features in the use of evidentiality.

Fourth, as an example of the IL vs. IL comparison, the frequency of the evidential markers by the native speakers of Turkish and by the speakers with various L1 backgrounds will be compared to reveal whether non-native speakers of English significantly differ or not in use of evidentiality.

3.2. Procedure for Data Analysis

Applying the Taxonomy in Table 3.1 to the three databases of the native speakers of Turkish, the native speakers of English and the speakers with various L1 backgrounds, the present study aims at finding out if there is a significant difference between the native and the non-native speakers of English with regard to the use of evidentiality in the dissertations. First, 30 dissertations for each of the native speakers of Turkish and English, 29 dissertations for the speakers with various L1 backgrounds, 89 dissertations in total for the three groups, are compiled to form the three databases. References for each of the 89 dissertations are listed in Appendix C. Each of the dissertations was written between the years of 2009 and 2016, and related to English language learning and teaching. Second, each of the dissertations in pdf format is converted into txt format by means of the software of Aiseesoft Pdf to Text Converter. Third, each of the dissertation sections except for ‘discussion’ or ‘discussion and conclusion’ is omitted. Fourth, reducing each dissertation to ‘discussion’ or ‘discussion and conclusion’ sections, the headings, titles, tables, figures, subtitles, page numbers, direct quotations are also omitted. These sections are not analyzed in the study because they do not have an impact on the results of the study. Direct quotations are omitted because they include someone else’s ideas and use of evidentiality. However, citations through rephrasing are included in the data analysis since they reflect the researchers’ own interpretation. Fifth, The AntConc 3.4.4. Software is applied to the three databases to determine the frequency of use of each evidential marker in Table 3.1. Thus, the first research question will be answered. Sixth, to answer the second research question, the frequencies are compared among the databases through the Log-likelihood calculator to conduct the NL vs. IL and IL vs. IL comparisons (Granger, 1996, 1998) described in Section 3.1.

3.3. The Data

89 dissertations written between the years of 2009 and 2016 within the fields of English language learning and teaching are included in the present study. The study is based on the analysis of the three databases with the purpose of investigating the use of evidential markers among the native and the non-native speakers of English. These databases are entitled as the Native Speakers of Turkish Database (NSTd), the Native Speakers of English Database (NSEd), and the World English Database (WEd). Each of

the NSTd and the NSEd consists of 30 dissertations; 29 dissertations are available in the WEd as well. For practical reasons, the data compilation of the NSEd and the WEd is provided through the dissertations available on-line at the website of ProQuest Open Access Dissertations and Theses. Each of these three databases is compiled according to the L1 background of the authors. In order to determine the authors' native speaker status or L1 background, on the one hand, the biographical information available on the website of the university they are a member of is checked. The curricula vitarum of these authors, if available, on their dissertations or on any other publications are also explored. On the other hand, the authors, especially forming the WEd, are contacted through the e-mail correspondence to confirm their L1 backgrounds. (See Appendix A for L1 confirming e-mails from some of the authors). Apart from that, biographical information about these authors available on the web is consulted to identify their L1 background. Figure 3.1 demonstrates the distribution of the dissertations according to the authors' L1 background in the WEd. Each column reserved for the mentioned language refers to how many authors possess this language as L1.

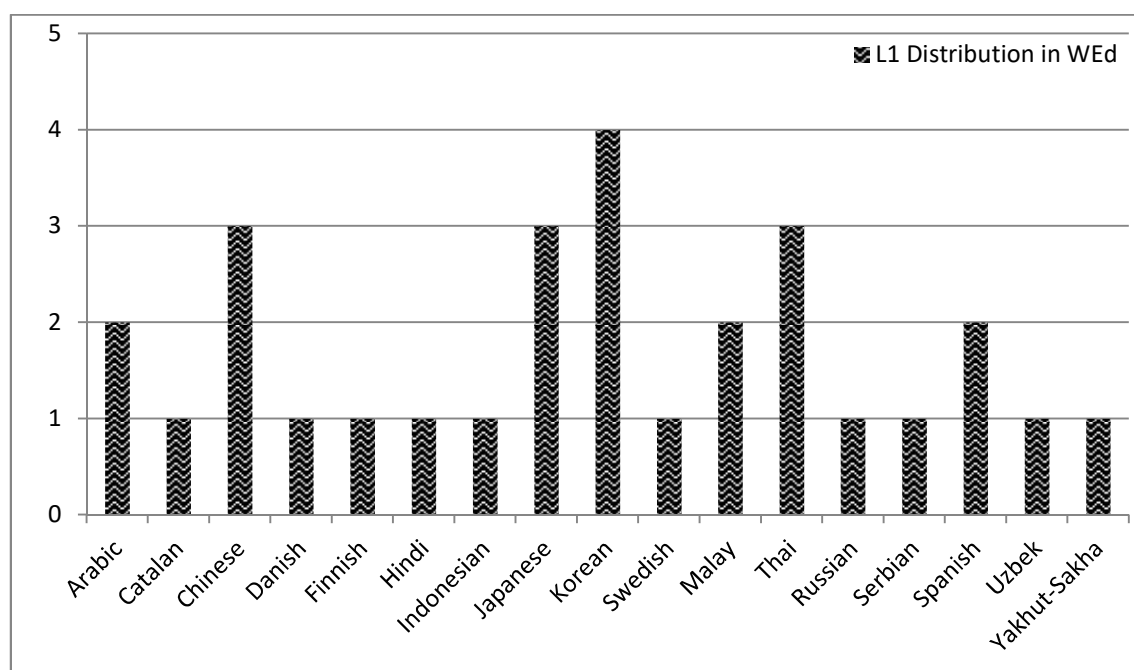


Figure 3.1 *Distribution of Dissertations according to Authors' L1 Background*

As shown in Figure 3.1, there are 17 different L1s in the WEd. It consists of only one author with each of Catalan, Danish, Finnish, Hindi, Indonesian, Swedish, Russian, Serbian, Uzbek and Yakhut (Sakha) L1s. It also consists of two authors with each of

Arabic, Malay and Spanish L1s; 3 authors with each of Chinese, Thai and Japanese L1s; and 4 authors with Korean L1s.

Apart from these, the dissertations in the NSTd are acquired through the database of High Education Board in Turkey.

Dissertations are preferred as the data of the present study to investigate the use of evidentiality of the authors because each dissertation is written by a single author. L1 background as a variety of the same language is a phenomenon whose effects on the use of evidentiality is investigated in the present study. It consists of both native/non-native and non-native/non-native comparisons. Due to the importance of L1 background of the authors and L1 sensitiveness of the present research, the author of the text is very important. Dissertations are written by a single author and the readers know that the whole text belongs to the same person. That is to say, all of the evidential markers in the text of dissertations are used by the same author. On the other hand, in an article, for example, with more than one author with different L1 backgrounds, the readers cannot estimate to whom the text belongs. The negative effects of different L1 backgrounds on the results are indispensable. The articles with only one author would be an alternative to the dissertations; however, it is quite obvious that the dissertations provide much more data and content than the articles do. Arguing that an essay becomes a dissertation if it turns into an extended piece of writing, Gillett, Hammond, and Martala (2009) express the metamorphosis of an essay into a dissertation (p. 4). The researchers have a chance to discuss the results freely without encountering the limitation of word restriction in scientific journals while publishing articles. They do not have to fit their publication into a limited space; thus, the language they use in dissertations provides plentiful content for the present issue of evidentiality.

At this point, it will be helpful to give some quantitative information to the readers about the three databases to make the following analyses more interpretable.

Table 3.2 summarizes the size of each of the three databases in terms of the word frequency in total.

Table 3.2 *Word Frequency in Each Database*

	NSEd	NSTd	WEd
SIZE	186,999	160,228	293,140

As Table 3.2 demonstrates, the WEd is the biggest one in terms of vocabulary count. The NSEd, the second biggest database, is composed of 186,999 words. Last, the content of the NSTd is comprised of 160,228 words. Although these three databases differ with respect to the word frequency, the Log-Likelihood calculator makes a calculation with the normalized occurrences per 100 words instead of the raw frequencies. However, the raw frequencies of the data in the present research are converted to the normalized occurrences per 1.000 words to keep up with the findings of the relevant studies, especially with Chafe (1986), the seminal work in the field of evidentiality in English.

3.4. Instruments

3.4.1. AntConc software

AntConc Software 3.4.4 is defined by its creator Anthony (2005) as a “corpus analysis toolkit” which “includes a powerful concordancer, word and keyword frequency generators, tools for cluster and lexical bundle analysis, and a word distribution plot (p. 729)”. The first and the major reason to use AntConc Software to examine the present data is its being freeware contrary to the resembling commercial WordSmith or MonoConc Software. Anthony (2004) lists some features of AntConc Software as suitable for school or college use, as it is lightweight, simple, practical and easy-to-use. Even though it does not contain each of the features-such as detailed statistics or enabling the researchers to work on mega corpora-commercial softwares include, Antconc contains lots of essential tools necessary for especially the analysis of limited-size corpora, such as the databases in the present issue. (pp. 7-12).

3.4.2. Log-likelihood calculator

The Log-likelihood calculator is used to reveal whether these three databases differ significantly with regard to the frequency of use of the evidential markers. The test makes calculations regarding the raw frequencies of an item in each of the two databases and the overall sizes of these two databases (e.g. NSEd vs. NSTd / NSEd vs. WEd / NSTd vs. WEd). The raw frequency of an item is automatically turned into the normalized occurrences per 100 words by the Log-likelihood calculator. The test

evaluates the two databases with regard to the more/less frequent use of an item by using the normalized occurrences. Figure 3.2 illustrates how the data is entered into the calculator.

	Corpus 1	Corpus 2
Frequency of word	23	45
Corpus size	186999	160228
Calculate		Clear form

Figure 3.2 A Screenshot of Log-Likelihood Calculator

Entering the data into the Log-likelihood calculator, a statistical result appears as an output as in Figure 3.3.

Item	O1	%1	O2	%2	LL
Word	23	0.01	45	0.03 -	11.05

Figure 3.3 A Screenshot of Log-Likelihood Calculator Results

O1 and O2 refer to the raw frequency of the analyzed item in each of the databases. The analyzed item is seen in the first database (O1) 23 times while the same item is used in the second database (O2) 45 times. %1 and %2 imply the normalized occurrences, the ratio of the raw frequency to the word size of the database, of the analyzed item per 100 words in each of the two databases. While the analyzed item occurs 0.01 times per 100 words in the first database (O1), it is seen 0.03 times per 100 words in the second database (O2). A positive sign and negative sign indicate the more frequent and the less frequent use in the first database (O1), respectively. The negative sign in Figure 3.3 above indicates that the analyzed item is less frequent in the first database (O1); in other words, its frequency of use in the first database (O1) is less frequent compared to that in the second database (O2). Different LL values refer to different accuracy levels and different margins of error. According to the following quote, higher LL values make the difference more significant ([http-1](#)).

- 95th percentile; 5% level; $p < 0.05$; critical value = 3.84

- 99th percentile; 1% level; $p < 0.01$; critical value = 6.63
- 99.9th percentile; 0.1% level; $p < 0.001$; critical value = 10.83
- 99.99th percentile; 0.01% level; $p < 0.0001$; critical value = 15.13

While from 3.84 to 6.62 LL values mean 95% accuracy and 5% margins of error, 15.13 and above LL values imply a more accurate significance. It shows that the result is significant at 99.99% accuracy and it has a 0.01% margin of error. Rayson, Berridge and Francis (2004) recommend the highest cut-off value at the end of the comparison of Chi-squared and Log-likelihood tests in their study by underlining that “in order to extend applicability of the frequency comparisons to expected values of 1 or more, use of the log-likelihood statistic is preferred over the chi-squared statistic, at the 0.01% level. The trade-off for corpus linguists is that the new critical value is 15.13 (p. 926)”.

In line with the citation above, the cut-off value of the present research is adopted as 15.13 in each of the Log-likelihood calculations.

In accordance with the methodology of the present research, first, the Native Language/Interlanguage comparison (NL/IL) (Granger, 1996, 1998) is calculated through the Log-likelihood calculator. The NSEd is compared to the NSTd and the WEd to find out whether the non-native authors show native-like features in the use of evidentiality. Second, the Interlanguage/Interlanguage comparison (IL/IL) (Granger, 1996, 1998) is calculated through the Log-likelihood calculator. The NSTd is compared to the WEd to reveal whether non-native authors share common features in use of evidentiality.

3.5. Data Analysis Procedure

All of the evidential markers in Table 3.1, also provided in Appendix B, were sought out in each of the three databases through the use of AntConc Software 3.4.4, the digital text analysis software.

The data analysis was obtained in the following steps. First, the compilation of each of the three databases, as clarified in a detailed way in the previous Sections 3.2 and 3.3, was completed. Then, each of these three databases for the data analysis was prepared by extracting the unnecessary items such as page numbers, headings, subtitles, direct quotations, etc.. AntConc Software 3.4.4 was utilized to determine the frequency of each of the evidential markers identified in Table 3.1 in each of the three

databases to answer the first research question. AntConc Software not only served for the detection of the lexical items identified in the Taxonomy but also provided the researcher with the opportunity to interpret the lexical item by demonstrating it in its context whether it was really an evidential marker or not. In this way, both the frequency of the evidential markers in Table 3.1 in each of the three databases was determined and the irrelevant uses of these lexical markers were excluded after the interpretation of their use in context. Figure 3.4 demonstrates how the concordance function of AntConc Software 3.4.4 works.

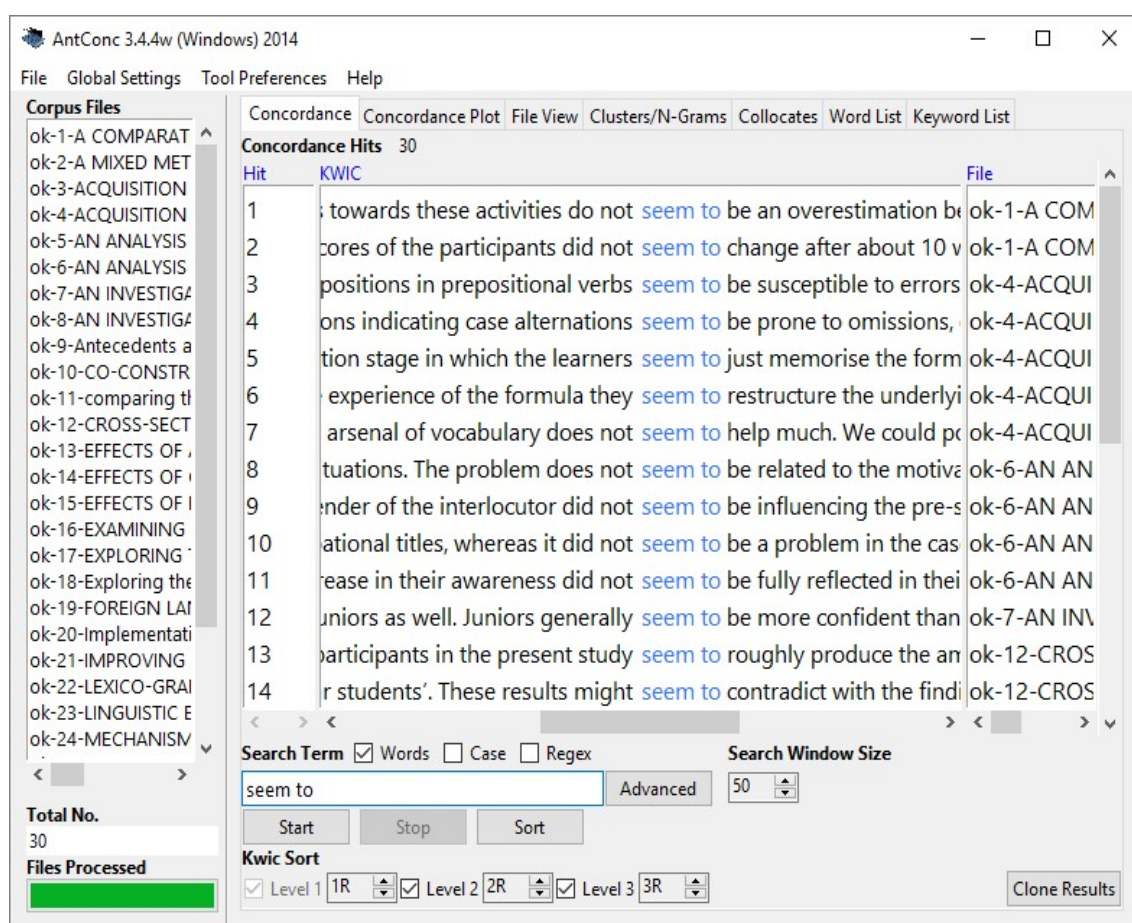


Figure 3.4 A Screenshot of AntConc Software (Concordance sample of *seem to* in NSTd)

In other words, the first part of the data analysis consisted of the determination of the evidential markers in Table 3.1 in each of the three databases and the assessment of these lexical items whether they served as evidential markers or not. At the end, the

frequencies of these evidential markers were determined after excluding the irrelevant uses of these lexical items.

Second, the procedure carried out by the researcher himself in the first part of the data analysis, explained in detail above, was replicated by a second researcher to determine to what extent these researchers reached a consensus about the functions of these lexical items in Table 3.1 in each of the three databases. Chafe (1986) grouped the items under eight categories such as markers of reliability, belief, induction, hearsay, deduction, sensory evidence, matching knowledge against verbal resources, and matching knowledge against expectations. Thirty percent of each of the three databases (ten dissertations at random in each) were examined by the second researcher, holding a master's degree in the field of English Language Teaching, with eight years of experience in the teaching of English; and then, Intraclass Correlation Coefficient Test for inter-rater reliability was run to determine the rate of agreement on both the whole data in each of the three databases and the eight categories of Chafe (1986) mentioned above between the two raters. Shrout and Fleiss (1979) define the Intraclass Correlation Coefficient as "the correlation between one measurement (either a single rating or a mean of several ratings) on a target and another measurement obtained on that target (p. 422)". As Shrout and Fleiss (1979) clearly express, there are several different forms of ICC. The researchers, first, should determine which type of ICC is suitable for the specific situation and for the content of their study. In the present research, in the process of calculating inter-rater reliability between the raters, "each target is rated by each of the same k judges, who are the only judges of interest (pp. 420-421)". In other words, as similar to the explanation in Landers (2015, p. 2) in line with Shrout and Fleiss (1979), in the present research, there are two exact raters making ratings on each of the eight categories. Also, these two raters do not represent a sample of raters, instead, they both are a population of raters themselves. That is, they are not selected as a sample group among a population. They are the two of two raters in the population. That is why two-way mixed of ICC is selected as a suitable test type to the present research.

Inter-rater reliability scores between the two raters for both each of the three databases in general and Chafe's (1986) eight categories are summarized in Table 3.3.

Table 3.3 *Inter-rater Reliability Scores between the Two Raters*

	The whole database in general	Markers of Reliability	Markers of Belief	Markers of Induction	Markers of Hearsay	Markers of Deduction	Markers of Sensory Evidence	Matching Knowledge against Verbal Resources	Matching knowledge against Expectations
NSTd	,999	1,000	N/A	,995	,998	,998	1,000	,984	1,000
NSEd	1,000	1,000	,900	,996	,953	,998	1,000	,889	1,000
WEd	,999	1,000	1,000	,998	1,000	,999	1,000	1,000	,998

According to Weir (2005), “the ICC can theoretically vary between 0 and 1.0, where an ICC of 0 indicates no reliability, whereas an ICC of 1.0 indicates perfect reliability (p. 232)”. In a similar way, Wastel and Barker (1988) explain how to get the scores by underlining “ICC thus measures the ratio of true score variance to total variance. When true score variance predominates over error variance, ICC will be close to 1, and vice versa (p. 584)”. As Table 3.3 demonstrates, the inter-rater reliability scores between the two raters are considerably satisfactory, close to perfect reliability in each of the calculations.

Third, both the raw frequencies of the evidential markers in Table 3.1 in each of the three databases and their numeric data indicating their normalized occurrences per 1.000 words were shared with the reader in Chapter 4. The raw occurrences of these lexical markers were converted into the normalized ones per 1.000 words to ensure the validity of the data and equality across the three databases because of not consisting totally equal number of words in size.

Fourth, to respond to the second research question, the Log-Likelihood Calculator of Rayson and Garside (2000) were utilized to reveal whether there were significant differences among these databases with regard to their use of evidential markers in Table 3.1.

CHAPTER FOUR

4. RESULTS AND DISCUSSION

4.1. Overview of the Study

This section consists of the findings provided through the analyses of the data and the discussion of the findings.

First, to answer the first research question, the analyses of the use of evidentiality, the raw frequencies of each of the evidential markers and their normalized occurrences per 1.000 words, in the NSTd, NSEd and WEd are investigated.

Second, in order to answer the second research question, the NSEd and the NSTd are compared in order to determine the difference between the native language and the interlanguage (NL/IL) (Granger, 1996, 1998) in terms of the use of evidential markers. Also, the NSEd and the WEd are compared to determine the difference between the native language and the interlanguage with regard to the use of evidentiality. By means of this NL/IL analysis, the study attempts to reveal whether the non-native authors show native-like features in terms of the use of evidentiality. Furthermore, the NSTd and the WEd; in other words, the non-native databases are compared to reveal the difference between the interlanguages of English with regard to the use of evidentiality. Interlanguage analysis through the IL/IL comparison (Granger, 1996, 1998) helps the researcher find out whether the non-native databases differ from each other with regard to the use of evidentiality. In order to answer the second research question, the Log-Likelihood calculations are made. The use of evidential markers in each of the three databases is compared to each other to determine whether these three databases differ significantly. At the very beginning, the overall use of evidentiality in each of the three databases is compared. Then, more specifically, the use of eight different types of markers is compared. The item-by-item analysis of 79 markers is conducted to compare the use of each marker in each of the three databases. Throughout these analyses, as pointed out in Chapter 3, both the Native Language and Interlanguage (NL/IL) and the Interlanguage and Interlanguage (IL/IL) comparisons (Granger, 1996, 1998) are conducted. While the former comparison examines the non-nativeness of the learner language, the latter requires the comparison of interlanguages of the same language or different languages to determine the similarities and differences in terms of the use of evidentiality.

4.2. Overall Use of Evidentiality in the Three Databases

With the aim of determining the raw frequencies of each of the evidential markers and their normalized occurrences in all of the three databases, each of the markers in Table 3.1 in Section 3.1 is analyzed and evaluated in its own context to reveal whether functioning as an evidential marker or not.

In general, the use of evidentiality in the NSEd is more frequent than the other two non-native databases. The NSTd ranks number two with regard to the use of evidentiality in total. The least frequent use of evidentiality appears in the WEd. Apart from the overall use of evidential markers, markers of reliability, deduction and matching knowledge against expectations draw attention with frequent occurrences in each of the three databases. The rest of the evidential types except markers of induction hardly ever occur in each of these databases. The use of the markers of induction in each of these databases is rare compared to the above-mentioned highly frequent evidential markers.

Figure 4.1 summarizes the normalized frequency distribution of evidential markers in the three databases.

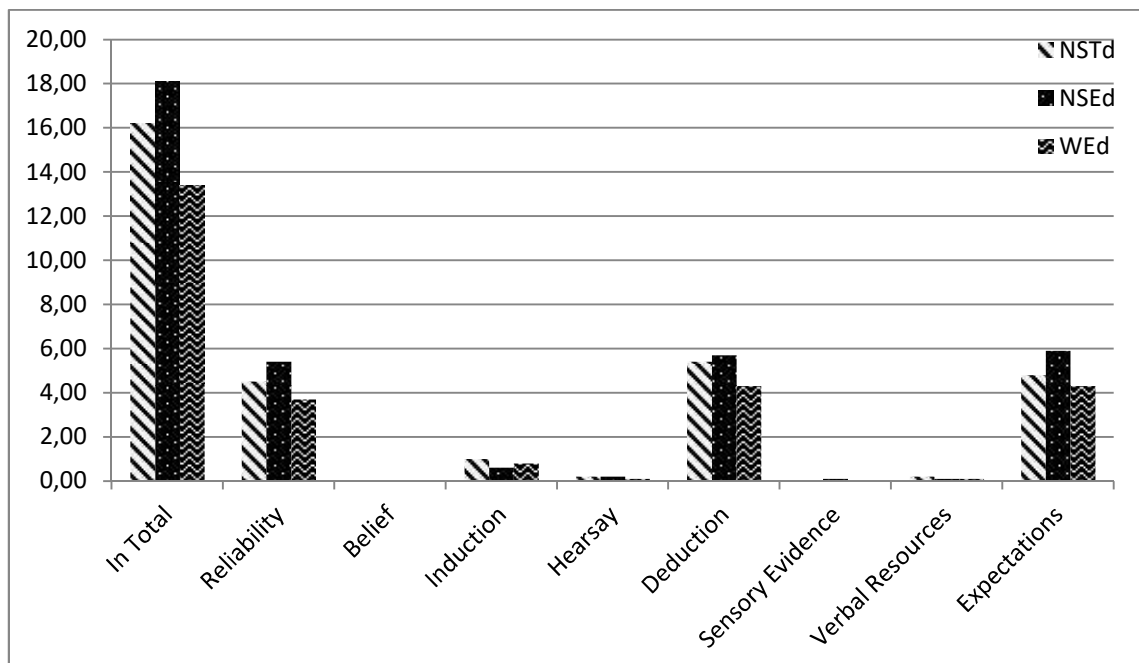


Figure 4.1 Normalized Frequency Distribution of Evidentiality in total and of 8 Different Types (per 1.000 words)

As seen in Figure 4.1 above, the analysis of the NSTd reveals that the overall use of evidentiality is observed in 2597 occurrences in total. 79 separate markers, included in Table 3.1 in Section 3.1, under 8 separate types appear 16.2 times per 1.000 words. In addition to that, the findings of the research show that markers of deduction appear 860 times with 5.4 normalized occurrences. Markers of expectation and reliability are the following most frequent types with 4.8 and 4.5 normalized occurrences, respectively. In comparison to these types, markers of belief, induction, hearsay, sensory evidence, matching knowledge against verbal resources are rather few in number or have little or no occurrence.

3376 raw instances of evidential markers with 18.1 normalized occurrences per 1.000 words are employed in the NSEd. The analyses of the research demonstrate that markers of matching knowledge against expectations show 1102 frequencies of use with 5.9 normalized occurrences. Markers of deduction and reliability are the following most frequently used types with 5.7 and 5.4 normalized occurrences, respectively. While markers of deduction are used 1072 times, the frequency of use of markers of reliability reaches to 1018. Compared to these types, markers of belief, induction, hearsay, sensory evidence, and matching knowledge against verbal resources are very few in number.

As for the WEd, 79 markers are used 3930 times with 13.4 normalized occurrences per 1.000 words. Markers of matching knowledge against expectations and deduction show the highest frequency of use with 1272 occurrences and 1254 occurrences, respectively, which equals to 4.3 normalized occurrences per 1.000 words. The following most frequently used type is markers of reliability with 3.7 normalized occurrences per 1000 words. The authors in the WEd make use of markers of reliability 1097 times. Contrary to these highly-frequent evidential types, markers of belief, induction, hearsay, sensory evidence, and matching knowledge against verbal resources are very scarce in number.

The following conclusions are reached when the three databases are taken into consideration. First, the use of evidential markers by the native English authors is more frequent than that by the non-native authors. Second, the use of markers of reliability, deduction, and matching knowledge against expectations are very frequent in academic writing, especially in the dissertations in the present data. Both the native and the non-native databases consist of a considerable amount of use of these aforementioned types. It can be inferred that the use of these types is a natural concomitant of the academic

genre. Third, it can be inferred from the quite low use of markers of belief, sensory evidence, hearsay and matching knowledge against verbal resources in each of the three databases, there are some types against the nature of the academic genre. These types do not serve the purpose of the academic writing.

4.2.1. Frequency analysis of overall use of evidentiality among the databases

There are 3376 evidential markers in total in the NSEd. This use of evidential markers equals to 18.1 occurrences per 1.000 words. As for the NSTd, the use of evidentiality markers occurs 2597 times with 16.2 normalized occurrences. Table 4.1 summarizes the data about the overall evidential use in the NSEd and the NSTd.

Table 4.1 *Frequency Analysis of Overall Use of Evidentiality in NSEd and NSTd*

	NSEd	NSTd	LL Ratio
Frequency of occurrence	3376	2597	+17.14
Normalized occurrences	‰18.1	‰16.2	

The overall use of evidentiality is more frequent in the NSEd compared to the NSTd with 17.14 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSEd and the NSTd with regard to the overall use of evidentiality; that is to say, more frequent use of evidential markers in the NSEd as compared with the NSTd is justified by the LL calculation. (critical LL value = 15.13)

In the WEd, the use of 3930 evidential markers in total stands out, meaning that the overall use of evidentiality equals to 13.4 normalized occurrences per 1.000 words. As mentioned in Table 4.1 above, the overall use of evidentiality in the NSEd appears 3376 times, which is 18.1 normalized occurrences. The data about the overall use of evidentiality in the NSEd and the WEd is visualized in Table 4.2.

Table 4.2 *Frequency Analysis of Overall Use of Evidentiality in NSEd and WEd*

	NSEd	WEd	LL Ratio
Frequency of occurrence	3376	3930	+159.06
Normalized occurrences	‰18.1	‰13.4	

The overall use of evidentiality in the NSEd outnumbers that in the WEd with 159.06 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSEd and the WEd with regard to the overall use of evidential markers; that is to say, the use of more frequent evidential markers in the NSEd as compared with the WEd is justified by the LL calculation. (critical LL value = 15.13)

The results illustrated in Tables 4.1 and 4.2 above reveal that the native and non-native databases differ significantly with regard to the use of evidentiality in total. In terms of the Native Language/Interlanguage comparison in the method of the present dissertation, both the authors in the NSTd and the ones in the WEd exhibit different characteristics from the authors in the NSEd with regard to the overall use of evidentiality. In the following Table, the non-native databases are compared to see whether there is any difference between different varieties of English, especially as for various L1 backgrounds.

The overall use of evidentiality with 2597 occurrences in the NSTd and with 3930 occurrences in the WEd equals to 16.2 and 13.4 normalized occurrences per 1.000 words, respectively. Table 4.3 summarizes the quantitative data about the overall use of evidentiality in both of the non-native databases.

Table 4.3 *Frequency Analysis of Overall Use of Evidentiality in NSTd and WEd*

	NSTd	WEd	LL Ratio
Frequency of occurrence	2597	3930	+55.51
Normalized occurrences	‰16.2	‰13.4	

The overall use of evidentiality is more frequent in the NSTd compared to the WEd with 55.51 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSTd and the WEd with regard to the overall use of evidentiality; that is to say, more frequent use of evidentiality in the NSTd as compared with the WEd is justified by the LL calculation. (critical LL value = 15.13)

As for the Interlanguage/Interlanguage comparison (Granger, 1998, pp. 13-14; 2015, p. 8), as demonstrated in Table 4.3, the overall use of evidentiality in the non-

native databases does not resemble each other. They show different characteristics with regard to the overall use of evidential markers.

4.2.2. Discussion of the overall use of evidentiality

In terms of the overall use of evidentiality, the results show that the native speakers of English make use of evidentiality more frequently compared to the non-native speakers. This may be because the texts written by the native speakers of English are relatively content-rich in the source of the knowledge the authors possess (evidentiality) and tend to show lack of/high commitment of the writer to the proposition in the text (epistemic modality). In other words, the native speakers of English are more prone to share the origin of the information they convey to the reader; and more willing to hedge or boost their propositions in the text. As for the non-native authors, all of these aforementioned arguments are valid for the native speakers of Turkish as well. Namely, compared to the authors with various L1 backgrounds, the native speakers of Turkish have a more tendency to write by sharing the source of their knowledge and to increase/lower their commitment to the proposition. Section 4.11 consists of the findings in which each of the groups, regardless of the academic writing conventions, is evaluated according to the semantical analysis of these markers in the taxonomy. In other words, Section 4.11 shows how these markers function in the text and affect the text in terms of reliability.

In addition to the frequency of the use of evidentiality, markers of reliability, deduction, and matching knowledge against expectations are frequently used by both native and non-native authors. The fact that these evidential types are common in each of these three databases and high in number directly concludes that these evidentials are typical elements of academic writing. Contrary to these extensively-used evidential types, quite low use of markers of belief, sensory evidence, hearsay and matching knowledge against verbal resources in each of these three databases suggests that academic writing is very selective in its components. These types do not serve the purpose of academic writing and are against its nature.

4.3. Use of Markers of Reliability in the Three Databases

23 markers of reliability in Table 3.1 in Section 3.1 are analyzed in these three databases. Detailed information about markers of reliability is presented in Section 2.3.6

in Chapter 2. These markers exist within the whole NSTd 728 times with 4.5 normalized occurrences per 1.000 words. These markers of reliability show the highest frequency with 1018 times, which is 5.4 normalized occurrences, in the dissertations of the NSE authors. These markers are the least in number with 1097 occurrences, which equals to 3.7 normalized occurrences, in the WEd. The normalized frequency distributions of markers of reliability in the three databases are demonstrated in Figure 4.2.

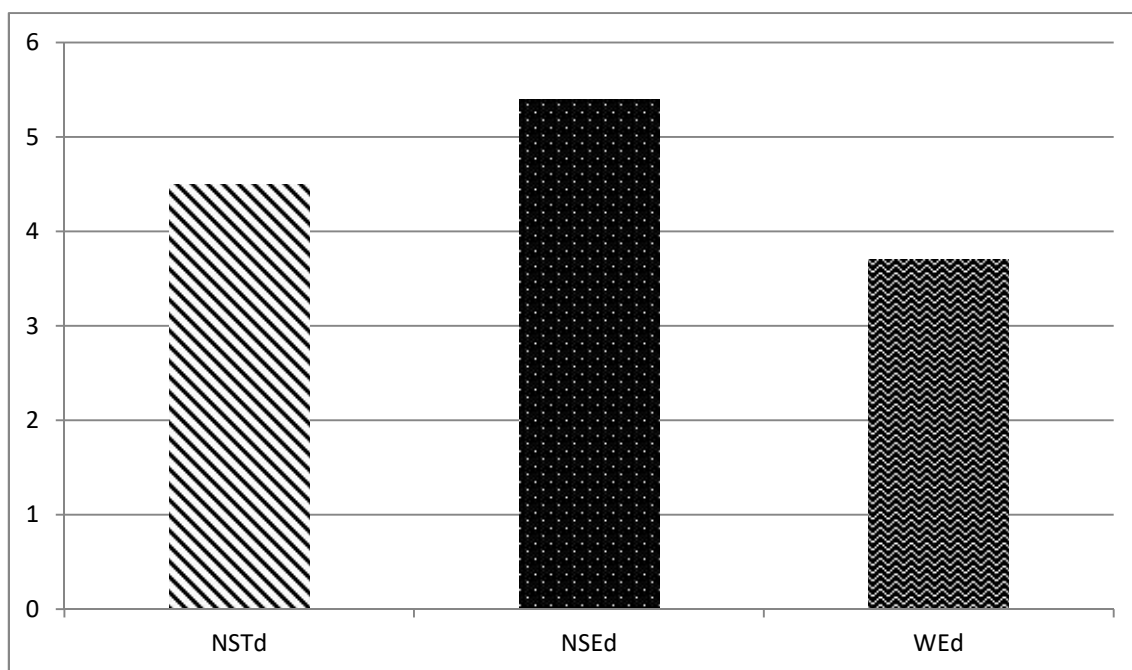


Figure 4.2 *Normalized Frequency Distribution of Markers of Reliability (per 1.000 words)*

As shown in Figure 4.2, the NSEd consists of a higher number of markers of reliability than the other two non-native databases do. Also, the use of these markers in the NSTd is more frequent than that in the WEd.

Figure 4.3 illustrates all of the 23 items functioning as markers of reliability with their normalized occurrences in each of the three databases.

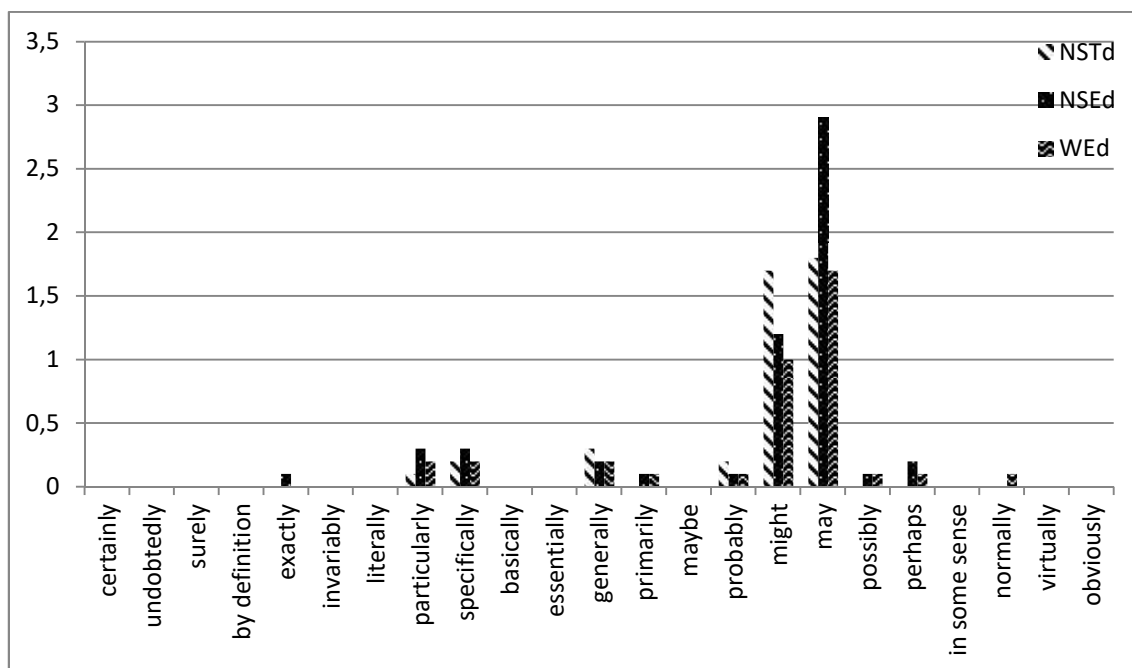


Figure 4.3 Normalized Frequency Distribution of Each of Markers of Reliability (per 1.000 words)

As shown in Figure 4.3 above, the modal *may* and *might* are the most frequently used reliability markers in all of the three databases. The modal *may* appears 295 times with 1.8 normalized occurrences per 1.000 words in the NSTd. Similar to *may*, the modal *might* is the following most frequent marker of reliability with 275 occurrences, meaning 1.7 times per 1.000 words. Compared to the NSTd, similarly, the modal *may* shows the highest frequency of use with the modal *might* in the NSEd. In addition to this, the modal *may* has the most frequent occurrence in the NSEd among these three databases. While *may* is used 547 times with 2.9 normalized occurrences as a marker of reliability, *might* shows 222 instances with 1.2 normalized occurrences in the NSEd. As in the NSTd and the NSEd, the modals *may* and *might* have the highest frequency of use among all of the markers of reliability in the WEd. The authors in the WEd make use of the modal *may* in 511 instances with 1.7 normalized occurrences. The modal *might* is used as a marker of reliability in 285 occurrences, which is 1 normalized occurrence.

In addition to these two most salient reliability markers, *generally*, *specifically*, *probably*, and *particularly* are seen in the NSTd with 123 occurrences; in other words, with 0.8 normalized occurrences in total. Apart from these markers of reliability, *possibly*, *perhaps*, *maybe*, *primarily*, *basically*, *exactly*, *undoubtedly*, *certainly*,

obviously, and *surely* also appear in the NSTd with a very small number of 35 raw occurrences in total.

In the NSEd, *perhaps*, *generally*, *specifically* and *particularly* show 170 frequencies of use, which equals to 1 normalized occurrence per 1.000 words. Out of these moderately-used markers of reliability, there are some markers of reliability very scarce in number. *Certainly*, *undoubtedly*, *surely*, *by definition*, *exactly*, *basically*, *essentially*, *primarily*, *maybe*, *probably*, *possibly*, *normally*, *virtually*, and *obviously* show very few usages with 79 raw frequencies of use, which equals to almost 0.4 normalized occurrences.

As in the NSTd and the NSEd, some markers of reliability have a moderate frequency in the WEd. *Particularly*, *specifically*, *generally*, *probably*, *primarily*, *perhaps*, *normally* and *possibly* are used in 267 occurrences, which equals to 0.9 normalized occurrences per 1.000 words. Out of these markers of reliability with moderate frequency, there are some markers of reliability which are very scarce in number. *Certainly*, *undoubtedly*, *surely*, *by definition*, *exactly*, *basically*, *essentially*, *maybe*, *virtually*, and *obviously* have very limited use in the WEd. Indeed, these markers of reliability are used in only 34 raw instances.

Apart from the above-mentioned scarcely used markers of reliability, there are some markers, *invariably*, *literally* and *in some sense*, used in none of the three databases. In addition to these three markers of reliability, *by definition*, *essentially*, *normally*, and *virtually* are some other markers never occurred in the NSTd.

4.3.1. Frequency analysis of markers of reliability among the databases

The use of markers of reliability appears 1018 times with 5.4 normalized occurrences in the NSEd while the same type is used 728 times with 4.5 normalized frequencies in the NSTd. This quantitative data is summarized in Table 4.4.

Table 4.4 *Frequency Analysis of Markers of Reliability in NSEd and NSTd*

	NSEd	NSTd	LL Ratio
Frequency of occurrence	1018	728	+13.99
Normalized occurrences	%5.4	%4.5	

The NSE authors use more markers of reliability compared to the NST authors with 13.99 LL value ($p > 0.0001$), meaning that there is not any statistically significant difference between the NSEd and the NSTd with regard to the use of markers of reliability; that is to say, more frequent use of markers of reliability in the NSEd as compared with the NSTd does not differ significantly with regard to the LL calculations.

The WEd consists of 1097 occurrences of markers of reliability, which is equal to 3.7 normalized frequencies. As mentioned in the previous paragraph, the NSE authors use markers of reliability 1018 times with 5.4 normalized occurrences. Table 4.5 demonstrates the data about the use of markers of reliability in the NSEd and the WEd.

Table 4.5 *Frequency Analysis of Markers of Reliability in NSEd and WEd*

	NSEd	WEd	LL Ratio
Frequency of occurrence	1018	1097	+73.41
Normalized occurrences	%5.4	%3.7	

The use of markers of reliability is more frequent in the NSEd compared to the WEd with 73.41 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSEd and the WEd with regard to the use of markers of reliability; that is to say, more frequent use of markers of reliability in the NSEd as compared with the WEd is justified by the LL calculations. (critical LL value = 15.13)

As underlined in Table 4.4 and 4.5, although there is a statistically significant difference between the NSEd and the WEd with regard to the use of markers of reliability, there is not any meaningful difference between the NSEd and the NSTd. With regard to the Native Language/Interlanguage comparison as a part of Granger's Contrastive Interlanguage Analysis (1998, pp. 12-14), it can be inferred that the NST authors show native-like features in terms of the use of markers of reliability. Their use of markers of reliability shows similarity with the native authors' use of markers of reliability. However, the authors' interlanguages in the WEd show different characteristics from the NSE authors' use of markers of reliability.

In order to compare the NSTd and the WEd with respect to the use of markers of reliability, 4.5 normalized occurrences in the NSTd and 3.7 normalized occurrences in the WEd are contrasted. This data is visualized in Table 4.6.

Table 4.6 *Frequency Analysis of Markers of Reliability in NSTd and WEd*

	NSTd	WEd	LL Ratio
Frequency of occurrence	728	1097	+16.24
Normalized occurrences	%4.5	%3.7	

Markers of reliability are more frequent in the NSTd compared to the WEd with 16.24 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSTd and the WEd with regard to the use of markers of reliability; that is to say, more frequent use of markers of reliability in the NSTd as compared with the WEd is justified by the LL calculations. (critical LL value = 15.13)

When we compare the Interlanguage/Interlanguage data, the non-native speakers' use of reliability markers significantly differ from each other as in the overall use of evidentiality. It can be inferred that different L1 backgrounds of these authors in the non-native databases bring about a differentiation between these non-native databases with regard to the use of markers of reliability. That is to say, non-native authors do not share common features in use of markers of reliability.

Table 4.7 demonstrates the item-by-item analysis of markers of reliability, which summarizes both the raw and the normalized frequency distributions of each of the markers of reliability and the Log-Likelihood calculations among the three databases.

Table 4.7 *Item-by-Item Frequency Analysis of Markers of Reliability*

Item	NSEd Raw Frequency/per 1.000 words	NSTd Raw Frequency/per 1.000 words	WEd Raw Frequency/per 1.000 words	LL Ratio for NSEd-NSTd	LL Ratio for NSEd-WEd	LL Ratio for NSTd-WEd
Certainly	6/0	2/0	4/0	+1.52	+1.80	-0.01
Undoubtedly	1/0	3/0	2/0	-1.38	-0.04	+1.25
Surely	1/0	1/0	2/0	-0.01	-0.04	-0.01
By definition	1/0	0/0	3/0	+1.24	-0.35	-2.62

Exactly	10/0.1	3/0	9/0	+2.97	+1.45	-0.59
Invariably	0/0	0/0	0/0	/	/	/
Literally	0/0	0/0	0/0	/	/	/
Particularly	47/0.3	20/0.1	60/0.2	+7.42	+1.10	-3.96
Specifically	50/0.3	33/0.2	45/0.2	+1.37	+7.27	+1.61
Basically	1/0	3/0	2/0	-1.38	-0.04	+1.25
Essentially	7/0	0/0	3/0	+8.66	+3.94	-2.62
Generally	30/0.2	44/0.3	44/0.2	-5.27	+0.08	+7.91
Primarily	16/0.1	4/0	29/0.1	+5.97	-0.22	-9.24
Maybe	2/0	5/0	1/0	-1.83	+0.94	+5.87
Probably	10/0.1	26/0.2	32/0.1	-10.05	-4.33	+2.21
Might	222/1.2	275/1.7	285/1	-16.81	+4.93	+44.46
May	547/2.9	295/1.8	511/1.7	+42.67	+70.42	+0.56
Possibly	14/0.1	6/0	17/0.1	+2.17	+0.50	-0.90
Perhaps	43/0.2	6/0	22/0.1	+26.07	+19.61	-2.57
in some sense	0/0	0/0	0/0	/	/	/
Normally	4/0	0/0	18/0.1	+4.95	-4.44	-15.70
Virtually	5/0	0/0	3/0	+6.19	+1.81	-2.62
Obviously	1/0	2/0	5/0	-0.51	-1.41	-0.15

As Table 4.7 illustrates, the use of the markers *may*, *might*, *perhaps*, and *normally* differs between some databases. First, the LL value of -16.81 means that less frequent use of *might* in the NSEd compared to the NSTd is statistically significant. Similarly, the use of *might* in the NSTd is more frequent than that in the WEd, and the LL value of +44.46 underlines that more frequent use of *might* in the NSTd is significant. However, its use does not significantly differs between the NSEd and the WEd. That is to say, as for the NL/IL comparison, it can be inferred that the NST authors show different characteristics with regard to the use of *might* in contrast with the NSE authors. However, the use of *might* in the WEd has characteristics in common with the NSEd. As for the IL/IL comparison, it can be inferred that non-native databases do not seem to be very much alike in use of *might*.

Second, more frequent use of *may* in the NSEd with +42.67 LL value indicates that the use of *may* by the NSE authors differs significantly from that by the NST authors. In a similar vein, more frequent use of *may* in the NSEd is statistically significant than its use in the WEd. In other words, as for the NL/IL comparison, the NSEd varies with both of the non-native databases significantly. Both of these two non-native databases do not show the same characteristics with the NSEd with regard to the use of *may*. However, as for the IL/IL comparison, the non-native databases do not

differ significantly between each other. Slightly more frequent use of *may* in the NSTd compared to the WEd does not make significant difference between the non-native databases.

Third, as in the marker *may*, an NL/IL differentiation occurs in the use of *perhaps*. Its use differs significantly both between NSEd-NSTd and NSEd-WEd. +26.07 LL value asserts that more frequent use of *perhaps* in the NSEd makes a significant difference between the NSEd and the NSTd. Similarly, +19.61 LL value shows that *perhaps* is more frequent in the NSEd significantly compared to its use in the WEd. Any significant difference, however, occurs between the non-native databases.

Fourth, contrary to the markers *may* and *perhaps*, there is a significant difference between the non-native databases with regard to the use of *normally*. -15.70 LL value implies that less frequent use of *normally* in the NSTd differs significantly than that in the WEd. It can be inferred that the non-native databases do not resemble each other with regard to the use of *normally*.

4.3.2. Discussion of markers of reliability

The use of markers of reliability is considerably frequent in each of these three databases. Similar to the present findings devoted to the dissertations, the academic data in Chafe (1986) consists of 6.8 frequencies of occurrence of markers of reliability per 1.000 words (p. 265). The results in Chafe (1986) support the findings of the present dissertation related to the markers of reliability. The use of these markers is very natural in academic genre. However, when it comes to a different genre, the use of markers of reliability dramatically declines. Investigating the use of evidentiality in the speech of the U.S presidential candidates, Berlin and Prieto-Mendoza (2014) mention that the use of markers of reliability in these candidates' speech equals to 2.24 per 1.000 words (p. 397). This frequency equals to almost one-third of markers of reliability in Chafe's academic data (1986, p. 265). Similarly, as for the spoken data in Chafe (1986), the findings devoted to the frequency of markers of reliability in Berlin and Prieto-Mendoza (2014) are nearly half of the frequency of markers of reliability in Chafe's conversational data. The frequency of these markers of reliability is 4.6 occurrences in Chafe's conversational data (p. 265). It can be inferred that markers of reliability are considerably frequent in the written academic genre compared to the conversational

English. One can assume that the genre of the data functions as a determinant factor in the use of markers of reliability.

As in the overall use of evidentiality, the use of markers of reliability is the most frequent in the NSEd. The NSTd and the WEd chase it, respectively. However, the NST authors do not differ from the NSE authors with regard to the use of markers of reliability. This implies that the NST authors show native-like features in the use of markers of reliability. Contrary to the NST authors, the authors with various L1 backgrounds differ significantly from the NSE authors. It can be inferred that the authors with various L1 backgrounds do not show native-like features with regard to the use of markers of reliability. According to Granger (2015), the reason of using a native speaker corpus/database as a control group is the acceptance of native speaker data as the ultimate attainment of learning a foreign or second language (p. 8). In this regard, one can assume that the native speakers of Turkish reach ultimate attainment in the use of these markers of reliability.

According to Chafe (1986), “not all knowledge is equally reliable (p. 264)”. While some of the information is more reliable, some of them is less reliable. Markers of reliability in the text increase or decrease the validity of the information the authors share with the reader. In other words, the authors increase or decrease the rate of the reliability they possess in their writing. Alternatively, one can assume that the NSE and the NST authors equally take on responsibility for their texts.

A clear majority of markers of reliability in each of these three databases, almost three quarters, is composed of *may* and *might*. The normalized frequency of *may* and *might* forms the 78.29% of the overall use of markers of reliability in the NSTd. This size is equal to 75.54% of markers of reliability in the NSEd. The size of *may* and *might* in the overall markers of reliability drops down to 72.56% in the WEd. This, on its own, is enough to suggest that markers of reliability are used in each of these three databases to “indicate the writer’s decision to withhold complete commitment to a proposition, allowing information to be presented as an opinion rather than accredited fact (Hyland, 2005b, p. 178)”.

The following examples from the data of the present research illustrate the use of modals *may* and *might* as reliability markers to add low probability to the proposition.

(1)...This **may** be due to the fact that these structures are not used in adult spoken language frequently, which is in line with several studies showing that object RCs are less frequent than subject RCs. (NSTd-24)

(2)...Very often we hear students saying “No matter how hard I study, I will not be able to learn a foreign language”. Or they **may** believe that foreign language learning is difficult and they do not have the ability to do it. These students **may** in advance expect to fail on the exams and will not spend much time studying. (NSTd-26)

(3)... One reason for a lack of teacher feedback **may** be the perception that English does not need to be noticed and assessed in CLIL contexts due to its instrumental role in the instruction... (WEd-8)

As a matter of its nature, academic writing avoids the use of assertive propositions. The authors tone their propositions down by means of some reliability markers such as *may*. As shown in the extract (1), the author comes up with a possible reason for some structures infrequently used in adult language. Extract (2) shows two instances concerning students’ some possible prejudices against learning a foreign language. The author abstains from using assertive reasons by the use of *may* for the absence of teacher feedback in (3).

(4)... This **might** explain why parental educational levels had an influence on student educational outcomes in this study, even after the other indicators of limited formal schooling were held constant. (NSEd-4)

(5)...Turkish-English bilingual children performed less successfully both in comprehension and production compared to Turkish monolingual children. We conjecture that this **might** be due to the fact that they do not receive any formal input (i.e., literacy education or instruction) in Turkish language. (NSTd-24)

Similar to *may*, the use of *might* also adds low possibility meaning to the proposition in the extracts (4-5). For example, in (4), the author shares a potential reason which conceivably explains the influence of parental educational levels on the student educational outcomes. Similarly, in (5), the author states a reason for why the

monolingual children are more successful in comprehension and production compared to the bilingual children. The use of the verb *to conjecture*, by itself, reflects the author's assumption for the potential reason s/he thinks of. In addition to the verb *to conjecture*, the modal *might* in the same sentence creates a highly unreliable proposition.

With regard to the use of *may*, the results are similar to those in the past studies. Searching for the modals *may* and *might* to reveal whether they function as grammatical evidential markers or epistemic markers, Alonso-Almeida and Cruz-Garcia (2011) investigate the abstract sections of the medical research articles written by the native speakers of English. The results show that the modal *may* shows an overwhelming presence in 35% of the whole cases. It outnumbers the other modals denoting possibility (p. 64). As for the modal *might*, Palmer (2001) underlines both *may* and *might* have exactly similar usage. However, in very rare situations, *might* denotes less certainty than *may* (p. 58). In another study, Alonso-Almeida and Adams (2012) compare medical research articles written in English and Spanish with regard to the use of evidentiality. The results, similar to the ones in the present dissertation, demonstrate that the modal *may* is the most common evidential item in the discussion parts of the English research articles (p. 19). Contrasting English and Spanish medical research articles with regard to the use of evidential and epistemic devices, Alonso-Almeida (2015) identifies that the modal *may* consists of "the evaluation of the author concerning the realization of the propositional content". In the extracts from his data, the modal *may* either indicates probability or signals likelihood. These epistemic modals are more frequent in the English research articles compared to the Spanish research articles (p. 44).

Apart from *may* and *might*, the data of the present study consists of several markers of reliability with various functions in a proposition. As is evident from their functions, these reliability markers strengthen or weaken the author's credibility. The following extracts demonstrate semantic diversity among these markers of reliability.

(6) While this study did not attempt to make any direct comparisons between blended and non-blended IEP courses, both the students and the teachers **obviously** noticed the differences as indicated by, among other things, their interview comments, which are discussed elsewhere in this chapter. **(WEd-7)**

(7) In addition, if MSTs are not competent in some areas of mentor behaviour, or if they have no knowledge of a particular aspect of mentoring, **obviously** there will be a lack of communication on the subject with PSTs. (NSTd-20)

(8) This must **certainly** have an effect on processing, as various studies confirm that the number and the nature of arguments influence the success in parsing. (NSTd-24)

(9)...Hence, it is important to understand my assumptions and biases such that I can effectively articulate what I learned from this study. Of course, these assumptions and biases that I present below **certainly** do not offer an exhaustive list. (NSEd-14)

(10)...Future studies on levels of task completion status will **surely** shed lights on developing assessment criteria for task performance. (WEd-5)

(11) Speech recognition as an instrument for supporting literacy is still relatively new and creative uses of the technology will **surely** lead to enhanced methods and practices that may contribute to accelerated learning for ELL students. (NSEd-10)

(12) Another significant limitation was time; because of time constraints, the training lasted for seven weeks. **Undoubtedly**, an extended training period would have helped students internalize and retain the strategies, and the researcher would have been able to monitor students' development better, leading to more reliable results. (NSTd-2)

(13)...**Undoubtedly**, distinguishing main by either underlining or highlighting ideas from minor ones will be beneficial. (NSTd-13)

(14)...In addition, it is difficult to explain why this relationship appeared only in Second cycle. **Perhaps**, First cycle learners did not have enough exposure to global media in English for their scores in this variable to be high enough to have an influence on motivation and, therefore, achievement. (WEd-24)

(15) Although Lakoff and Johnson say that the way we look at language and create metaphors depends on culture, there are no studies which show how this is reflected in real language situations. This study fills a gap in the literature or **perhaps** begins a new thread of study in which metaphors can be examined in the context of different languages and different cultures. (NSEd-2)

(16)...The limitations of the study include its small size, SLP recruitment restrictions, a limited source of student participants, and, **possibly**, the questionnaire format itself. (NSEd-29)

(17) The novelty of the information as well as **possibly** different background knowledge could have caused the participants to have difficulty answering these inferential and literal questions. (NSEd-25)

(18)...**Maybe** the most important strength of this study is that it showed how useful it could be to change students' maladaptive beliefs in terms of their control beliefs, engagement and effort. (NSTd-26)

(19) The absence of significant correlations between expected school mark in English and achievement in First cycle is **probably** related to the fact that this group shows the lowest school mark in the sample and there is not enough variability in the scores for this variable. (WEEd-24)

(20) As for increasing study hours, it indirectly highlights the importance of effort. As students believed that the effort they expend is not enough, and they need to put more effort, they decided to increase their study hours. Finally, students preferred studying in the mornings, **probably** because they felt that they understand the content better in the morning. (NSTd-2)

The extracts above contain eight different markers of reliability which function as the main provider of certainty or possibility meaning; namely, high probability or low probability.

On the one hand, in the extracts (6-13), markers of reliability add higher rate of certainty to the assertions of the authors. The authors' confidence in their arguments is reflected on their assertions by means of *obviously*, *certainly*, *surely* and *undoubtedly*.

They provide added value for the writer's credibility on the side of the reader. In the extract (6), *obviously* increases the author's validity in the proposition about that the students and the teachers notice the differences between blended and non-blended IEP courses. Similarly, in (7), the author shares what kind of trouble the shortcomings of MST cause. The use of *obviously* persuades the reader of the reality of the proposition. In (8), the author is certain of the potential effect of processing. As in (8), *certainly* helps the author ensure the reader that s/he does not offer an exhaustive list of assumptions and biases in the extract (9). *Surely* in (10) persuades the reader with the potential effects of the future studies on developing assessment criteria for task performance. In the extract (11), the author asserts that new methods and practices accelerating the learning will appear as a result of the creative use of technology. *Surely* adds a meaning as if it is a typical outcome of the technology. In (12), the author is sure enough of the potential effects of a training in a longer period on students and researcher. The author in (13) points out the importance of making discrimination between minor and major ideas with the help of *undoubtedly* which leaves an impression on the reader that this kind of discrimination is indispensable.

On the other hand, the authors in the extracts (14-20) are unsure of the validity of their ideas. Under favor of using *perhaps*, *possibly*, *maybe*, *probably*, the authors soften their assertions. The use of these markers implies that the authors do not share a fact with the reader; instead, they convey assumptions or estimations. For example, in the extract (14), the author frankly expresses that it is difficult to account for the absence of what is available in Second Cycle in First Cycle. This, by itself, already reduces the reliability of the author. In addition to this explanation, starting with the marker *perhaps* and listing hypothetical reasons for First Cycle learners completely tone the author's proposition down. In (15), the author is sure of that his/her study fills the void in the literature; however, *perhaps* underlines that s/he does not feel fully certain of whether the metaphors will be examined in different contexts. Similarly, in the extract (16), the author is sure of that small size of the study, SLP recruitment restrictions, a limited source of student participants are the facts which are limitations of his/her study. However, *possibly* indicates that the author is not sure enough about the subsequent reason of the questionnaire format. In (17), the author suggests two reasons for why the participants have difficulty in answering some kinds of questions. S/he is sure of that one of these reasons is the novelty of the knowledge. However, *possibly* refers to the

author's doubt for the second reason of different background knowledge. Likewise, *maybe* implies that the author is not certain of the most important strength of his/her study in the extract (18). In the same way, in the extract (19), the use of *probably* refers to the assumption that the absence of a significant correlation between the two variables may derive from that the group has the lowest mark in the sample and that their scores do not vary enough. In (20), the author states a potential reason for why the students prefer studying in the mornings. However, s/he is not fully assured of whether the reason given would be a very real reason for that.

According to Chafe (1986), especially in academic writing, a special kind of reliability in which the writer knows what is underlined in his/her proposition is not absolutely true but it can be assumed that it is statistically rather true. According to him, something mostly true is not always true. It may turn into untrue (p. 265). The markers mentioned in the following extracts (21-24) serve this function which Chafe underlines.

(21) They also reveal that L2 learners are **basically** similar to the native English speakers in the way they process grammatical and ungrammatical wh-extractions. More specifically, they use similar processing strategies to those of the native speakers in processing wh-dependencies in the L2 English even if they are slower in processing items they can judge correctly. (NSTd-25)

(22) However, given that the exploratory factor analysis structure results of the pilot study **essentially** agreed with the main study that Extraversion and Agreeableness could not be separated, despite a substantial revision of questionnaire items... (NSEd-22)

(23) Then, there are also the occasions when people deliberately set a time for the completion of a task, such as homework. Given that others have found time diaries to be relatively accurate (Juster, 2009; Juster et al., 2003), and that interview data showed that participants **generally** recorded episodes to the nearest five minutes, these data can be accepted as **generally** reliable. (NSEd-5)

(24) If EFL is mostly teaching about the language and learning to communicate in everyday situations, then CLIL **primarily** is teaching and learning how to use the language in subject study. (WEd-8)

According to Berlin and Prieto-Mendoza (2014), *basically*, *primarily*, *generally*, and *essentially* are neutral with regard to their effect on the reliability of the text/author (p. 392). In the extract (21), the author underlines that L2 learners show native-like features in processing un/grammatical wh-extractions. *Basically* adds a meaning, as Chafe (1986) clarified, what is asserted is not categorically but statistically true. Similarly, in (23), the author gives information about the participants' general tendencies by using *generally*. This truth may also turn into untrue. In (24), there are some conditional situations between EFL and CLIL. *Primarily* adds that CLIL is basically devoted to the teaching and learning of using the language; however, any change in EFL may have an alteration in CLIL. In (22), the author makes a deduction from the results of the study. Some other results may change the author's opinion.

Berlin and Prieto-Mendoza (2014) define the markers of reliability mentioned in the following 3 extracts as the ones denoting higher reliability (p. 392).

(25) The correlation between M-LCT and M-RCL seems to be mostly a result of the sharing of the same latent variable(s) with M-LLT rather than with M-SLT. In fact, this is **exactly** what the principal components analyses indicate. **(WE_d-13)**

(26) Students in this study also used their personal influences to regulate their environment with the use of various strategies, such as avoiding distractions or finding a place where they can study efficiently. Similarly, Vandeveldt et al. (2011) found **exactly** the same result in a different context (i.e., Belgium). **(NST_d-2)**

(27) Cohen (1986) explained this issue that some words come into learners' vocabulary very easily without much attention whereas some others need conscious effort involving either rote repetition or organizational techniques. **Particularly**, low frequent and academic words need such special effort. **(NST_d-12)**

(28) The first section discusses the findings about the development of size and depth of vocabulary knowledge and thus overall lexical competence. The next section addresses to the participants' lexical use and diversity profile, as a result discussing the participants' lexical performance. The final section of the chapter **specifically** evaluates the academic lexical

competence and performance by relating the findings with the previous research on academic vocabulary. (NSTd-12)

The deduction of the author in (25) is originated from the principal components analyses and *exactly* shows that the author is completely sure of this deduction. Similarly, in (26), the use of *exactly* helps the author assure the reader of what is found in Vandeveld et al. is completely the same as the ones in the author's study. In (27), the author is confident about that some words need much time and conscious effort to include in the learner's mental lexicon. The author clarifies which words these are. The use of *particularity* shows that the author is reliable and his/her proposition is higher in reliability. In (28), *specifically* underlines what will be done in a more specific way in the final section is shared with the audience.

According to Berlin and Prieto Mendoza (2014), *normally* and *virtually* lower the reliability in the text (p. 392).

(29) Second, Korean is a head-final language, meaning that all dependent elements of the head **normally** precede the head. (WEd-14)

(30) Furthermore, a recent Canadian-immigrant presence is **virtually** non-existent (i.e., less than 0.05% based upon a older 2000 summary Census, which corresponds to more recent estimates). (NSEd-13)

In the extract (29), the author asserts that dependent elements appear before the head. However, the use of *normally* adds that there seems to be some exceptions. The use of *virtually* in (30) is similar to the markers of matching knowledge against verbal resources in Section 4.9., all of which tone the proposition in the text down.

4.4. Use of Markers of Belief in the Three Databases

The data from the NSTd does not consist of any markers of belief. Namely, in the dissertations conducted by the NST authors, they do not make use of any markers of belief. *I think*, *I guess*, *I suppose*, *I know*, and *I suspect*, are not used in the NSTd. For detailed information about the markers of belief, see Section 2.3.1. in Chapter 2.

Although the NSEd consists of more instances of markers of belief than that of the NSTd, it is still very scarce in number. 5 different markers of belief show only 4 raw instances. While *I think* shows 2 instances as a marker of belief, *I know* and *I suspect*

are used just once by the NSE authors. In addition to these scarcely-used markers of belief, *I guess* and *I suppose* show no instance as a marker of belief.

The WEd consists of almost no markers of belief. There are only 2 instances of markers of belief in the WEd. Only the marker of belief *I think* appears in 2 occurrences. Out of this marker, none of the rest is employed in the WEd.

4.4.1. Frequency analysis of markers of belief among the databases

The use of markers of belief is very rare in the NSEd, which is equal to just 4 frequencies of use. Contrary to the NSEd, the NSTd does not consist of any use of markers of belief. Table 4.8 shows the data about the use of markers of belief in the NSEd and the NSTd.

Table 4.8 *Frequency Analysis of Markers of Belief in NSEd and NSTd*

	NSEd	NSTd	LL Ratio
Frequency of occurrence	4	0	+4.95
Normalized occurrences	%0.00	%0.00	

Markers of belief have slightly more frequent use in the NSEd compared to the NSTd with 4.95 LL value ($p > 0.0001$), meaning that there is not any statistically significant difference between the NSEd and the NSTd with regard to the use of markers of belief; that is to say, slightly more frequent use of markers of belief in the NSEd as compared with the NSTd does not differ significantly with regard to the LL calculations.

As in the NSEd, in which 4 uses of markers of belief occur, just 2 uses of markers of belief are employed in the WEd. The information about the frequency distribution of markers of belief is demonstrated in Table 4.9.

Table 4.9 *Frequency Analysis of Markers of Belief in NSEd and WEd*

	NSEd	WEd	LL Ratio
Frequency of occurrence	4	2	+1.88
Normalized occurrences	%0.00	%0.00	

Markers of belief are slightly more frequent in the NSEd than in the WEd with 1.88 LL value ($p>0.0001$), meaning that there is not any statistically significant difference between the NSEd and the WEd with regard to the use of markers of belief; that is to say, slightly more frequent use of these markers in the NSEd as compared with the WEd does not differ significantly with regard to the LL calculations.

As shown in Tables 4.8 and 4.9, there is no statistically significant difference neither between the NSEd and the NSTd nor between the NSEd and the WEd with regard to the use of markers of belief. There is not any meaningful difference among the three databases. With regard to the Native Language/Interlanguage comparison, it can be inferred that the non-native databases show native-like features in terms of the use of markers of belief. Their use of markers of belief shows similarity with the native authors' use of markers of belief.

As shown in Table 4.10, the use of markers of belief is not encountered in the NSTd; however, only 2 markers of belief are used in the WEd.

Table 4.10 *Frequency Analysis of Markers of Belief in NSTd and WEd*

	NSTd	WEd	LL Ratio
Frequency of occurrence	0	2	-1.74
Normalized occurrences	%0.00	%0.00	

NST authors use slightly less markers of belief compared to the ones in the WEd with 1.74 LL value ($p>0.0001$), meaning that there is not any statistically significant difference between the NSTd and the WEd with regard to the use of markers of belief; that is to say, slightly less frequent use of these markers in the NSTd as compared with the WEd does not differ significantly with regard to the LL calculations.

According to the frequency analysis of markers of belief in the non-native databases illustrated in Table 4.10, no significant difference occurs between them. As for Interlanguage/Interlanguage comparison, these two databases do not show any difference with regard to the use of markers of belief. That is to say, non-native authors seem to be very much alike with regard to the use of markers of belief.

The item-by-item analysis of markers of belief, which summarizes both the raw and the normalized frequency distributions of each of the markers of belief and the Log-Likelihood calculations among the three databases, is demonstrated in Table 4.11.

Table 4.11 *Item-by-Item Frequency Analysis of Markers of Belief*

Item	NSEd Raw Frequency/per 1.000 words	NSTd Raw Frequency/per 1.000 words	WEd Raw Frequency/per 1.000 words	LL Ratio for NSEd-NSTd	LL Ratio for NSEd-WEd	LL Ratio for NSTd-WEd
I think	2/0	0/0	2/0	+2.48	+0.20	-1.74
I guess	0/0	0/0	0/0	/	/	/
I suppose	0/0	0/0	0/0	/	/	/
I know	1/0	0/0	0/0	+1.24	+1.89	/
I suspect	1/0	0/0	0/0	+1.24	+1.89	/

As shown in Table 4.11 above, there is not any significant difference among the databases with regard to the use of each marker. It is because of the minimum use of these markers in the data. The Log-Likelihood calculator does not make any calculation for the markers *I guess* and *I suppose* because of their unavailability in each of the three databases. Similarly, the marker *I suspect* occurs neither in the NSTd nor in the WEd; so there is not any Log-Likelihood ratio for this marker in the NSTd-WEd comparison.

4.4.2. Discussion of markers of belief

The findings devoted to the use of markers of belief in each of the three databases show parallelism with the nature of academic writing. The items in Table 4.11 are frequently encountered in neither form of the academic genre. However, it is possible to see different findings in the literature. Conversational English data in Chafe (1986) and the political debates between the incumbents and the challengers or among parties in Berlin and Prieto-Mendoza (2014) consist of a considerable amount of markers of belief. While Chafe's data of dinner table conversations involves 3.6 normalized occurrences of markers of belief (1986, p. 266), the debates between the politicians in Berlin and Prieto-Mendoza's work include 5.8 markers of belief per 1.000 words (2014, p. 397). These frequencies in conversational English are a lot more than the ones in academic writing. For example, conversational data in Chafe (1986) contains six times more markers of belief than the academic data (p. 266). Similarly, the debates in Berlin

and Prieto-Mendoza (2014, p. 397) consist of nearly ten times more markers of belief than Chafe's academic data. In consideration of the findings devoted to the markers of belief both in the present dissertation and in the relevant research, it can be inferred that the use of markers of belief is not in tune with academic writing. These markers do not serve the author's purpose to convince the reader about the accuracy of the proposition. They reduce the reliability of the research as well. Namely, the presentation of the findings with the use of markers of belief does not satisfy the audience.

As for to what extent these markers of belief denote reliability, it can be expressed that all of the markers except *I know* consist of the writers' belief with a low degree of reliability. They refer to less reliable sources of information; therefore, the knowledge presented is evaluated as less valid on the interlocutor.

(31)... All in all, as an instructor, I found the use of directed blogging to be quite advantageous to my students in their ESL classrooms, and **I think** it would be of value for other second language instructors to include it in their lesson plans as well. **(NSEd-3)**

(32)... If we give weight to pupils' wishes - as **I think** we should - CLIL reports are worth embarking on. **(WEd-8)**

(33)... While I agree that it is important to examine the time in each mode, **I think** that the lead mode should be primarily determined based on the nature of instruction that happens in it. **(WEd-21)**

As can be seen in the extracts (31-33) above, the assertions made by the authors are based on their opinion. For example, in the extract (31), the use of *would* already implies hypothetical information about the potential benefit of directed blogging to other second language instructors. In addition to *would*, the use of *I think* also lowers the credibility of the author on the part of the readers. In (32), *I think* indicates that the author is not sure of whether they should give weight to pupils' wishes or not. Similarly, in (33), the author is certain of the importance of time examination in each mode. However, starting with *I think*, the author implies that s/he is not sure of how the determination of lead mode should be carried out. Furthermore, the use of *while* means there is a contrast between the two ideas in the proposition.

As a mode of knowing, belief is expressed by Chafe (1986, p. 266) as a source of knowledge, for which the availability of the evidence is neglected. The use of *I think* on the extracts above bases the authors' arguments on their belief or ideas. Interestingly, defining the modes of knowing, Chafe (1986, p. 266) underlines that knowledge based on belief is conveyed through the expressions such as *I think*, *I guess* and *I suppose* in conversational English. The use of *I think* is not an ordinary habit of academic writing. Despite of its inconsistency with academic writing, it appears at a minimum level in the NSEd and the WEd. Apart from these, discussing the mitigating effect of *I think* on the speaker's/writer's assertions, Berlin (2008) argues "the simple insertion of I think mitigates the force of an assertion while simultaneously alleviating the speaker of complete culpability, or commitment to the truth value of the assertion (p. 377)". The use of *I think* functions as the inclusion of the speaker's own reflection as the source of knowledge transmitted to the interlocutor (Hassler, 2015, pp. 183). However, academic writing requires knowledge based on evidence instead of the speaker's own estimation. That is why the use of *I think* is absent in the dissertations in the data of the present study.

(34)... For immigrant students, immigration status may be one of the most important variables of all since it limits their opportunities in life. **I suspect**, however, that the social distance scale indirectly measured the effects of undocumented immigration status on students. Similarly, I was not told which students were from low-income families, and I was not allowed to ask, but data on parental education may have been just as useful. (NSEd-4)

The use of *I suspect* in the extract (34) shows similarity with the use of *I think*. Both *I think* and *I suspect* imply that the authors are not confident enough for their arguments which lack the availability of any evidence. In (34), the author has some doubts for whether the effects of documented immigration status on students were measured or not. Would it be done or not? The author is not sure of this.

The results devoted to the markers of belief in this dissertation are similar to the findings in Yang (2012). In a research in which the research articles of the native speakers of English and Chinese authors are compared with regard to the use of evidentiality, Yang (2012) resulted that markers of belief and sensory evidence are the least common evidential types in both native and non-native corpora (p. 143). Similarly,

Chafe's (1986) academic written data consists of .6 occurrences of markers of belief (p. 266). The findings in the literature corroborate the results devoted to the use of markers of belief in the present study. It can be inferred that the use of markers of belief is against the nature of academic writing.

With regard to the frequency analysis of markers of belief, it can be assumed that neither the native speakers nor the non-native speakers differ from each other. Each group shows similar tendencies in the use of markers of belief. Alternatively, it can be added that the non-native authors show native-like features with regard to the use of these markers. In addition, they share common features in the use of markers of belief. Apart from this, some reasons could be added for why these markers of belief are minimally used in the data. For example, the source of the knowledge "for belief is problematic (Chafe, 1986, p. 263)". There is no basis for how the author attains the knowledge. The author shares his/her opinion or belief lowering the reliability in the text. Even though opinion or belief as a mode of knowing is valuable in some other genres, e.g. in newspaper articles it would attract a vast audience, it does not work in the academic genre to persuade the reader of the scientificness of the text. The audience of scientific texts has expectations for evidence supported through scientific processing instead of the author's intuition. Consequently, markers of belief do not add any contribution to the scientific validity of the academic texts except lowering their reliability.

4.5. Use of Markers of Induction in the Three Databases

The present research analyzes 10 different markers to reveal whether they function as markers of induction and to determine their frequency of distribution and normalized occurrences. Section 2.3.2 in Chapter 2 consists of detailed information about the markers of induction which occur 165 times with 1 normalized occurrence in the NSTd. These markers of induction occur 106 times, which equals to 0.6 normalized occurrences per 1.000 words, in the NSEd. They are encountered in 243 occurrences, which are 0.8 normalized occurrences per 1.000 words, in the WEd.

As seen in Figure 4.4, the use of markers of induction in the NSTd is more frequent than the other two databases.

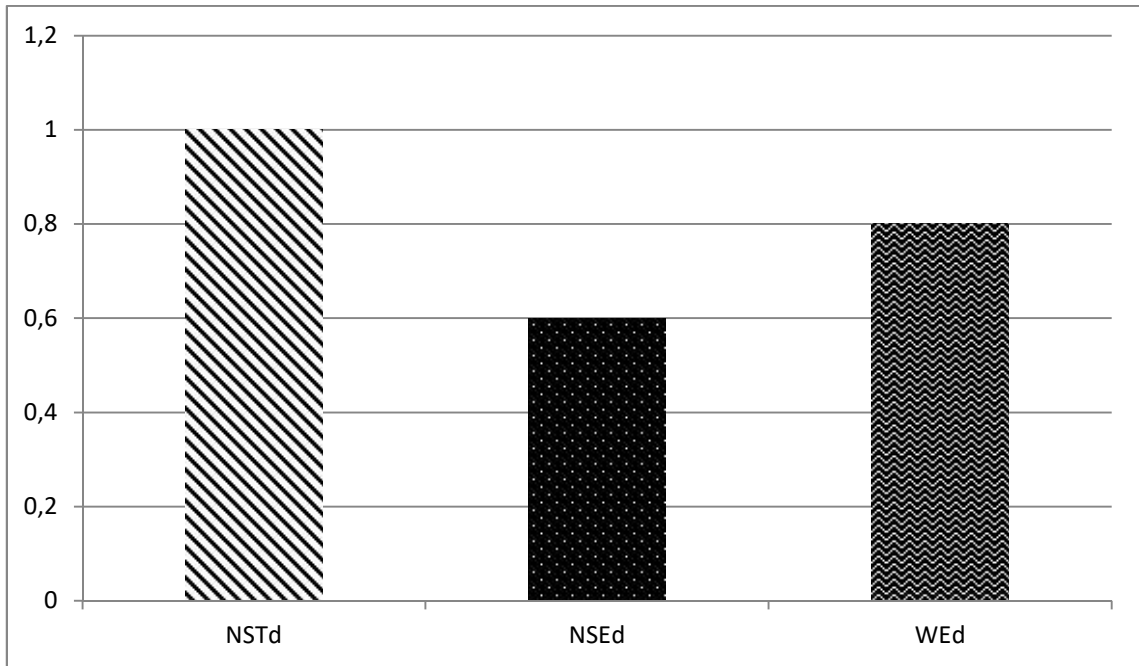


Figure 4.4 *Normalized Frequency Distribution of Markers of Induction (per 1.000 words)*

The frequency distributions and the normalized occurrences of these 10 markers of induction are demonstrated in Figure 4.5.

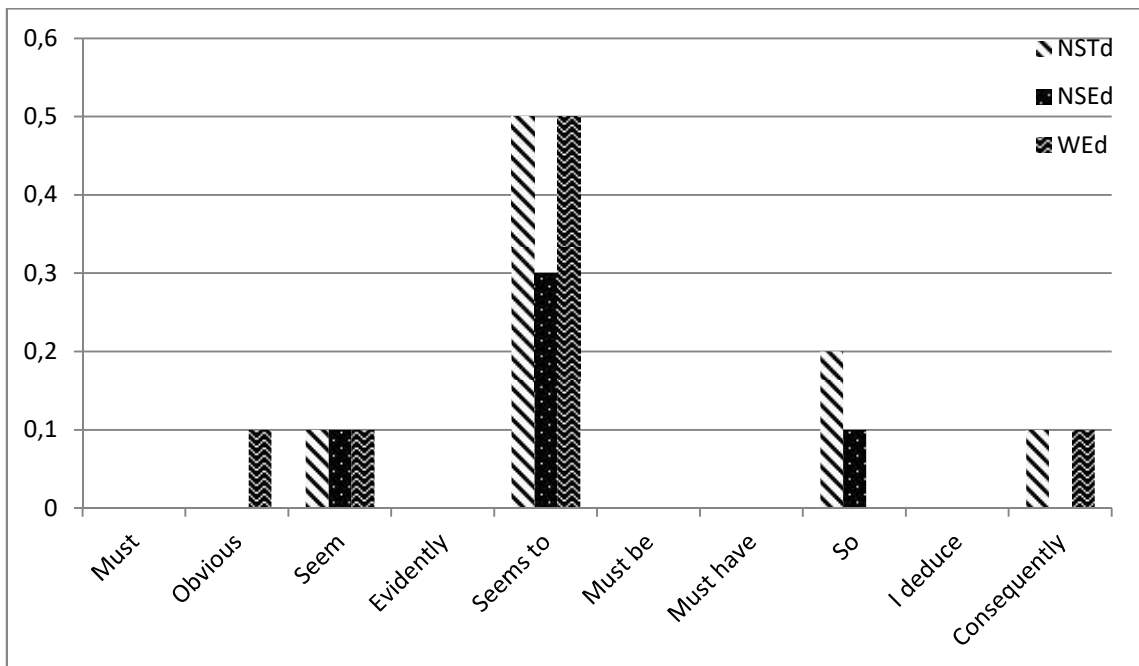


Figure 4.5 *Normalized Frequency Distribution of Each of Markers of Induction (per 1.000 words)*

Figure 4.5 shows that *seems to* is the most frequently used marker of induction in each of these databases. It occurs 88 times with 0.5 normalized occurrences in the NSTd. The following most frequent marker of induction in the NSTd is *so*, occurring 32 times with 0.2 normalized occurrences. Apart from these markers of induction, *seem* and *consequently* are the following most frequent induction markers with 17 and 13 raw occurrences, respectively. *Must*, *obvious*, *evidently*, *must be*, and *must have* are very rare in number in the NSTd as markers of induction with 15 raw occurrences. *I deduce* does not have any instance as a marker of induction in the NSTd.

10 markers of induction occur 106 times, which equals to 0.6 normalized occurrences per 1.000 words, in the NSEd. Among these markers of induction, *seems to* appears in 57 instances, which are 0.3 normalized occurrences. *Seem* and *so* have the following highest usage with 38 raw instances. This frequency of use equals to 0.2 normalized occurrences per 1.000 words. Out of these markers of induction, *must*, *obvious*, *must be*, and *consequently* appear 11 times with 0.1 normalized occurrences per 1.000 words. *Evidently*, *must have* and *I deduce* do not show any instance as markers of induction.

As seen in Figure 4.5 above, the non-native databases consist of an equal frequency of use of *seems to*. The most frequent marker of induction is *seems to* with 158 occurrences, which equals to 0.5 normalized occurrences in the WEd. Except for this highly frequent marker of induction, there are some markers of induction with moderate frequency. *Obvious*, *seem*, and *consequently* have 76 occurrences with 0.3 normalized occurrences in total. Apart from these markers with a moderate frequency of use, some are very rare in number. *Evidently*, *must be*, and *so* are used in only 9 raw occurrences. *Must*, *must have* and *I deduce* do not show any instance in the WEd.

4.5.1. Frequency analysis of markers of induction among the databases

106 raw occurrences of markers of induction in the NSEd equal to 0.6 normalized occurrences per 1.000 words. On the other hand, the same markers are used 165 times with 1 normalized occurrence in the NSTd. That is to say, the frequency distribution of markers of induction in the NSTd outnumbers the use of markers of induction in the NSEd. Table 4.12 indicates the quantitative information about the use of markers of induction.

Table 4.12 *Frequency Analysis of Markers of Induction in NSEd and NSTd*

	NSEd	NSTd	LL Ratio
Frequency of occurrence	106	165	-23.68
Normalized occurrences	‰0.6	‰1	

Markers of induction are less frequent in the NSEd compared to the NSTd with 23.68 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSEd and the NSTd with regard to the use of markers of induction; that is to say, less frequent use of these markers in the NSEd as compared with the NSTd is justified by the LL calculations. (critical LL value = 15.13)

0.6 normalized occurrences of markers of induction in the NSEd are fewer in number than 0.8 normalized occurrences of markers of induction in the WEd. Markers of induction come into prominence with 243 occurrences in the WEd. Table 4.13 summarizes the quantitative data about the use of markers of induction both in the NSEd and the WEd.

Table 4.13 *Frequency Analysis of Markers of Induction in NSEd and WEd*

	NSEd	WEd	LL Ratio
Frequency of occurrence	106	243	-11.15
Normalized occurrences	‰0.6	‰0.8	

Markers of induction are less frequent in the NSEd compared to the WEd with 11.15 LL value ($p > 0.0001$), meaning that there is not any statistically significant difference between the NSEd and the WEd with regard to the use of markers of induction; that is to say, less frequent use of these markers in the NSEd as compared with the WEd does not differ significantly with regard to the LL calculations.

As underlined in Tables 4.12 and 4.13, although there is a statistically significant difference between the NSEd and the NSTd with regard to the use of markers of induction, there is not any meaningful difference between the NSEd and the WEd. With

regard to the Native Language/Interlanguage comparison, it can be inferred that the authors in the WEd show native-like features in terms of the use of markers of induction. Their use of markers of induction shows similarity with the native authors' use of these markers. However, the authors' interlanguages in the NSTd show different characteristics from the native authors' use of markers of induction with regard to the use of these markers.

The use of markers of induction in the NSTd outnumbered the frequency of use of markers of induction in the WEd. The NSTd is the one in which the most intensive use of markers of induction takes place. Table 4.14 shows the use of markers of induction both in the NSTd and in the WEd.

Table 4.14 *Frequency Analysis of Markers of Induction in NSTd and WEd*

	NSTd	WEd	LL Ratio
Frequency of occurrence	165	243	+4.55
Normalized occurrences	%1	%0.8	

Markers of induction are slightly more frequent in the NSTd when compared to the WEd with 4.55 LL value ($p > 0.0001$), meaning that there is not any statistically significant difference between the NSTd and the WEd with regard to the use of markers of induction; that is to say, slightly more frequent use of these markers in the NSTd as compared with the WEd does not differ significantly with regard to the LL calculations.

As for the Interlanguage/Interlanguage comparison, it can be inferred that non-native authors highly resemble each other with regard to the use of markers of induction.

Table 4.15 demonstrates the item-by-item analysis of markers of induction, which summarizes both the raw and the normalized frequency distributions of each of the markers of induction and the Log-Likelihood calculations among the three databases.

Table 4.15 *Item-by-Item Frequency Analysis of Markers of Induction*

Item	NSEd Raw Frequency/per 1.000 words	NSTd Raw Frequency/per 1.000 words	WEd Raw Frequency/per 1.000 words	LL Ratio for NSEd-NSTd	LL Ratio for NSEd-WEd	LL Ratio for NSTd-WEd
Must	3/0	3/0	0/0	-0.04	+5.66	+6.24
Obvious	1/0	6/0	14/0.0	-4.78	-8.35	-0.26
Seem	25/0.1	17/0.1	30/0.1	+0.55	+0.96	+0.01
Evidently	0/0	1/0	3/0	-1.55	-2.96	-0.20
Seems to	57/0.3	88/0.5	158/0.5	-12.33	-14.73	+0.02
Must be	1/0	3/0	1/0	-1.38	+0.10	+2.61
Must have	0/0	2/0	0/0	-3.09	/	+4.16
So	13/0.1	32/0.2	5/0	-11.48	+8.18	+41.62
I deduce	0/0	0/0	0/0	/	/	/
consequently	6/0	13/0.1	32/0.1	-3.84	-9.75	-0.85

As seen in Table 4.15 above, there is a statistically significant difference between the NSTd and the WEd with regard to the use of *so*. +41.62 Log-Likelihood value for the NSTd-WEd comparison means that the marker *so* in the NSTd is more frequent compared to its use in the WEd. The difference between these two databases with regard to the use of *so* is statistically significant.

Some of these markers (e.g. *must*, *obvious*) denote inference with a high degree of reliability while some (e.g. *seem*, *evidently*) downgrade the degree of reliability (Chafe, 1986, pp. 266-267). 0.4 markers of induction per 1.000 words indicate less certainty in the NSEd. This number equals to 0.7 in both the NSTd and the WEd. In addition to markers of induction referring to less certainty, there are other markers of induction which refer to a high degree of reliability and denote the knowledge more valid. Markers of induction indicating a high degree of reliability occur 0.1 times per 1.000 words in the NSEd. They occur 0.4 and 0.2 times in the NSTd and the WEd, respectively. It can be concluded that, as for markers of induction, the three databases consist of more markers denoting inference with less degree of reliability.

4.5.2. Discussion of markers of induction

Comparing the native speakers of Chinese and English authors in terms of the use of evidentiality in research articles, Yang (2012) underlines that inferring evidentials are the most common evidential types following reporting evidentials (p. 143). Underlining that although academic writing consists of more markers of induction than spoken data,

Chafe (1986) reveals that the use of markers of induction with 2.4 normalized occurrences per 1.000 words is still low (p. 267).

Another dimension can be added to the findings by underlining that the non-native authors appeal to more frequent use of markers of induction compared to the native authors. The findings of markers of induction show partial parallelism with the ones in Chafe (1986). Although Chafe's academic data involves more inference markers than the present data, it is still low in number, as in the ones in the present dissertation. The use of markers of induction with 2.4 normalized occurrences in Chafe's academic data (p. 267) equals to four times more induction marker use of the NSE authors. Similarly, Chafe's academic data consists of 2.4 times and 3 times more markers of induction than the NSTd and the WEd, respectively. However, according to Chafe, the frequency of markers of induction in his own academic data is low (1986, p. 267). Similarly, the use of inference markers is not very frequent, even very low in the data of the present dissertation.

The following extracts exemplify the instances of markers of induction in each of the three databases.

(35) The MTP **seems to** have enabled them to express their ideas more fully and heightened their awareness of some topics and details of the mentoring programme. (NSTd-20)

(36) The research in the current study **seems to** indicate that teachers view the CPST, an important support system involved in the RtI framework, as a benefit. (NSEd-19)

(37) During the first interview session, teacher participants were asked to describe the policies and procedures that would dictate instruction of English learners. A majority of participants **seemed** unclear about policies and procedures for instruction of English learners and asked for clarification of the question. (NSEd-19)

(38) They **seemed** pleased to be able to express themselves, to have the opportunity to share their views and to exchange ideas. (NSTd-20)

(39) Extroverts also **seem to** have slightly more positive experiences in their high school English classes, and **seem** slightly more aware of the value of speaking English outside the classroom. (NSEd-22)

(40) It is **obvious** that in the first years of CLIL, the emphasis is on casual English and the accumulation of general vocabulary, but later on, as the language needed for study becomes increasingly subject-specific, EFL-type English and English in CLIL start to diverge from each other. (WE_d-8)

(41) In conclusion, the findings of the present study showed the pre-service English language teachers are aware of the factors to be taken into consideration while addressing people; however, it is **obvious** from the findings that they do not use address forms effectively. (NST_d-6)

Two different markers in (35-41) serve as inference items with varying degree of reliability. *Seem* and *Seems to* in (35-39) “indicates less certainty about the conclusion” with Chafe’s his own words. However, *obvious* in (40-41) serves as a more effective inference item with a high degree of reliability (1986, p. 266). For example, in (35), the author discusses some positive effects of MTP on some people. However, *seems to* indicates that these positive effects may not result from MTP. The reader should bear in mind that there would be some other reasons enabling these people to express their ideas more fully, etc. In (36), according to the author, the results of the study show that teachers think that CPST is beneficial. This is not a fact, though. Someone else may come to an inference which is totally opposite to the author’s. In a similar vein, in (37), the participants’ attitude and behaviors let the author come to a conclusion that the participants are unclear about the policies and procedures for teaching of English. S/he supports herself/himself with underlying the participants’ request for clarification of the question. However, if the author is wrong in this particular inference, it should not surprise the readers. In (38), the proposition contains the author’s inference based on most probably visual evidence. The author does not assert that they are pleased; instead, s/he tones his/her proposition down by using *seemed*. Similarly, in (39), the author comes to an inference about the extroverts, which is based on the extroverts’ attitudes in and out of the classroom. Contrary to *seem to/seems to*, *seemed*, *obvious* in (40-41), which is “more compelling” inference marker than *must* (Chafe, 1986, p. 266), heightens the author’s credibility in his/her proposition. The author in (40) is sure if casual English and teaching of general vocabulary is emphasized in the first years of CLIL. *Obvious* in this proposition lets the reader think that the information shared by the author is reliable enough. In (41), it is inferred from the results that the participants

do not use address forms effectively. It is an inference based on evidence; however, it is enough to persuade the reader of the validity of the proposition in the text.

According to Chafe (1986, p. 266), evidence forms the basis of the inference. However, he adds that “English often signals only that induction has taken place, without any indication of what the nature of the evidence was”. The extracts (35-41) above make use of markers of induction to denote inference meaning. In other words, the author draws an inference based on some evidence. Especially in the extracts (35-39), the authors’ argumentations cause an inference on the reader with a low degree of reliability. On the contrary, the authors in the extract (40-41) present their ideas with a high degree of reliability by means of *obvious*.

(42) Combining the results, we suggested that the subject-object asymmetry in Turkish RCs could not depend on a single cause but **must be** arising as a result of combination of multiple factors. (NSTd-24)

Chafe (1986, p. 266) underlines that *must* denotes an inferential meaning with a high degree of reliability. In the extract (42) above, the author suggests an alternative more likely to be the reason of subject-object asymmetry in Turkish RCs.

(43) ...teachers in middle-high income schools mentioned that they were fluent in English in terms of speaking, listening, reading, and writing and fluent in their native language (varied) while speaking and listening, **so** they identified their dominant language to be English. (WEd-9)

(44)...the students in this study were mostly likely to be 18 to 23 years old, and were all under 30 years old, **so** the results of this study may not be applicable to groups of students who are significantly younger or older than this group. (NSEd-28)

(45) The identity work in the EFL classroom context shows that there is a main frame, which is the activity that the participants gets together for, in our context, the activity of teaching and learning. **So**, Teaching Frame may be called Main Frame. (NSTd-10)

(46) He stopped his students talking to correct their grammatical errors every time he noticed them; **consequently**, his students **seemed to be** easily disengaged and to be reluctant to interact during the activities. (WEd-17)

(47) Concerning the emergence of new strategies in general, Lee and Oxford (2008) arrive at similarly interesting findings in their study on EFL learners' strategy use and strategy awareness in Korea. Students participating in their study used different kinds of memory strategies from those in the SILL. The specific memory strategies favoured by Koreans were 'repetition' and 'dictation'. **Consequently**, Lee and Oxford recommended adding them to the SILL, hoping to inform English language teaching in that specific setting. **(WEd-10)**

(48) Due to their limited practice or language resources, they either preferred to repeat the same words (i.e. lexical recycling) as for the 2nd year students or they demanded on more frequent and easier words to make simple sentences as for the 1st year first semester. **Consequently**, the results on the participants' lexical performance showed that instead of greater proportions of less frequent and academic words, the learners used greater proportions of high frequent words. **(NSTd-12)**

So and consequently in (43-48) are inferential statements which might be included in markers of induction (Ifantidou, 2001, p. 6). Both of them signal to an effect as a result of a cause. For example, in (43), the reasons why the teachers in middle-high income schools identify their dominant language to be English are listed. In the extract (44), the participants' age range let the author state a reason for why the results may not be extended to younger or older groups. In other words, his/her inference is based on the evidence of age range of the participants. In (45), the author has a reason which forms the basis of the author's inference as an evidence of why s/he calls Teaching Frame as Main Frame. Similarly, *consequently* in (46) gives a similar meaning. Why the students are disengaged and reluctant to interact is underlined. *Seemed to* in the same sentence supports that the author comes to an inference. It is understood that it is not a fact that the students are disengaged and reluctant. It is the inference the author draws. In (47), the use of specific memory strategies by Korean EFL learners directs Lee and Oxford to recommend adding these strategies to the SILL. This reason is the evidence which let the author of the extract (47) think that Lee and Oxford arrive to such a conclusion. In a similar vein, in (48), the author comes to a conclusion about why the participants have a deficiency in using academic words and lexical items. Some factors, such as their

limited practice or language resources, are evidence directing the author to draw an inference about the participants' inability.

As for the statistical results, it can be concluded that the authors with various L1 backgrounds show native-like features in the use of markers of induction. They show similar usages with the native speakers. However, the native speakers of Turkish authors both differ significantly from the native speakers of English authors and do not show native like features in the use of these markers. For example, compared to the native speakers of English, the native speakers of Turkish authors use induction markers more frequently. It can be assumed that the Turkish authors possess much more evidence for what they have written in their texts because the evidence is the source of knowledge on which the inference is based. Alternatively, it can be added that the native speakers of Turkish authors are more prone to draw an inference as a result of some evidence. It is also possible to claim for the availability of the evidence as a source of knowledge for the Turkish authors because in the absence of evidence, it is impossible for an author to come to an inference about anything. On the other side, it is also possible for the rest of the authors, in the WEd and the NSEd, to claim that they possess little evidence to draw inferences.

Apart from these author-based possibilities, it can be assumed that the data of the present study is comprised of the discussion part of the dissertations. In this part, the researchers are expected to list some potential reasons for the present results. As the name implies, the reasons listed are potential, namely possible, and subjected to the author's inference based on some evidence. This could imply that native speakers of Turkish authors have discussed the issues more elaborately in consideration of the available evidence. At least, it can be alleged that they differ from the others in the use of markers of induction.

4.6. Use of Markers of Hearsay in the Three Databases

The use of markers of hearsay shows an equal normalized occurrence in the NSTd and the NSEd. While the NSTd includes 35 raw occurrences of markers of hearsay in total, which equals to 0.2 normalized occurrences per 1.000 words, 15 different markers of hearsay in the NSEd show 43 instances. There are only 39 occurrences of markers of hearsay, which are 0.1 normalized occurrences per 1.000 words, in the WEd. See Section 2.3.4. in Chapter 2 for detailed information for markers of hearsay. Figure 4.6

demonstrates the frequency distribution of markers of hearsay among the three databases.

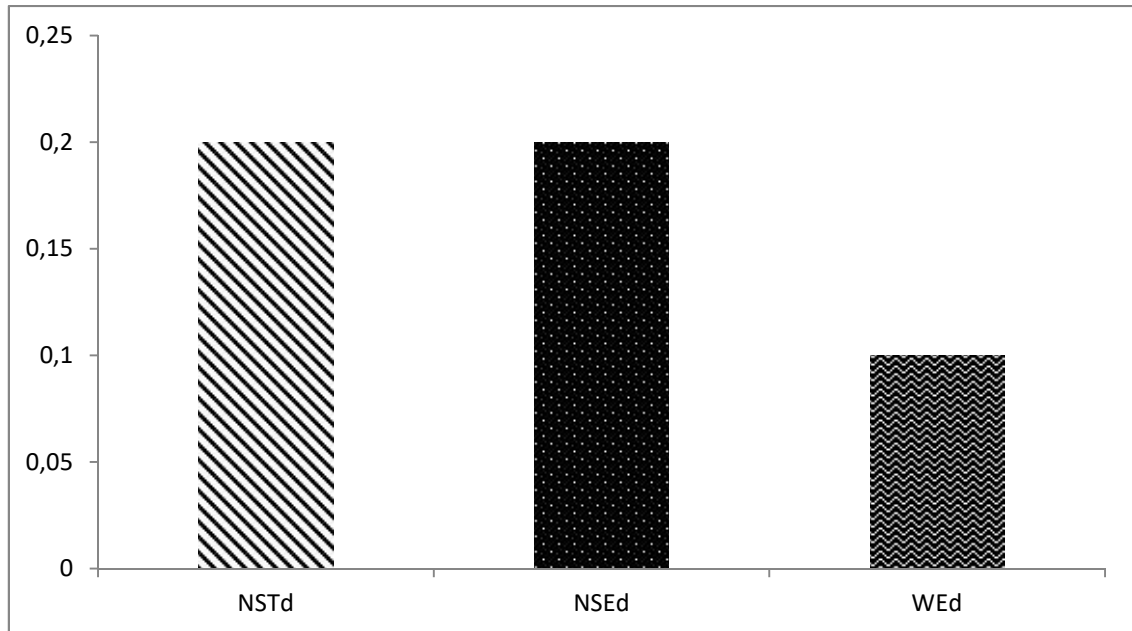


Figure 4.6 *Normalized Frequency Distribution of Markers of Hearsay (per 1.000 words)*

Figure 4.7 demonstrates the frequency distributions and the normalized occurrences of each of these 15 markers of hearsay.

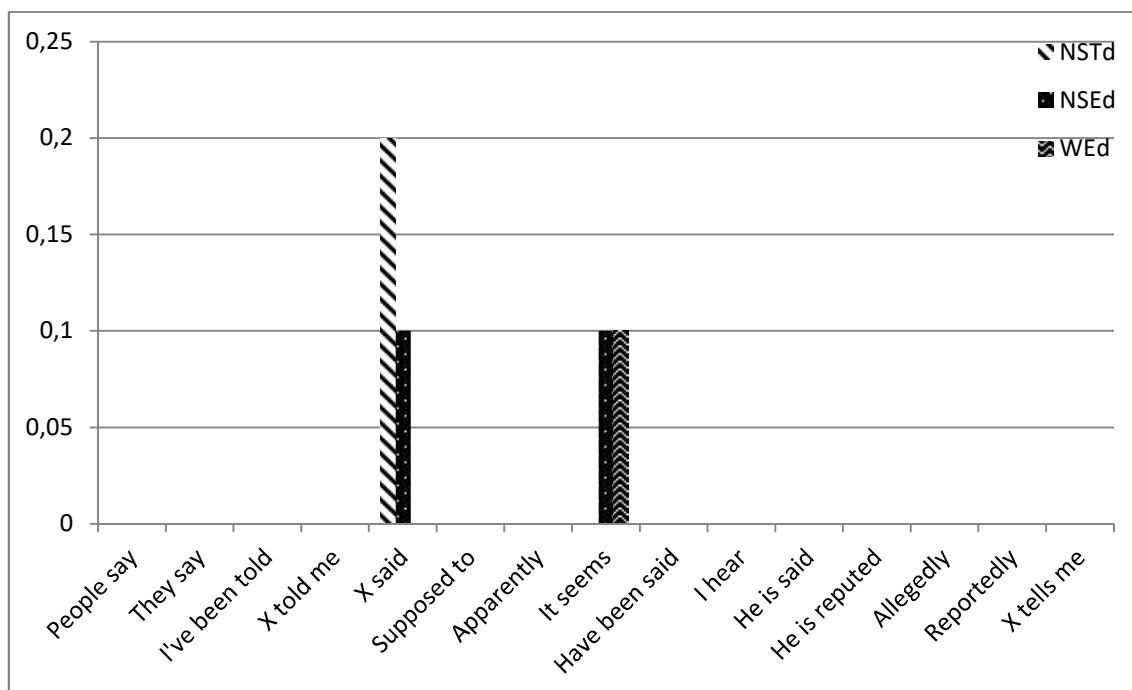


Figure 4.7 Normalized Frequency Distribution of Each of Markers of Hearsay (per 1.000 words)

As seen in Figure 4.7, *x said* is used as a marker of hearsay 28 times with 0.2 normalized frequencies per 1.000 words. In addition to *x said*, *it seems* occurs in the NSTd only 6 times. Apart from these, *apparently* shows itself once. The rest of 12 markers of hearsay except these three items are not used in the NSTd.

As for the NSEd, *x said*, *it seems*, *they say* and *apparently* show 43 instances as markers of hearsay in total. Except for these 4 markers, none of the remaining items is used by the NSE authors.

The use of markers of hearsay is very few in number in the WEd. Only three out of 15 markers are used. *It seems* is the most frequent one with 25 frequencies of use, which equals to 0.1 normalized occurrences. Apart from this, *x said* and *apparently* show 14 raw occurrences in total.

4.6.1. Frequency analysis of markers of hearsay among the databases

The use of markers of hearsay seems similar in the NSEd and the NSTd. While the data from the NSEd consists of 43 markers of hearsay, the NSTd involves 35 markers of hearsay. These usages in both databases are equivalent to 0.2 normalized

occurrences per 1.000 words. Table 4.16 demonstrates the data concerning the use of markers of hearsay both in the NSEd and the NSTd.

Table 4.16 *Frequency Analysis of Markers of Hearsay in NSEd and NSTd*

	NSEd	NSTd	LL Ratio
Frequency of occurrence	43	35	+0.05
Normalized occurrences	‰0.2	‰0.2	

Markers of hearsay are slightly more frequent in the NSEd when compared to the NSTd with 0.05 LL value ($p>0.0001$), meaning that there is not any statistically significant difference between the NSEd and the NSTd with regard to the use of markers of hearsay; that is to say, slightly more frequent use of these markers in the NSEd as compared with the NSTd does not differ significantly with regard to the LL calculations.

The use of markers of hearsay seems similar in the NSEd and the WEd with regard to the raw frequencies. However, the normalized occurrences per 1.000 words in the NSEd vary with those in the WEd. The raw frequencies and the normalized occurrences regarding the use of markers of hearsay in the NSEd and the WEd are indicated in Table 4.17.

Table 4.17 *Frequency Analysis of Markers of Hearsay in NSEd and WEd*

	NSEd	WEd	LL Ratio
Frequency of occurrence	43	39	+6.10
Normalized occurrences	‰0.2	‰0.1	

Markers of hearsay are slightly more frequent in the NSEd when compared to the WEd with 6.10 LL value ($p>0.0001$), meaning that there is not any statistically significant difference between the NSEd and the WEd with regard to the use of markers of hearsay; that is to say, slightly more frequent use of these markers in the NSEd as compared with the WEd does not differ significantly with regard to the LL calculations.

Tables 4.16 and 4.17 demonstrate that any statistically significant difference between the native and the non-native databases occurs with regard to the use of markers of hearsay. The non-native authors show native-like features in terms of the use of these markers. It can be inferred, as for the Native Language/Interlanguage comparison, the non-native authors' use of markers of hearsay shows similarity with the native authors'. In other words, their use of markers of hearsay does not show different characteristics from the native authors'.

The findings concerning the use of markers of hearsay in the NSTd and the WEd show similarity with those in the NSEd and the WEd. The raw frequencies of markers of hearsay in the WEd are higher in number than those in the NSTd. However, the normalized occurrences of markers of hearsay in the NSTd slightly outnumber those in the WEd. The quantitative data concerning markers of hearsay both in the NSTd and the WEd are shown in Table 4.18.

Table 4.18 *Frequency Analysis of Markers of Hearsay in NSTd and WEd*

	NSTd	WEd	LL Ratio
Frequency of occurrence	35	39	+4.45
Normalized occurrences	%0.2	%0.1	

Markers of hearsay are slightly more frequent in the NSTd compared to the WEd with 4.45 LL value ($p > 0.0001$), meaning that there is not any statistically significant difference between the NSTd and the WEd with regard to the use of markers of hearsay; that is to say, slightly more frequent use of these markers in the NSTd as compared with the WEd does not differ significantly with regard to the LL calculations.

As for the Interlanguage/Interlanguage comparison, as in the Native Language/Interlanguage comparison, any significant difference occurs between the non-native databases. In other words, the non-native authors have a similar use of markers of hearsay.

Table 4.19 indicates the item-by-item analysis of markers of hearsay, which summarizes both the raw and the normalized frequency distributions of each of the markers of hearsay and the Log-Likelihood calculations among the three databases.

Table 4.19 *Item-by-Item Frequency Analysis of Markers of Hearsay*

Item	NSEd Raw Frequency/per 1.000 words	NSTd Raw Frequency/per 1.000 words	WEd Raw Frequency/per 1.000 words	Log-likelihood Ratio for NSEd-NSTd	Log-likelihood Ratio for NSEd-WEd	Log-likelihood Ratio for NSTd-WEd
People say	0/0	0/0	0/0	/	/	/
They say	1/0	0/0	0/0	+1.24	+1.89	/
I've been told	0/0	0/0	0/0	/	/	/
X told me	0/0	0/0	0/0	/	/	/
X said	25/0.1	28/0.2	13/0	-0.95	+11.15	+18.36
Supposed to	0/0	0/0	0/0	/	/	/
Apparently	1/0	1/0	1/0	-0.01	+0.10	+0.18
It seems	16/0.1	6/0	25/0.1	+3.30	+0.00	-3.82
Have been said	0/0	0/0	0/0	/	/	/
I hear	0/0	0/0	0/0	/	/	/
He is said	0/0	0/0	0/0	/	/	/
He is reputed	0/0	0/0	0/0	/	/	/
Allegedly	0/0	0/0	0/0	/	/	/
Reportedly	0/0	0/0	0/0	/	/	/
X tells me	0/0	0/0	0/0	/	/	/

As seen in Table 4.19 above, any Log-Likelihood ratio is available for *people say*, *I've been told*, *X told me*, *supposed to*, *have been said*, *I hear*, *he is said*, *he is reputed*, *allegedly*, *reportedly*, and *X tells me*. These markers of hearsay occur in none of the three databases. In a similar vein, even though the marker *they say* occurs once in the NSEd, it occurs neither in the NSTd nor in the WEd. So, any Log-Likelihood ratio of the marker *they say* for the NSTd and the WEd stands out. However, in the use of the marker *x said*, it is seen that there is a statistically significant difference between the non-native databases. +18.36 LL value means that the marker *x said* is more frequent in the NSTd with regard to its use in the WEd. It can be inferred, as for the Interlanguage/Interlanguage comparison, that the non-native authors do not seem to share common features in use of *x said*.

4.6.2. Discussion of markers of hearsay

The use of markers of hearsay in the academic data in Chafe's study (1986) is not very frequent with the exception of citations. Even though citations are a part of

personal communications among academics, they are not included as markers of hearsay in Chafe's study (p. 269) being not "usually considered hearsay evidentials". In a similar vein, citations are not included in this dissertation as markers of hearsay due to the general view in the literature.

Hearsay is a kind of indirect evidence, the source of which is language (Chafe, 1986), and which is attained through other people or third party. According to Chafe (1986), some of the markers of hearsay are "less direct hearsay markers" and denotes "more doubtful reliability". *It seems, supposed to, apparently* are those markers of hearsay which downgrade the reliability of the information (p. 268). Out of these, markers of *people say, they say, I've been told, X told me, X said* are more direct hearsay markers which are the ones with a high degree of reliability compared to the above-mentioned less direct hearsay markers. The NSEd and the WEd consist of 0.1 markers of hearsay denoting a low degree of reliability per 1.000 words. This score equals to 7 frequencies of occurrence, which is 0.0 per 1.000 words in the NSTd. However, the markers of hearsay signaling high degree of reliability occur 0.2 times in the NSTd. The use of these hearsay markers is 0.1 and 0.0 in the NSEd and the WEd, respectively. It can be inferred that the overall data consists of much more direct hearsay markers denoting a high degree of reliability compared to those with low degree of reliability.

According to Chafe (1986), *it seems* functions primarily as a marker of induction. However, it may function as "less direct hearsay marker" to reveal that knowledge is attained by means of language, which is the source of hearsay knowledge (p. 268).

(49)... The same influence of L1 Spanish or Basque on general attitudes toward EFL was found by the same author in another study (Lasagabaster, 2005a). Lasagabaster's (2002, 2005a) results suggest an interesting finding in the relation of English as a global language and attitudes towards it. **It seems that** favourable attitudes towards an international language are less common among speakers of minority languages. However, the explanation put forward by Lasagabaster (2002, 2005a) to explain differences in attitudes to English according to L1 does not seem to fit in our sample.
(WEd-24)

(50) Conway et al. (2005) emphasize that the secondary task of complex span tests such as reading span or operation span should be sufficiently demanding so that WM is actively involved in (p. 771). Thus, **it seems** the processing task of the OST was not demanding enough to stimulate WM operations of active maintenance of information in the face of ongoing processing. **(NSTd-18)**

The extracts (49-50) inform the reader about the content of another research. The authors obtain the knowledge through another researchers' statements. They do not have direct experience about what they state in their own research; however, they are informed by other researchers. Especially, in (49), the author shares a piece of information with readers, which underlines that speakers of minority languages do not have favorable attitudes towards an international language. This information is not what the author himself/herself arrives to what the inference is about. Rather, it is a piece of information which is reported from Lasagabaster's studies. In a similar vein, in (50), Conway et al. (2005) is the source of knowledge, which forms the basis of the author's hearsay knowledge.

(51) **The teachers said** that the parents requested email because they had time to contemplate the messages and get help translating if necessary. **(NSEd-21)**

(52) This is what Danesi and Di Pietro (1991) describe as "lexical transfer." The lexical modes of expression are different across cultures. **They say** that knowing about this kind of transfer helps teachers "understand what is going on ... in the minds of their students." **(NSEd-2)**

In the extracts (51-52), *the teachers said* and *they say* are a bit different from *it seems (that)*. Contrary to *it seems (that)*, *x said* and *they say* have a direct hearsay meaning. They directly inform the reader about the knowledge that is transferred by (an)other person(s).

(53) Based on the results, it seems clear that someone who talks a lot within the appropriate social group was seen as an extroverted personality by the study participants. While someone who wants to be the "center of attention" (EI 5) or "likes to draw attention" (EI 4) is an unwelcome personality in the

Japanese context, talking a lot is **apparently** acceptable and even desired behavior in the language classroom. (NSEd-22)

Chafe (1986, p. 268) defines *apparently*, as well as *is supposed to*, as denoting “somewhat more doubtful reliability” than *it seems* does. It can be said that *apparently* supplies an indirect hearsay knowledge for the reader/hearer. In the extract (53), the author is informed through the item of a questionnaire, which means that the author does not have a direct evidence for the case and indirectly learns a piece of information through a questionnaire.

As for the statistical results, it can be assumed that each of the three groups has similar tendencies with regard to the use of markers of hearsay. For example, the non-native authors show native-like features in the use of these markers. Furthermore, the non-native databases do not differ from each other. They seem to share common features in use of these markers of hearsay. It can be suggested that there is a unity in the use of these markers between the academics and a unity in the teaching of academic writing. There is quite low use of these markers in each of the three databases because the authors in academic writing abstain from using them. For example, as for epistemic modality, some of them directly have a negative impact on the text reliability. The use of these markers lowers the reliability of the authors. On the other hand, as for the source of the information, the reader should assume that the knowledge conveyed through the author is reported from someone else. Namely, it is not based on the author’s direct involvement to the issue. S/he indirectly has evidence about something and presents it to the audience. Reaching the information in that way is not a desired method in scientific texts. Hence, the use of these markers is at minimum level.

4.7. Use of Markers of Deduction in the Three Databases

Markers of deduction show the highest frequency of use with 860 occurrences in the NSTd. That is, the NSTd consists of 5.4 normalized occurrences of markers of deduction per 1.000 words. Following markers of matching knowledge against expectations, 5 different markers of deduction have the second highest frequency of use with 1072 instances, which equals to 5.7 normalized occurrences per 1.000 words in the NSEd. As in the NSEd, markers of deduction have the second highest frequency of use with 1254 occurrences, which equals to 4.3 normalized occurrences in the WEd. Section 2.3.5. in Chapter 2 involves detailed information about the markers of deduction. Figure

4.8 shows the normalized frequency distribution of markers of deduction among the three databases.

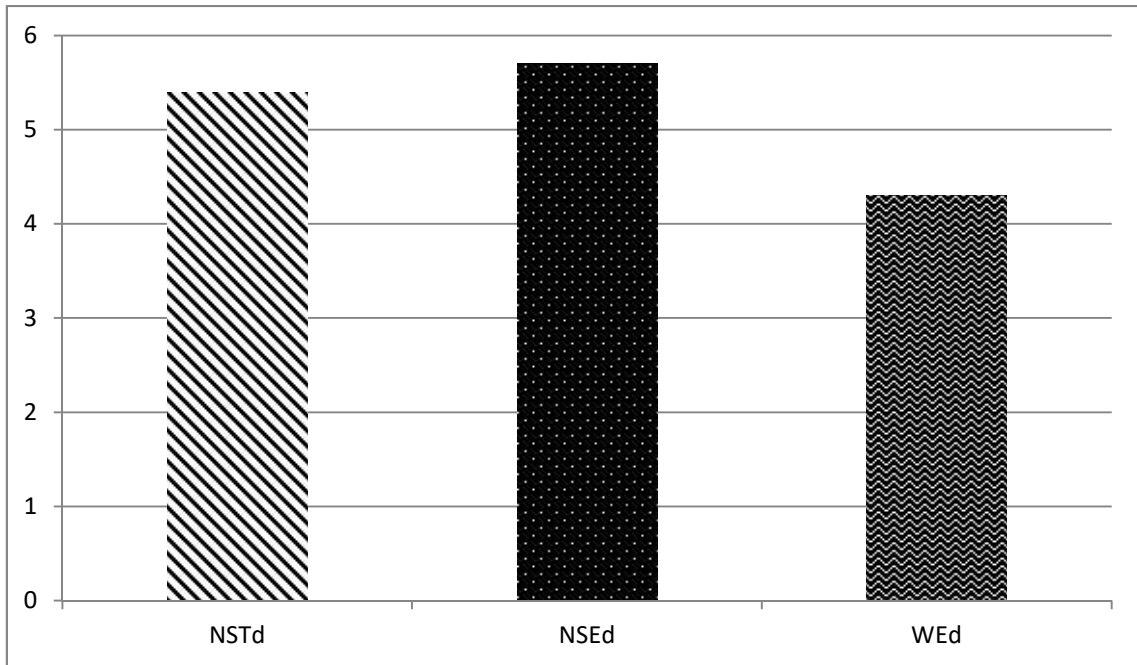


Figure 4.8 *Normalized Frequency Distribution of Markers of Deduction (per 1.000 words)*

The normalized frequency distributions among the three databases and the normalized occurrences of each of the 5 markers of deduction are demonstrated in Figure 4.9 below.

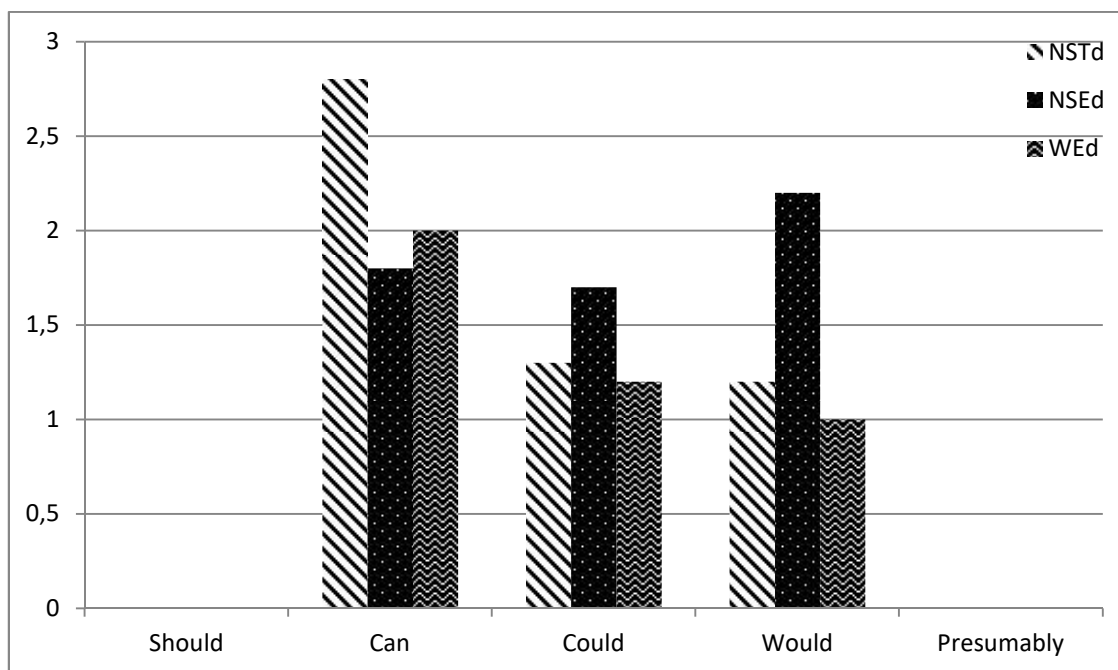


Figure 4.9 *Normalized Frequency Distribution of Each of Markers of Deduction (per 1.000 words)*

Out of ‘should’, all of the markers of deduction are used in the NSTd. The modal *can* has the highest frequency of use with 2.8 normalized occurrences per 1.000 words. In other words, the NST authors have used the modal *can* 450 times in their dissertations. The following highest frequency of use belongs to the modal *could* with 215 raw frequencies. It appears 1.3 times per 1.000 words in the NSTd. This usage equals to nearly half of the frequency of use of the modal *can*. The modal *would* is another marker of deduction with 192 occurrences. Its usage with 1.2 normalized occurrences per 1.000 words is close to the usage of the modal *could*. Out of these three frequently used markers of deduction, *presumably* is another marker of deduction with 3 raw frequencies. Its usage is quite few in number.

As for the NSEd, the modal *would* shows the highest frequency of use with 412 instances, which are 2.2 normalized occurrences per 1.000 words. The modal *can* has the following highest frequency of use with 337 instances, which equals to 1.8 normalized occurrences. The modal *could* follows slightly behind of *can* with 318 frequencies of use and 1.7 normalized occurrences. Out of these markers of deduction, *should* and *presumably* are very rare in number and show only 5 frequencies of use.

As Figure 4.9 indicates, the modal *can* is the most frequent marker of deduction in the WEd as in the NSTd. It shows 600 occurrences with 2 normalized occurrences. The modal *could* has the following highest frequency of use in 359 instances with 1.2 normalized occurrences. Similarly, *would* is encountered in 289 instances with 1 normalized occurrence. Apart from these highly frequent markers of deduction, there are 2 more markers of deduction with very limited use. Both *should* and *presumably* are used in 3 raw occurrences in the WEd.

4.7.1. Frequency analysis of markers of deduction among the databases

Markers of deduction are very frequent in both the NSEd and the NSTd. Although the raw frequencies of markers of deduction show a large disparity, these two databases do not show a big variation with regard to the normalized occurrences of markers of deduction. Table 4.20 summarizes the quantitative data concerning the use of markers of deduction both in the NSEd and the NSTd.

Table 4.20 *Frequency Analysis of Markers of Deduction in NSEd and NSTd*

	NSEd	NSTd	LL Ratio
Frequency of occurrence	1072	860	+2.07
Normalized occurrences	%5.7	%5.4	

Markers of deduction are more frequent in the NSEd when compared to the NSTd with 2.07 LL value ($p > 0.0001$), meaning that there is not any statistically significant difference between the NSEd and the NSTd with regard to the use of markers of deduction; that is to say, more frequent use of these markers in the NSEd as compared with the NSTd does not differ significantly with regard to the LL calculations.

The use of markers of deduction in the NSEd varies with that in the WEd. Not only the raw frequencies but also the normalized occurrences of markers of deduction in the NSEd and the WEd differ greatly. Table 4.21 demonstrates the data concerning the use of markers of deduction in the NSEd and the WEd.

Table 4.21 *Frequency Analysis of Markers of Deduction in NSEd and WEd*

	NSEd	WEd	LL Ratio
Frequency of occurrence	1072	1254	+48.98
Normalized occurrences	‰5.7	‰4.3	

Markers of deduction are more frequent in the NSEd compared to the WEd with 48.98 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSEd and the WEd with regard to the use of markers of deduction; that is to say, more frequent use of these markers in the NSEd as compared with the WEd is justified by the LL calculations. (critical LL value = 15.13)

As underlined in Tables 4.20 and 4.21, although there is a statistically significant difference between the NSEd and the WEd with regard to the use of markers of deduction, there is not any meaningful difference between the NSEd and the NSTd. With regard to the Native Language/Interlanguage comparison, it can be inferred that the NST authors show native-like features in terms of the use of markers of deduction. Their use of markers of deduction shows similarity with the native authors' use of markers of deduction. However, the authors' use of markers of deduction in the WEd shows different characteristics from the native authors' use of markers of deduction.

The findings related to the use of markers of deduction in the NSTd and the WEd are similar to those in the NSEd and the WEd. Both the raw frequencies and the normalized occurrences of markers of deduction show a large disparity. The use of markers of deduction is fewer in number in the WEd than both that in the NSEd and in the NSTd. Table 4.22 summarizes the data regarding the use of markers of deduction both in the NSTd and the WEd.

Table 4.22 *Frequency Analysis of Markers of Deduction in NSTd and WEd*

	NSTd	WEd	LL Ratio
Frequency of occurrence	860	1254	+25.84
Normalized occurrences	‰5.4	‰4.3	

Markers of deduction are more frequent in the NSTd compared to the WEd with 25.84 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSTd and the WEd with regard to the use of markers of deduction; that is to say, more frequent use of these markers in the NSTd as compared with the WEd is justified by the LL calculations. (critical LL value = 15.13)

As for the Interlanguage/Interlanguage comparison, as in the Native Language/Interlanguage comparison, it can be inferred that non-native authors do not seem to be very much alike with regard to the use of markers of deduction.

Table 4.23 demonstrates the item-by-item analysis of markers of deduction, which summarizes both the raw and the normalized frequency distributions of each of the markers of deduction and the Log-Likelihood calculations among the three databases.

Table 4.23 *Item-by-Item Frequency Analysis of Markers of Deduction*

Item	NSEd Raw Frequency/per 1.000 words	NSTd Raw Frequency/per 1.000 words	WEd Raw Frequency/per 1.000 words	LL Ratio for NSEd-NSTd	LL Ratio for NSEd-WEd	LL Ratio for NSTd-WEd
Should	3/0	0/0	3/0	+3.71	+0.30	-2.62
Can	337/1.8	450/2.8	600/2.0	-38.43	-3.54	+25.25
Could	318/1.7	215/1.3	359/1.2	+7.29	+17.97	+1.11
Would	412/2.2	192/1.2	289/1	+51.62	+112.11	+4.33
Presumably	2/0	3/0	3/0	-0.39	+0.00	+0.54

As Table 4.23 indicates, the use of markers *can*, *could*, and *would* vary between the databases. First, the LL value of -38.43 means that less frequent use of *can* in the NSEd compared to the NSTd is statistically significant. Similarly, the use of *can* in the NSTd is more frequent than that of WEd, and the LL value of +25.25 underlines that the more frequent use of *can* in the NSTd is significant. However, its use does not significantly differ between the NSEd and the WEd. It can be inferred, as for the NL/IL comparison, that while the use of marker of deduction *can* by the authors in the WEd is similar to that by the authors in the NSEd, the authors in the NSTd differ from the authors in the NSEd with regard to the use of marker of deduction *can*. Besides, as for the IL/IL comparison, it can be made an inference that the non-native databases differ from each other as for the use of *can*.

Second, more frequent use of *could* in the NSEd with +17.97 LL value indicates that the use of *could* by the NSE authors differ significantly from that by the authors in the WEd. In other words, the authors in the WEd do not show native-like features in the use of *could* as for the NL/IL comparison. The non-native databases do not differ significantly with regard to the use of *could*. Slightly more frequent use of *could* in the NSTd compared to the WEd does not make any significant difference between the non-native databases. As for the IL/IL comparison, it can be inferred that the non-native authors resemble each other with regard to their use of *could* in academic writing.

Third, a native/non-native differentiation occurs in the use of *would*. Its use differs significantly both between NSEd-NSTd and NSEd-WEd. +51.62 LL value asserts that more frequent use of *would* in the NSEd makes a significant difference between the NSEd and the NSTd. Similarly, +112.11 LL value shows that more frequent use of *would* in the NSEd compared to its use in the WEd is justified by the LL calculations. Any significant difference, however, occurs between the non-native databases. In conclusion, it can be said that, as for the NL/IL comparison, the non-native authors do not show native-like features in the use of *would* in academic writing. Besides, as for the IL/IL comparison, the non-native authors seem to have a similar use of *would* in academic writing.

4.7.2. Discussion of markers of deduction

The use of markers of deduction in Chafe's academic data equals to 4.4 normalized occurrences per 1.000 words. These markers are more frequent in the academic data than the spoken data. Chafe attributes it to the need and the presence of more time for "hypothesis formation" while writing but not speaking (1986, p. 269). In order to generate reasoning, there must be time to think and to draw conclusions, and there is sufficient time available for writers. Contrary to Chafe's proposition, as for conversational English, the use of markers of deduction is highly frequent. The political debates consist of 12.53 markers of deduction per 1.000 words in Berlin and Prieto-Mendoza (2014, p. 397). They contain nearly 4 times more markers of deduction than conversational data does in Chafe (1986, p. 269). Despite the fact that debates are conversational data in which, by contrast with Chafe's argument, the speaker does not have enough time to come to a conclusion as in writing, there is a high frequency of markers of deduction. It may be because of that politicians make preparations for their

speech in advance to convince the voters. By the way, they may have a chance to base their argument on a credible source to be more believable.

As for each of these markers of deduction, *should* and *presumably* are markers of deduction with a high degree of reliability. Out of these markers, *can*, *could* and *would* denote that the proposition consists of low degree of reliability (Chafe, 1986, p. 269). Almost all of the markers of deduction in each of the three databases signal low degree of reliability.

(54) Most of the episodes occurred when the participant was alone (longitudinal 1, 82%, longitudinal 2, 84%, cross, 73%). This is logical, as if the vast majority of episodes involving English occurred at home, then **presumably** the participant was in his or her own room. (NSEd-5)

(55) In the two simulations experimented within this study, the emphasis was more on listening comprehension and speaking than on writing or reading, but both simulations contained tasks eliciting language in all four basic skills. The size of the computer screen, however, sets some limitations to how rational it is to incorporate longer texts, but it **should** be more flexible to produce, type and edit text using a keyboard and a word processor programme than paper and a pencil. (WEd-8)

Chafe (1986) explains that markers of deduction denote the meaning of reasoning involving “an intuitive leap to a hypothesis from which conclusions about evidence can be deduced” (p. 269). Contrary to *can* and *could*, *should* and *presumably* imply a high degree of reliability. The extracts (54-55) above contain the authors’ strong deduction based on some hypotheses. For example, in (54), the author deduces that most of the episodes occurred in the participant’s own room. S/he comes to this conclusion as the episodes occurred at home and the participant was alone. Similarly, the author in (55) develops a hypothesis through talking about the superiority of a keyboard and a word processor over a paper and a pencil in producing, typing, and editing text. This is convincing enough on the part of the reader.

(56) This course **can** teach prospective teachers what to do if the students are all at different levels, if they keep using their own language, if they are uncooperative, if they do not want to talk. (NSTd-16)

(57) Attitudes towards learning English in our study is the closest to the fact of actually learning the language, which **can** be influenced by variables related to the factors in the classroom, like the role of the teacher. **(WEd-24)**

(58)...student satisfaction **can** be a predictor for success and these connections with an instructor are part of that experience. **(NSEd-1)**

(59) Alternatively or perhaps cooperatively, a social networking site, such as Facebook, **could** be used to enable university supervisors and the former classmates of these novice teachers to follow them as they transition to their first job. **(NSEd-6)**

(60)...it is not clear why the participants were not able to produce very low/low collocations accurately. It **could** be due to L2 English learners' look-up strategies, which could cause cognitive interference. **(WEd-28)**

(61) The reasons underlying such attrition **could** be lack of vocabulary-focused instructions. **(NSTd-12)**

Contrary to *should* and *presumably*, *can* and *could* imply a lesser degree of reliability (Chafe, 1986, p. 269). In the extract (56), the author alleges that the course will be beneficial for prospective teachers to cope with some undesired situations. However, it is an assertion and there is the possibility that the course will not work. Similarly, in (57), the author alleges that attitudes towards learning English may be influenced by the classroom-related factors. S/he bases her/his claim upon a kind of hypothesis which reduces the reliability in the proposition. In (58), it is the assumption of the author that student satisfaction can be a predictor for success. The author attains the knowledge through deduction which is based on hypothesis. So, it can be alleged that the proposition is hypothetical. In (59), it comes as no surprise if Facebook does not work well to monitor the graduates. In a similar way, in (60), the author associates the participants' deficiency in producing collocations in an accurate way to their look-up strategies. However, the author is not certain if learners' look-up strategies really affect their performance in producing collocations. In (61), the author states a potential reason for attrition, which reflects that the author deduces this knowledge. However, nothing directs him/her to deduce this kind of conclusion. The source of his/her deduction is based on an assumption.

(62) Without those video-recorded files, it **would** be impossible to make the observations and test the suggested hypotheses by only examining the final static transcripts of the participants' text-based chats. **(WEd-22)**

(63) A future study could consider involving participants from several graduate CSD programs to evaluate grammar knowledge, its application in assessment, and the type of academic preparation students received. This approach **would** ease the dependence on the student enrollment of one college. Future studies could be conducted related to grammar knowledge across CSD departments or in partnership with other disciplines. For example, collaboration with educators, literacy specialists, and/or liberal arts faculty **would** be helpful. **(NSEd-29)**

(64) Another reason that no statistically significant difference found between the use of foreign language strategies and the language proficiency of the participants might be related to the duration of the study. A 10-week study period might not be long enough to detect the likely effects of foreign language strategies use and a strategy based instruction. At least a one semester (15 weeks or more) **would** give better results on assessing the likely effect of strategy based instruction. **(NSTd-28)**

Chafe (1986, p. 269) expresses that *would* denotes a hypothetical knowledge which causes the writer's lack of commitment to the proposition. In the extract (62), the author discusses a potential unreal consequence in the absence of video-recorded files. Similarly, in (63), the author discusses some ideas which are hypothetical and unreal. Throughout the paragraph, the use of *could* with *would* strengthens the low possibility meaning in the proposition. In a similar way, in (64), although the author suggests that a 15-week period may positively contribute to the study in terms of investigating the effects of strategy based instruction, anything forms a basis for this suggestion. S/he bases his/her suggestion on hypothesis. In other words, the author comes to a conclusion by means of deduction, the source of which is a hypothesis.

According to Alonso-Almeida (2015), the modal *would* indicates "the writers' reservation concerning the existence of validated assertiveness scales, and thus they use *would* epistemically to indicate tentative probability (p. 45)". Additionally, Collins (2009) supports the view of Alonso-Almeida by underlining that "tentative *would* is

often used to reduce the speaker's level of confidence in the truth of the proposition (p. 142)".

As for the statistical results, it can be suggested that the use of markers of deduction is more frequent in the NSEd, and while the NSTd shows native-like features in the use of these markers, the WEd differs from the NSEd significantly. Furthermore, the non-native authors differ significantly with regard to the use of these markers. It can be assumed that they do not seem to be very much alike with regard to the use of markers of deduction. However, in each of the three databases, there is a frequent use of markers of deduction.

A couple of reasons would be listed for why they are frequently used in the academic genre.

First, the source of the information is hypothesis in deduction (Chafe, 1986). Namely, the author deduces something based on some hypotheses. The process of making a deduction is completed as a result of hypothesis formation. In academic writing, especially in theses, the researcher forms some hypotheses at the very beginning of the study. The accuracy of these hypotheses is checked at the end. It can be suggested that hypothesis as a source of knowledge coincides with the nature of the scientific studies in some ways.

Second, in the present study, the discussion sections of the dissertations are utilized as data and the authors make way for discussing results and the potential reasons by using available hypotheses. Thus, they find chance to discuss in a versatile way.

Third, the use of markers of deduction includes the audience in the discussion while toning the author's proposition down. In other words, deduced knowledge both lowers the reliability of the authors, conveys a low degree of commitment to the validity of the proposition and gives the readers an opportunity to evaluate what is proposed by the author. For example, the following two propositions are strictly different from each other.

- a) Consuming too much salt is the reason of the high blood pressure.
- b) Consuming too much salt would be the reason of the high blood pressure.

In (a), the author shares a truth by using *to be*. However, in (b), the author conveys hypothetical knowledge to the audience by means of *would*. Even though, in

the first proposition, the rate of reliability of the author is at maximum level, it prevents the audience from taking participation into the discussion, namely prevents them thinking about some other potential reasons. Contrary to (a), in (b), the author invites the reader to get involved in the discussion, which causes active participation of the reader.

4.8. Use of Markers of Sensory Evidence in the Three Databases

8 different markers of sensory evidence are sought in the NSTd. Detailed information about markers of sensory evidence is available in Section 2.3.3. in Chapter 2. The NST authors use hardly any markers of sensory evidence. *Looks like* as a marker of sensory evidence appears only once in the NSTd. Except for the marker of sensory evidence *looks like*, the NST authors do not use any of these markers.

In the NSEd, 8 different markers of sensory evidence are used 17 times, which equals to 0.1 normalized occurrences. The use of markers of sensory evidence in the NSEd is very limited. While *looks like* is used 6 times, *I see* is used 4 times by the NSE authors. Out of these items, both *I feel* and *sounds like* occur 3 times in the NSEd. *Feels like* is used just once. *I hear*, *it tastes*, and *smells like* do not show any instance as markers of sensory evidence.

The use of markers of sensory evidence in the WEd is very scarce in number. 8 markers of sensory evidence are used only in 4 raw instances. The markers *I see* and *I feel* appear in 4 raw occurrences in total. Out of these 2 markers of sensory evidence, none of the rest occurs. Figure 4.10 demonstrates the normalized frequency distribution of markers of sensory evidence among the three databases.

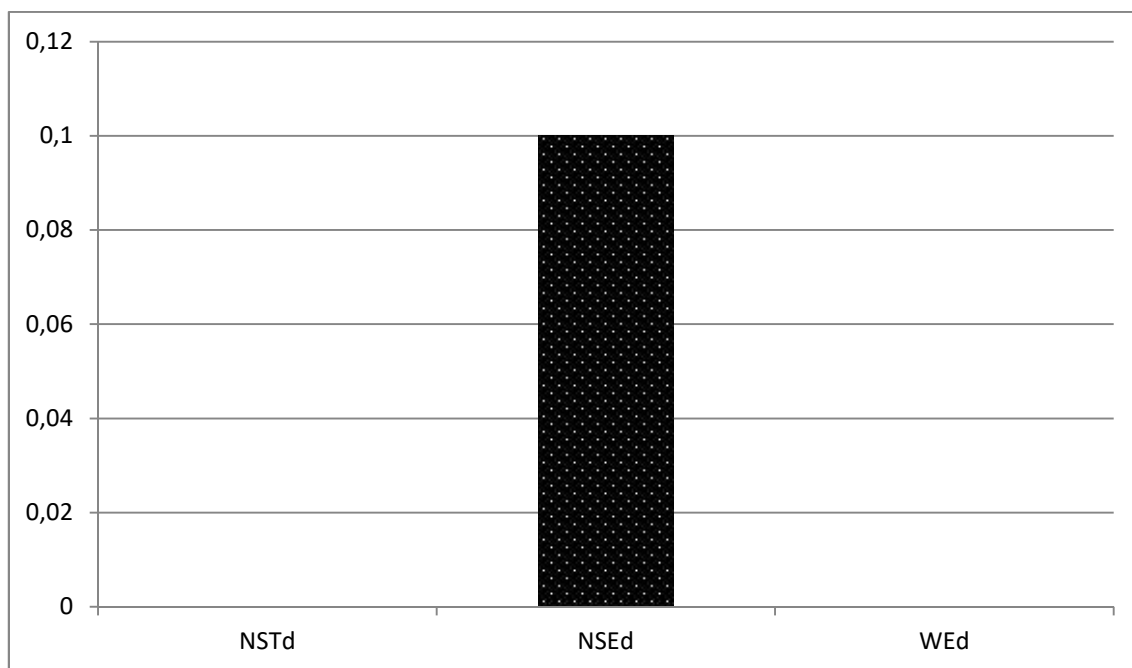


Figure 4.10 *Normalized Frequency Distribution of Markers of Sensory Evidence (per 1.000 words)*

4.8.1. Frequency analysis of markers of sensory evidence among the databases

Although the raw frequency of markers of sensory evidence in the NSEd is higher than that in the NSTd, the normalized occurrences show that the use of these markers is quite few in number both in the NSEd and the NSTd. The data concerning the use of markers of sensory evidence in the NSEd and the NSTd is indicated in Table 4.24.

Table 4.24 *Frequency Analysis of Markers of Sensory Evidence in NSEd and NSTd*

	NSEd	NSTd	LL Ratio
Frequency of occurrence	17	1	+14.86
Normalized occurrences	%0.1	%0.0	

Markers of sensory evidence are more frequent in the NSEd compared to the NSTd with 14.86 LL value ($p > 0.0001$), meaning that there is not any statistically significant difference between the NSEd and the NSTd with regard to the use of markers of sensory evidence; that is to say, more frequent use of these markers in the

NSEd as compared with the NSTd does not differ significantly with regard to the LL calculations.

Both the raw frequencies and the normalized occurrences indicate that the use of markers of sensory evidence in the NSEd outnumbered that in the WEd. Table 4.25 indicates the variance between the NSEd and the WEd with regard to the use of markers of sensory evidence.

Table 4.25 *Frequency Analysis of Markers of Sensory Evidence in NSEd and WEd*

	NSEd	WEd	LL Ratio
Frequency of occurrence	17	4	+15.56
Normalized occurrences	%0.1	%0.0	

Markers of sensory evidence are more frequent in the NSEd compared to the WEd with 15.56 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSEd and the WEd with regard to the use of these markers; that is to say, more frequent use of these markers in the NSEd as compared with the WEd is justified by the LL calculations. (critical LL value = 15.13)

As underlined in Tables 4.24 and 4.25, although there is a statistically significant difference between the NSEd and the WEd with regard to the use of markers of sensory evidence, there is not any meaningful difference between the NSEd and the NSTd. With regard to the Native Language/Interlanguage comparison, it can be inferred that the NST authors show native-like features in terms of the use of markers of sensory evidence. Their use of markers of sensory evidence shows similarity with the native authors' use of these markers. However, the authors' in the WEd show different characteristics from the native authors with regard to the use of markers of sensory evidence.

The NSTd and the WEd do not differ with regard to the use of markers of sensory evidence. A limited number of frequency of use in each database and the normalized frequencies are shown in Table 4.26.

Table 4.26 *Frequency Analysis of Markers of Sensory Evidence in NSTd and WEd*

	NSTd	WEd	LL Ratio
Frequency of occurrence	1	4	-0.56
Normalized occurrences	%0.0	%0.0	

Markers of sensory evidence are slightly less frequent in the NSTd when compared to the WEd with 0.56 LL value ($p > 0,0001$), meaning that there is not any statistically significant difference between the NSTd and the WEd with regard to the use of markers of sensory evidence; that is to say, slightly less frequent use of these markers in the NSTd as compared with the WEd does not differ significantly with regard to the LL calculations.

As for the Interlanguage/Interlanguage comparison, the non-native databases share common features with regard to the use of markers of sensory evidence. It can be inferred that the non-native authors highly resemble each other with regard to the use of these markers.

Table 4.27 demonstrates the item-by-item analysis of markers of sensory evidence, which summarizes both the raw and the normalized frequency distributions of each of the markers of sensory evidence and the Log-Likelihood calculations among the three databases.

Table 4.27 *Item-by-Item Frequency Analysis of Markers of Sensory Evidence*

Item	NSEd Raw Frequency/per 1.000 words	NSTd Raw Frequency/per 1.000 words	WEd Raw Frequency/per 1.000 words	LL Ratio for NSEd-NSTd	LL Ratio for NSEd-WEd	LL Ratio for NSTd-WEd
I see	4/0	0/0	3/0	+4.95	+0.94	-2.62
I hear	0/0	0/0	0/0	/	/	/
I feel	3/0	0/0	1/0	+3.71	+2.15	-0.87
Looks like	6/0	1/0	0/0	+3.23	+11.32	+2.08
Sounds like	3/0	0/0	0/0	+3.71	+5.66	/
Feels like	1/0	0/0	0/0	+1.24	+1.89	/
It tastes	0/0	0/0	0/0	/	/	/
Smells like	0/0	0/0	0/0	/	/	/

As seen in Table 4.27 above, any Log-Likelihood ratio is available for *I hear*, *It tastes*, and *smells like*. These markers of sensory evidence occur in none of the three databases. Similarly, although the markers *sounds like* and *feels like* occur in the NSEd, they occur neither in the NSTd nor in the WEd. So, any Log-Likelihood ratio for these markers for the NSTd and the WEd stands out.

4.8.2. Discussion of markers of sensory evidence

The use of markers of sensory evidence is considerably low in academic data. As in the present data, Chafe's academic data contains hardly any use of markers of sensory evidence. However, 1.1 markers of sensory evidence per 1.000 words are encountered in conversational data (1986, p. 268). Similarly, Berlin and Prieto-Mendoza's data on the political quarrels consists of almost the same amount of these markers as in Chafe's conversational data (2014, p. 397).

As underlined in Chafe (1986), *I see*, *I hear*, *I feel*, *It tastes* are markers of sensory evidence denoting a high degree of reliability; however, *looks like*, *sounds like*, *feels like*, *smells like* downgrade the rate of reliability on the proposition. The use of markers of sensory evidence in the overall data is really very limited in each of the three databases. Most of them seem to denote a less degree of reliability.

Chafe (1986) underlines that sensory evidence is the source of knowledge and supplies reliable knowledge for the readers (p. 267). As seen in the extracts (65-67), the authors have direct perceptual evidence for their claims. The source of knowledge in each of these propositions is based on perception which indicates that the rate of reliability the authors possess is considerably high.

(65) He did not want to see any student raising a hand or calling out an answer. He only wanted to see teachers using sticks because he thought this was the best way to conduct a class. As a result, **I saw** this practice over and over during my observations. (NSEd-21)

(66) However, as I observed my participants, I found that many of them did listen to his suggestions and incorporate them into their teaching. As a result, **I saw** similar practices and procedures in each setting. (NSEd-21)

(67) In reflection, **I feel** that I have learned more from the study than the participants may have. A more experienced researcher may have produced better and more insightful results for the study. **(WEd-14)**

The extracts (68-69), contrary to (65-67), consist of “a degree of doubt” with Chafe’s his own words (1986, p. 267) even though they are also based on perceptual evidence. *Looks like* and *sounds like* signify a lower degree of reliability compared to the sensory verbs *see*, *hear*, and *feel*.

(68) There is a simple equation concerning L1 transfer of any kind. It **looks like** in the intermediate level, learners more likely transfer features of L1 into L2. **(NSTd-4)**

(69) Finally, it should be noted that *en* has a broad range of usage. Since *en* is a kind of all-purpose preposition and since it **sounds like** English *in*, a student may automatically choose *in* when there is some uncertainty about what to choose. **(NSEd-2)**

In the extract (68), the author discusses that the transfer from L1 to L2 seems to come true in intermediate level. However, readers cannot rely on this information as if it was a fact. It should not be surprising for the audience if it does not come true in intermediate level. Similarly, in (69), *sounds like* indicates that the preposition *en* sounds as if it was English preposition *in*, but essentially it is not.

Some reasons can be listed why the use of markers of sensory evidence is very low in each of the three databases.

First, the use of these markers requires direct involvement of the author to the issue. For example, in order to be able to write *I see*, the author has to see; or to write *I hear*, s/he has to hear. Taking into consideration the content of the present data; in other words, the discussion parts of the dissertations, the use of these markers is applicable to neither discussion parts nor social/educational sciences. They seem that they are suitable for using in experiment-based studies in hard sciences. In these studies, direct involvement of the author provides the discussion of the issue with more frequent markers of sensory evidence. As Hedges (1987) underlines in his distinguishing work, “the most immediately obvious difference between measurements in the physical sciences and those in the social sciences does seem to be that measurements in the

physical sciences are much more accurate (p. 452)". The researchers' discussion is based on the findings and to what extent the researchers are certain about their discussion is based on to what extent the findings are attained in an accurate way. Methodological differences providing researchers with data have a first-hand impact on the way the researchers sound un/certain. As such, Storer (1967) proposes that "the use of mathematics in a science provides a greater degree of precision in organizing its body of knowledge and, thus, a "tougher" set of criteria for the evaluation of new contributions (p. 78)". Some kinds of features such as mathematical analyses not in consequence of generalized findings, laboratory experiments, clinical tests which are special to the methodology of hard sciences, beyond any doubt, direct researchers to very exact results; and correspondingly, the researchers express themselves in a way more free from ambiguity. Yet, some techniques such as the use of questionnaires, surveys, observations, which are typically utilized to obtain data in soft sciences, obligate researchers to generalize the findings; and different samples do not represent the same population with the same results. Consequently, the researchers may intrinsically opt for a less-certain language to purport results.

Second, in the present data, there would be few studies which are based on observation or requiring direct interaction of the participants with the researchers. Under these circumstances, instead of using markers of sensory evidence, the authors prefer making a deduction based on potential hypotheses.

4.9. Use of Markers of Matching Knowledge against Verbal Resources in the Three Databases

Three different markers of matching knowledge against verbal resources occur 32 times with 0.2 normalized occurrences per 1.000 words in the NSTd. Similarly, these markers are very rare in number and show 14 raw instances in the NSEd, which are 0.1 normalized occurrences per 1.000 words. As for the WEd, markers of matching knowledge against verbal resources are very limited in number and show 19 raw frequencies of use. See Section 2.3.6. in Chapter 2 for detailed information about markers of matching knowledge against verbal resources. Figure 4.11 below shows the normalized frequency distribution of these markers among the three databases.

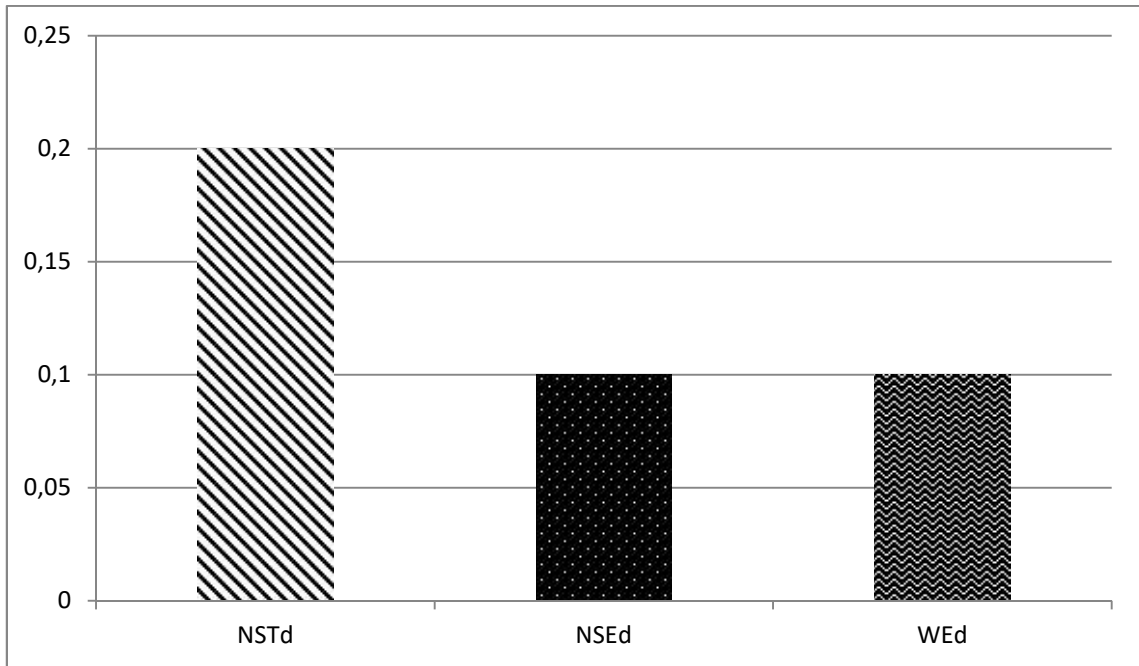


Figure 4.11 *Normalized Frequency Distribution of Markers of Matching Knowledge against Verbal Resources (per 1.000 words)*

The frequency distributions and the normalized occurrences of these three markers of matching knowledge against verbal resources are demonstrated in Figure 4.12 below.

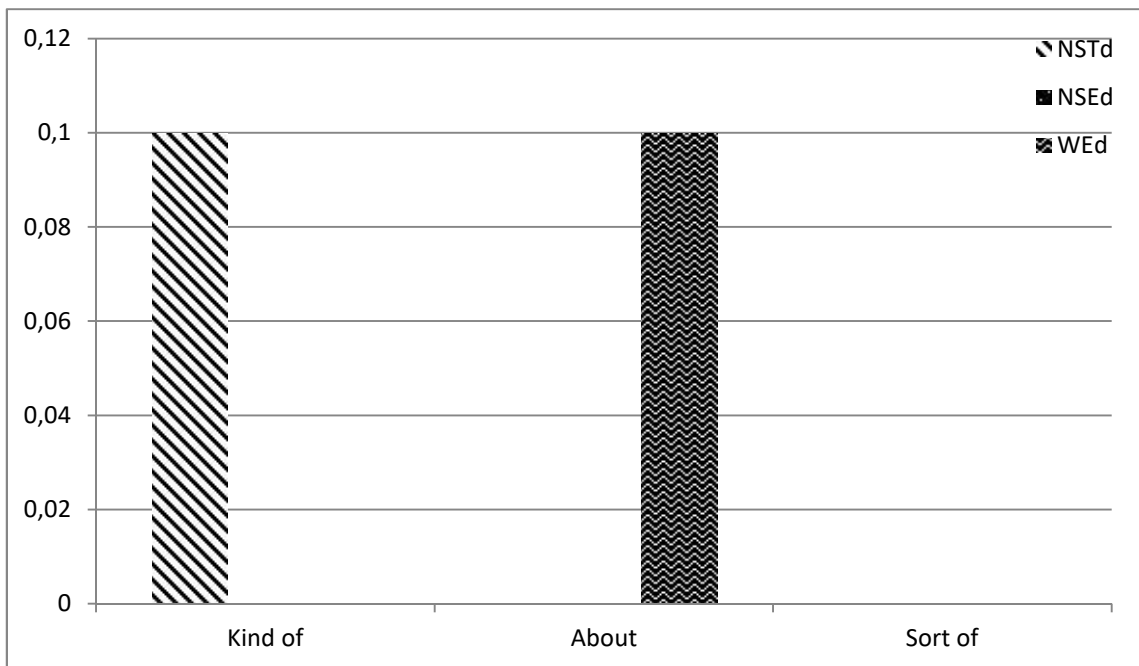


Figure 4.12 *Normalized Frequency Distribution of Each of Markers of Matching Knowledge against Verbal Resources (per 1.000 words)*

As shown in Figure 4.12 above, *kind of* as a marker of matching knowledge against verbal resources is used 24 times with 0.1 normalized occurrences per 1.000 words in the NSTd. *About* and *sort of* are the following markers with 5 and 3 raw occurrences, respectively.

As for the NSEd, *about* is used 8 times as a marker of matching knowledge against verbal resources. While the NSE authors use *kind of* 5 times, they use *sort of* once. These three markers have very limited use in the NSEd. They show only 14 raw frequencies of use in total.

In the WEd, *about* and *kind of* are used in 19 raw occurrences with 0.1 normalized occurrences. Out of these markers, *sort of* shows no instance.

4.9.1. Frequency analysis of markers of matching knowledge against verbal resources among the databases

It is summarized in Table 4.28 that the use of markers of matching knowledge against verbal resources does not show a great disparity in the NSEd and the NSTd. The frequency distributions and the normalized occurrences of these markers are close to each other in these two databases.

Table 4.28 *Frequency Analysis of Markers of Matching Knowledge against Verbal Resources in NSEd and NSTd*

	NSEd	NSTd	LL Ratio
Frequency of occurrence	14	32	-10.29
Normalized occurrences	%0.1	%0.2	

Markers of matching knowledge against verbal resources are less frequent in the NSEd compared to the NSTd with 10.29 LL value ($p > 0.0001$), meaning that there is not any statistically significant difference between the NSEd and the NSTd with regard to the use of markers of matching knowledge against verbal resources; that is to say, the less frequent use of these markers in the NSEd as compared with the NSTd does not differ significantly with regard to the LL calculations.

The findings concerning the use of markers of matching knowledge against verbal resources in the NSEd and the WEd do not vary with those in the NSEd and the NSTd. While the raw frequencies are different, the normalized occurrences per 1.000 words are the same in the NSEd and the WEd. Table 4.29 demonstrates the data concerning the use of these markers in the NSEd and the WEd.

Table 4.29 *Frequency Analysis of Markers of Matching Knowledge against Verbal Resources in NSEd and WEd*

	NSEd	WEd	LL Ratio
Frequency of occurrence	14	19	+0.17
Normalized occurrences	‰0.1	‰0.1	

Markers of matching knowledge against verbal resources are slightly more frequent in the NSEd compared to the WEd with 0.17 LL value ($p > 0.0001$), meaning that there is not any statistically significant difference between the NSEd and the WEd with regard to the use of these markers; that is to say, slightly more frequent use of these markers in the NSEd as compared with the WEd does not differ significantly with regard to the LL calculations.

As shown in Tables 4.28 and 4.29, there is no statistically significant difference neither between the NSEd and the NSTd nor between the NSEd and the WEd with regard to the use of these markers. There is not any meaningful difference among the three databases. With regard to the Native Language/Interlanguage comparison in the method of the present dissertation, it can be inferred that the non-native databases show native-like features in terms of the use of these markers.

As shown in Table 4.30, the use of markers of matching knowledge against verbal resources differentiates in the NSTd and the WEd. Both the raw frequencies and the normalized occurrences in the NSTd are higher in number than those in the WEd.

Table 4.30 *Frequency Analysis of Markers of Matching Knowledge against Verbal Resources in NSTd and WEd*

	NSTd	WEd	LL Ratio
Frequency of occurrence	32	19	+15.79
Normalized occurrences	%0.2	%0.1	

Markers of matching knowledge against verbal resources are more frequent in the NSTd when compared to the WEd with 15.79 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSTd and the WEd with regard to the use of these markers; that is to say, more frequent use of these markers in the NSTd as compared with the WEd is justified by the LL calculations. (critical LL value = 15.13)

As for the Interlanguage/Interlanguage comparison (Granger, 1998, pp. 13-14; 2015, p. 8), the results demonstrated in Table 4.30 above underline that non-native databases differ from each other with regard to the use of markers of matching knowledge against verbal resources. The authors in these databases do not resemble each other in the use of these markers.

Table 4.31 demonstrates the item-by-item analysis of these markers, which summarizes both the raw and the normalized frequency distributions of each of these markers and the Log-Likelihood calculations among the three databases.

Table 4.31 *Item-by-Item Frequency Analysis of Matching Knowledge against Verbal Resources*

Item	NSEd Raw Frequency/per 1.000 words	NSTd Raw Frequency/per 1.000 words	WEd Raw Frequency/per 1.000 words	LL Ratio for NSEd-NSTd	LL Ratio for NSEd-WEd	LL Ratio for NSTd-WEd
Kind of	5/0	24/0.1	4/0	-16.65	+1.01	+30.45
About	8/0	5/0	15/0.1	+0.31	-0.17	-0.99
Sort of	1/0	3/0	0/0	-1.38	+1.89	+6.24

As Table 4.31 demonstrates, the use of the marker *kind of* differs significantly between the NSEd and the NSTd. -16.65 LL value implies that the less frequent use of *kind of* in the NSEd compared to that in the NSTd is statistically significant. Similarly, the non-native databases differ significantly with regard to the use of *kind of*. +30.45 LL value means that more frequent use of *kind of* in the NSTd differs significantly compared to that in the WEd. It can be inferred that the authors in the NSTd do not show native-like features with regard to the use of *kind of* in academic writing but the authors in the WEd do. Besides, that the non-native databases differ from each other indicates that the non-native authors do not share common features in the use of *kind of* in academic writing. Apart from *kind of*, the use of the other two markers does not differ among the databases.

4.9.2. Discussion of markers of matching knowledge against verbal resources

The use of markers of matching knowledge against verbal resources is quite rare in the present data. In another academic written data, Chafe finds similar results. Furthermore, conversational data both in Chafe (1986) and in Berlin and Prieto Mendoza (2014, p. 397) involves much more markers of matching knowledge against verbal resources than academic written data does in Chafe (p. 270). These three markers are a kind of hedging devices. They hardly ever occur although the present data consists of a number of markers of reliability lowering the reliability in the text. This scarcity in number is not because that markers of reliability are not suitable for academic writing, but it is derived from these three markers. The results cannot be generalized to the whole markers lowering the reliability as if they were not frequently used in academic writing. This finding is specific to these three markers.

(70) Both the survey results and the diary entries by the participant student teachers indicated the existence of **a sort of** anxiety caused by their peers. (NSTd-19)

(71) This give-and-take is **a kind of** collaboration, where the partners are both working together to create a relationship. (NSEd-18)

(72) Computers have entered people's daily lives and become a part of it for the last 24 years. The computer has also brought some terms with it and

‘computer literacy’ is one of them. It is a **kind of** knowledge about computers which people should have in order to make use of it. (NSTd-21)

(73) However, after students finished a couple of graded readers (which amounted to **about** 20,000-30,000 words), they realized that the goal was possible to reach. (WEd-16)

(74) The concordancing treatment lasted for **about** 10 weeks. In the process, the experimental group was given pre-activities about the vocabulary items to be taught before each session; these activities were constructed by using online corpora (www.lextutor.ca) composed of **about** 15 million words. (NSTd-1)

All of the extracts (70-74) above serve as hedging devices as mentioned in Chafe (1986, p. 270). For example, in (73), the author does not give exact information about the amount of the word count. Similarly, the authors do not mention neither the exact type of the anxiety caused by the peers in the extract (70) nor the exact type of the collaboration in (71). In a similar vein, in (72), the author underlines that computer literacy is a kind of knowledge; however, s/he abstains from revealing the exact type of it. In (74), the author is not certain of both the time period of concordancing treatment and the size of the online corpora.

Each of these three markers functions as an item lowering the reliability of the author. Although the present data consists of lots of markers conveying that the proposition of the author is unreliable, the use of these markers is quite low in the present data. Chafe (1986) suggests that there is a process in which the information shared with the reader and the schemas in the reader’s brain are matched. As seen in the extracts above, each of these markers tries to adapt some information to the available schemas on the part of the reader. For example, in (70), the author tries to use the schema about anxiety to account for the anxiety caused by peers. Similarly, in (71), the schema about the collaboration in the reader’s brain is activated to explain give-and-take. It can be assumed that these three markers have a very specific function in the text and this lowers their frequency of use in the present data. For example, *probably* or *possibly* as markers of reliability can be used in any text to indicate lack of speaker/writer commitment. Also, the substitution of *possibly* for *probably* or vice versa is very natural. However, *about*, *kind of*, *sort of* cannot be used in any sentence to lower

the reliability as a substitution of any markers. They add possibility meaning about a certain element like anxiety in (70), collaboration in (71), and word counts in (73). They do not substitute for any other adverbs or modals as markers of reliability and this lowers their frequency of use.

4.10. Use of Markers of Matching Knowledge against Expectations in the Three Databases

10 different markers of matching knowledge against expectations are sought in the NSTd. Section 2.3.6. in Chapter 2 consists of detailed information about matching knowledge against expectations. The total frequency distribution of these 10 markers indicates that these markers show the second highest frequency of 776 occurrences with 4.8 normalized occurrences per 1.000 words after markers of deduction in the NSTd. However, these markers show the highest frequency of use in the NSEd. They show 1102 instances with 5.9 normalized occurrences per 1.000 words. Similar to the NSEd, markers of matching knowledge against expectations hold the highest frequency of use with 1272 occurrences, which equals to 4.3 normalized occurrences per 1.000 words in the WEd. However, the WEd ranks number three among the databases with regard to the use of these markers. Figure 4.13 below demonstrates the normalized frequency distribution of these markers among the three databases.

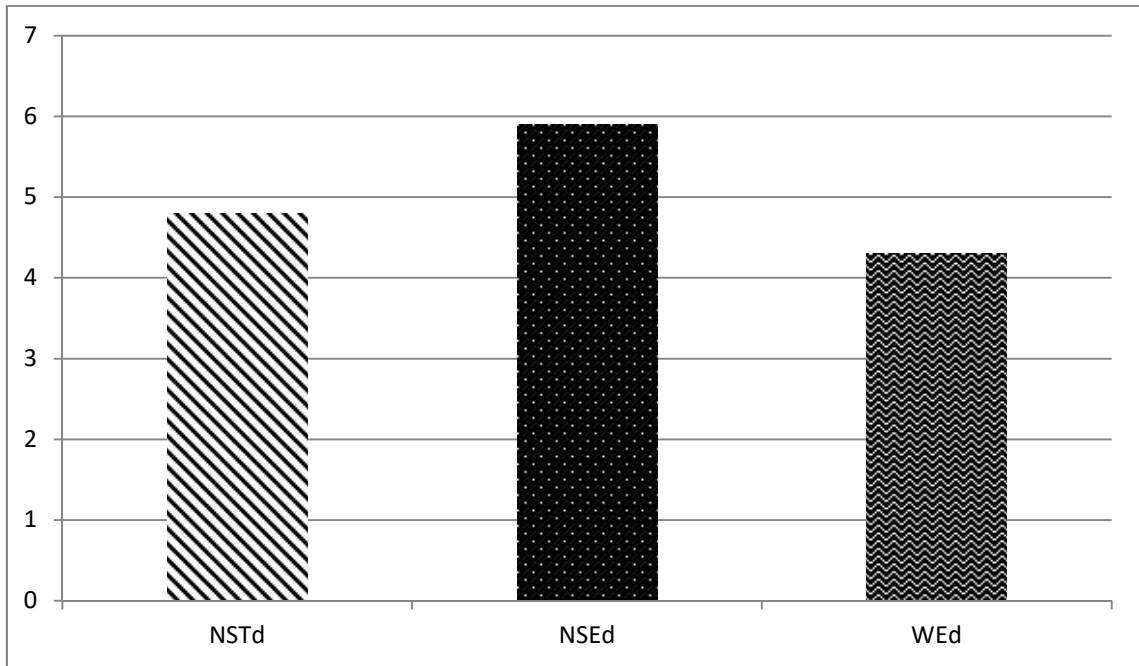


Figure 4.13 *Normalized Frequency Distribution of Markers of Matching Knowledge against Expectations (per 1.000 words)*

The frequency distribution and the normalized occurrences of these 10 markers of matching knowledge against expectations are visualized in Figure 4.14.

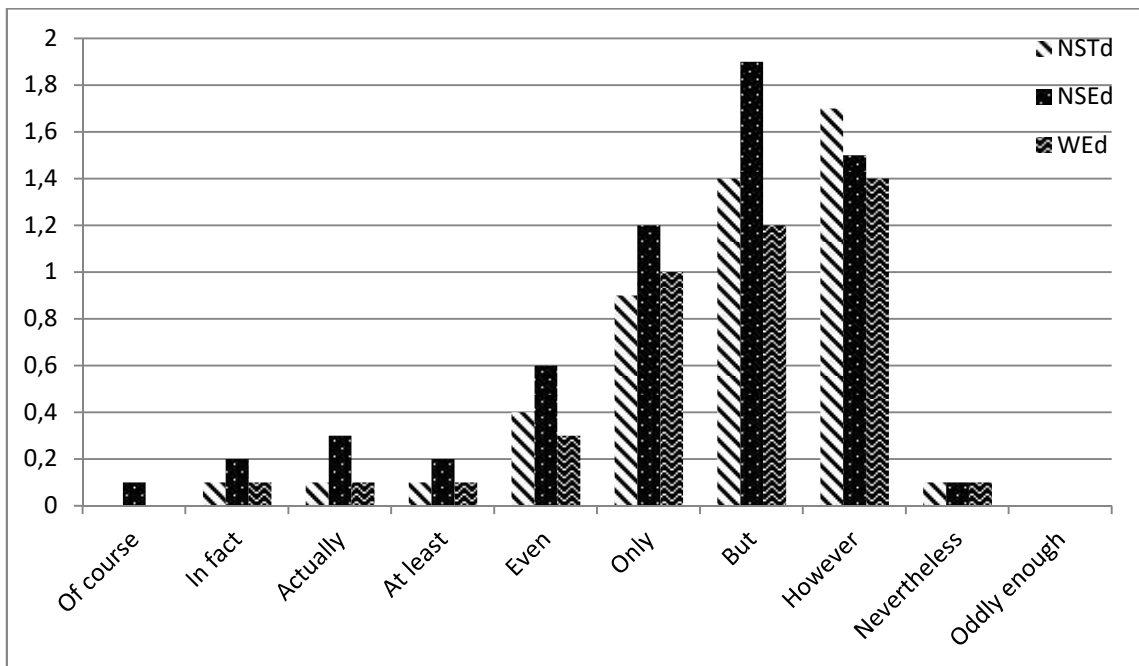


Figure 4.14 *Normalized Frequency Distribution of Each of Markers of Matching Knowledge against Expectations (per 1.000 words)*

As seen in Figure 4.14, the most frequent marker *however* is used by the NST authors 274 times with 1.7 normalized occurrences. *But* is the second most frequently used marker with 219 occurrences, which are 1.4 normalized occurrences. *Only* is the following marker used by the NST authors 144 times as a marker of matching knowledge against expectations. It has 0.9 normalized occurrences in the NSTd. Out of these three highly frequent markers, *even*, *at least*, *actually*, *nevertheless*, *in fact*, and *of course* appear 139 times with almost 0.8 normalized occurrences. Only *oddly enough* shows no instance in the dissertations of the NST authors.

The most frequently used marker *but* appears in the NSEd 358 times with 1.9 normalized occurrences. *However* is the second most frequently used marker with 272 occurrences, which are 1.5 normalized occurrences. *Only* is the following marker used by the NSE authors 220 times as a marker of matching knowledge against expectations, which equals to 1.2 normalized occurrences in the NSEd. Out of these three highly frequent markers, *even*, *at least*, *actually*, *nevertheless*, *in fact* and *of course* appear 252 times with almost 1.5 normalized occurrences. *Oddly enough* is the only marker which shows no instance in the dissertations of the NSE authors.

As for the WEd, Figure 4.14 indicates that *however* shows the highest frequency of use in 416 raw instances with 1.4 normalized occurrences. *But* follows *however* with 349 frequencies of use, which equals to 1.2 normalized occurrences. *Only* is used in 293 occurrences with 1 normalized occurrence. Apart from these highly frequent markers, there are some markers with moderate use. *In fact*, *actually*, *at least*, *even*, and *nevertheless* are used in 210 occurrences with 0.7 normalized occurrences. Out of these markers with moderate use, *of course* is very few in number with 4 instances. *Oddly enough* shows no instance.

4.10.1. Frequency analysis of markers of matching knowledge against expectations among the databases

Markers of matching knowledge against expectations are one of the most frequently used types in the three databases. These markers in the NSEd differ greatly from those in the NSTd. As shown in Table 4.32 below, not only the raw frequencies but also the normalized occurrences concerning the use of markers of matching knowledge against expectations show a big variation in the NSEd and the NSTd.

Table 4.32 *Frequency Analysis of Markers of Matching Knowledge against Expectations in NSEd and NSTd*

	NSEd	NSTd	LL Ratio
Frequency of occurrence	1102	776	+17.71
Normalized occurrences	%5.9	%4.8	

Markers of matching knowledge against expectations are more frequent in the NSEd compared to the NSTd with 17.71 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSEd and the NSTd with regard to the use of these markers; that is to say, more frequent use of these markers in the NSEd as compared with the NSTd is justified by the LL calculations. (critical LL value = 15.13)

The use of markers of matching knowledge against expectations in the NSEd and the WEd shows similarity with that in the NSEd and the NSTd. Both the raw frequencies and the normalized occurrences of these markers in the NSEd and the WEd largely differ from each other. Table 4.33 demonstrates the data regarding the use of these markers in the NSEd and the WEd.

Table 4.33 *Frequency Analysis of Matching Knowledge against Expectations in NSEd and WEd*

	NSEd	WEd	LL Ratio
Frequency of occurrence	1102	1272	+54.71
Normalized occurrences	%5.9	%4.3	

Markers of matching knowledge against expectations are more frequent in the NSEd with 54.71 LL value ($p < 0.0001$), meaning that there is a statistically significant difference between the NSEd and the WEd with regard to the use of these markers; that is to say, more frequent use of these markers in the NSEd as compared with the WEd is justified by the LL calculations. (critical LL value = 15.13)

As underlined in Tables 4.32 and 4.33, there is a statistically significant difference between the native and the non-native databases with regard to the use of markers of matching knowledge against expectations. As for the Native Language/Interlanguage comparison, it can be inferred that the authors in the non-native databases do not show native-like features in the use of these markers in academic writing. Their use of markers of matching knowledge against expectations does not show similarity with the native authors' use of these markers.

The large disparity between both NSEd-NSTd and NSEd-WEd does not come into prominence between the NSTd and the WEd with regard to the use of markers of matching knowledge against expectations. Even though the raw frequencies differ highly from each other, the normalized occurrences of these markers in each of these databases are close to each other. The data regarding the use of these markers in the NSTd and the WEd is demonstrated in Table 4.34.

Table 4.34 *Frequency Analysis of Matching Knowledge against Expectations in NSTd and WEd*

	NSTd	WEd	LL Ratio
Frequency of occurrence	776	1272	+5.76
Normalized occurrences	%4.8	%4.3	

Markers of matching knowledge against expectations are more frequent in the NSTd compared to the WEd with 5.76 LL value ($p > 0.0001$), meaning that there is not any statistically significant difference between the NSTd and the WEd with regard to the use of markers of matching knowledge against expectations; that is to say, more frequent use of these markers in the NSTd as compared with the WEd does not differ significantly with regard to the LL calculations.

As for the Interlanguage/Interlanguage comparison (Granger, 1998, pp. 13-14; 2015, p. 8), the results demonstrated in Table 4.34 underline that the non-native authors' written products with regard to the use of markers of matching knowledge against expectations highly resemble each other.

Table 4.35 demonstrates the item-by-item analysis of markers of matching knowledge against expectations, which summarizes both the raw and the normalized

frequency distributions of each of these markers and the Log-Likelihood calculations among the three databases.

Table 4.35 *Item-by-Item Frequency Analysis of Markers of Matching Knowledge against Expectations*

Item	NSEd Raw Frequency/ per 1.000 words	NSTd Raw Frequency/ per 1.000 words	WEd Raw Frequency/ per 1.000 words	LL Ratio for NSEd-NSTd	LL Ratio for NSEd-WEd	LL Ratio for NSTd-WEd
Of course	15/0.1	3/0	4/0	+6.99	+12.68	+0.17
In fact	29/0.2	11/0.1	43/0.1	+5.86	+0.05	-5.79
Actually	52/0.3	19/0.1	22/0.1	+11.27	+29.71	+2.09
At least	36/0.2	20/0.1	30/0.1	+2.50	+6.55	+0.47
Even	107/0.6	67/0.4	97/0.3	+4.14	+15.21	+2.14
Only	220/1.2	144/0.9	293/1	+6.41	+3.31	-1.10
But	358/1.9	219/1.4	349/1.2	+15.78	+39.58	+2.54
However	272/1.5	274/1.7	416/1.4	-3.57	+0.10	+5.67
Nevertheless	13/0.1	19/0.1	18/0.1	-2.25	+0.12	+3.96
Oddly enough	0/0	0/0	0/0	/	/	/

As indicated in Table 4.35, the use of the markers *actually*, *even*, and *but* differentiate between the databases. First, the LL value of +29.71 means that more frequent use of *actually* in the NSEd compared to the WEd is statistically significant. The use of *actually* in the NSEd is more frequent than that of the WEd. However, its use does not significantly differentiate between the NSEd and the NSTd and between the non-native databases. In other words, it can be inferred that the non-native authors in the WEd do not show native-like features in the use of *actually* in academic writing but the non-native Turkish authors do. Furthermore, the non-native authors share common features with regard to the use of *actually* in academic writing.

Second, as in the use of *actually*, more frequent use of *even* in the NSEd compared to the WEd with +15.21 LL value indicates that the use of *even* by the NSE authors differs significantly from that by the authors in the WEd. The authors in the WEd differ from the NSE authors in the use of *even* in academic writing. Furthermore, the non-native databases do not differ significantly with regard to the use of *even*. Its slightly more frequent use in the NSTd compared to the WEd does not make any significant difference between the non-native databases. It can be inferred that the non-

native authors seem to be very much alike with regard to their use of *even* in academic writing.

Third, a native/non-native differentiation occurs in the use of *but*. Its use differs significantly both between NSEd-NSTd and NSEd-WEd. +15.78 LL value asserts that more frequent use of *but* in the NSEd compared to the NSTd makes a significant difference between the NSEd and the NSTd. Similarly, +39.58 LL value shows that more frequent use of *but* in the NSEd compared to its use in the WEd is justified by the LL calculation. As for the NL/IL comparison, it can be concluded that the non-native authors do not show native-like features in the use of *but* in academic writing. Moreover, any significant difference, however, occurs between the non-native databases with regard to the use of *but*. It means that the non-native authors share common features with regard to their use of *but* in academic writing.

4.10.2. Discussion of markers of matching knowledge against expectations

The use of expectation markers in academic data in Chafe (1986) is very frequent as in the present dissertation. The written data consists of 13.9 occurrences of expectation markers per 1.000 words. Similarly, the conversational data consists of more markers of expectation than the academic written data does (p. 271). The political debates in Berlin and Prieto-Mendoza show similar results. They have 9.7 occurrences of markers of expectation (2014, p. 397).

(75) These two findings, **of course**, seem contradictory. (NSTd-19)

(76) Proficiency is **of course** only one variable which may be predictive of the neurofunctional correlates of L2 processing. (NSEd-30)

(77) It is possible that more fundamental psycholinguistic/psychometric parameters such as working memory capacity and processing speed should be taken into account in order to explain more variance. **In fact**, as early as 1980, Daneman and Carpenter illustrated the importance of working memory capacity for reading and listening comprehension. (WEd-13)

(78) It is interesting to note that the students' attitudes toward LDOCE and their actual performance during the collocation tests contradict each other. The participants' performance in two collocation types - verb + noun and

adjective + noun - was different. **In fact**, the participants successfully corrected around 68% of the adjective + noun collocations while 55% of the verb + noun collocations. **(WEEd-28)**

(79) Inexperienced prospective teachers' perceptions regarding their knowledge of learners did not match with their actual teaching practices. Namely, what they believed they could do and what they **actually** did were different. **(NSTd-16)**

(80) In a type 1 error, the null hypothesis is true but has been rejected, as in when an association is found to be statistically significant when no such association exists (Agresti & Finlay, 2009). In a type 2 error, the null hypothesis is false, but has not been rejected, as in when an association is not found to be statistically significant but a significant association **actually** exists. **(NSEd-4)**

In the extracts (75-76), “something is in line with expectations” of the authors (Chafe, 1986, p. 270). *Of course* supports the authors' claims and increases the rate of reliability of the propositions. For example, in (75), the author feels fully self-assured of that two findings seem contradictory. In a similar way, in (76), both *of course* and *only* persuade the readers to believe in that the function of proficiency as a variable on L2 processing. On the other side, *in fact* and *actually* in (77-80) imply that “a fact goes beyond what one might have expected (Chafe, 1986, p. 271)”. In other words, they denote a meaning of surprise, or mirativity. In (77), while the author discusses the importance of working memory capacity, after the use of *in fact*, s/he shares a mirative fact which informs the reader about that the importance of working memory capacity was already underlined in 1980 by Daneman and Carpenter. Similarly, in (78), both the use of *it is interesting to note that* and *in fact* underline that their actual performance in the collocation tests is surprisingly contrary to their attitudes toward LDOCE. In (79), the use of *actually* underlines a surprising finding that the inexperienced prospective teachers' actual teaching practices seem contradictory with their perceptions regarding their knowledge of learners. Similarly, in (80), it surprises the author that even though the null hypothesis is false, it is not rejected.

(81) Therefore, **at least** three items should be used to define a construct, and four or more items are preferable in order to measure the construct with a greater degree of precision along the endorsability scale. (NSEd-22)

(82) Thus, it can show that the participants might learn new words or **at least** recognize many words, but it does not mean that they know the associational links of these words or they know them in-depth. (NSTd-12)

(83) **Even** advanced learners still need support in the language aspects of their writing because the external support that they can get is not sufficient and seldom is immediate. (WEEd-15)

(84) Generally, students assigned some value to learning a language. This contrasted with the open responses that students gave regarding why learning another language was important because **even** students who indicated they personally didn't feel it was important to them still saw the value in others needing to know additional languages. (NSEd-1)

(85) The selection of mentors is of paramount importance in this respect, as, quite apart from any other selection criteria, **only** those who willingly volunteer should be considered as MSTs, if mentors are to be of benefit to PSTs. (NSTd-20)

(86) When working with Kelly, Zach **only** cared about the speed of task completion. Similar to Zach, Kelly was **only** interested in finishing the work quickly. (WEEd-6)

In the extract (81), giving the minimum amount of items to be used through *at least*, the author is clear on his/her explanation and increases the rate of reliability of the proposition in the sentence. Similarly, in (82), *at least* denotes that the author is not sure of that the participants will learn new words; however, he is certain of that they will recognize many words. *Even* in the extract (83) is another mirative item which codes the author's surprise to the proposition. According to the author of this extract, the support that advanced learners need in their writing is surprising. In (84), the author underlines the students' tendency to assign value to learning a language. The use of *even* supports this claim. It adds that, in addition to the students for whom learning a language is

important, also the students who are reckless while learning a language show respect to the idea of learning another language. In the extract (85), the author uses *only* to distinguish the volunteers as the intended group. As in *at least*, both *even* and *only* contribute to increase the writer/speaker attainment in the text. In (86), the author underlines both Zach and Kelly do while working together. We, as readers, know that they do not do anything further except caring about the speed of task completion and finishing the work quickly.

(87) The first category of challenges, the position of English conversation classes in the university were evident in the data **but** not many of the issues were recognised by the teachers as being a barrier to the success of their programs. (WEd-17)

(88)...a link was found between grammar proficiency and the amount of time spent interacting with the course materials, **but** not with the instructor or other students. (NSEd-1)

(89) Their low performance in inferencing was proved by their quite low scores on the items examining those skills in the pretest. **However**, after receiving the strategy instruction, the students were expected to exhibit remarkable improvement in the skills and strategies mentioned in the hypotheses. (NSTd-27)

(90)...students have been mainly receptors while the teacher has been the dominant producer of communication when teaching and learning via the traditional teaching method. Students have been barely communicating with each other and with their teacher, which made even hard for them to have influence on each other, acquire knowledge or understanding, or even arrive at decisions. **However**, the findings have shown that teaching via TBLT involved most of these roles of good classroom communication as part of the students'. For example, students who have been working in groups have shown a high level of gaining affinity, as they have been very comfortable communicating with each other and with their teacher. (WEd-2)

(91) In conclusion, **even** in the absence of strong evidence to support the Unaccusative Trap Hypothesis, the findings of the present study

nevertheless demonstrate the utility of neurocognitive approaches for the investigation of processes involved in second language acquisition. (NSEd-30)

(92)...an independent samples t-test was applied to the results of the PSTs' opinionnaire, based on attendees and non-attendees of the MTP, and once again no statistically significant findings were discovered. It was therefore not possible to reach any firm conclusions from the quantitative aspects of this part of the study. There are, **nevertheless**, a few observations which can be made with reference to the statistical findings. (NSTd-20)

All of the three markers in the extracts (87-92) have almost the same meaning, which implies a conflict with what was declared before. For example, in (87), there are some issues which cannot be recognized although they are evident in the data. The words *evident* and *not recognized* are wholly contradictory. Also, it is surprising for the reader to learn that something evident cannot be recognized. In (88), *but* strictly denotes that there is no link between the instructor or other students and grammar proficiency. Similarly, in the extract (89), a surprising expectation about transformation of low performance on the pretest to a remarkable improvement after an instruction process appears through *however*. In (90), two pieces of contradictory information exist. The function of *however* is to distinguish traditional teaching method from TBLT in terms of the students' classroom communication. The extract (91) contains both *even* and *nevertheless* as mirative markers. The author conveys two different surprising facts. The first one is that strong evidence about the hypothesis lacks. The marker *even* contributes to convey this meaning. The second surprising fact occurs through *nevertheless*. It helps to denote that findings at the end show the involvement of neurocognitive approaches into the investigation process. In (92), despite of the absence of statistically significant findings, availability of a few observations based on the statistical results is surprising enough.

As for the statistical analysis, it can be suggested that neither of the non-native databases shows native-like features with regard to the use of markers of matching knowledge against expectations. Furthermore, it is indicated that the non-native authors seem to be very much alike with regard to their use of these markers. In each of the three databases, the use of expectation markers is highly frequent. Chafe (1986)

underlines that there is a process in which the knowledge of the speaker/writer is matched with his/her own or someone else's expectations. Therefore, these expectation markers have both functional and semantical contributions to the text. These markers function as transitions which connect one idea in the text to another. For example, *in fact* and *actually* function as additive transitions. They add additional knowledge to the proposition. On the other hand, semantically, they add mirativity to the proposition as in (77-80). Furthermore, while *of course* and *nevertheless* imply the concession of the author, *but* and *however* underline the conflict between the ideas. Shortly, each of them helps the author smoothly make transitions between e.g. conflicting, overlapping, surprising ideas in the text. It can be assumed that, in the discussion parts of the dissertations, the authors would frequently use these transitions because they discuss the potential effects of some above-mentioned conflicting, overlapping or surprising ideas. In the absence of these items, both the quality of the text declines and the arrangement of the ideas gets difficult.

According to Berlin and Prieto-Mendoza (2014), each of these expectation markers boosts the reliability of the author in the text (p. 392). This means that authors increase the rate of their reliability in the text through these markers. Thus, increasing the credibility of their ideas, they would help the author leave a positive impression on the reader.

4.11. Results Devoted to the Rate of Reliability

In the present study, regardless of the academic writing conventions and based on the semantical analysis of the markers in the taxonomy, in order to determine the database which conveys low/high degree of commitment to the validity of the proposition in the text, first, the evidential markers in each of the three databases are classified with regard to Chafe's instruction (1986) as in the following way. The left side of the marker > consists of the evidential markers signaling a high degree of reliability; in other words, more valid knowledge; the right side of the marker consists of the markers with a low degree of reliability, in another saying, less valid knowledge.

Markers of Belief

I know > I think, I guess, I suppose, I suspect

Markers of Induction

Must, obvious, must be, must have, so, consequently > seem, seems to, evidently

Markers of Sensory Evidence

I see, I hear, I feel, It tastes > looks like, sounds like, feels like, smells like

Markers of Hearsay

People say, they say, I've been told, X told me, X said > it seems that, supposed to, apparently

Markers of Deduction

Should, presumably > can, could, would

According to this classification, the use of evidential markers denoting a low degree of reliability is almost the same with 6.3 and 6.1 normalized occurrences in the NSEd and the NSTd, respectively. The score drops down to 5 occurrences in the WEd. As for the evidential markers denoting a high degree of reliability, the NSEd and the WEd are equal to each other with 0.3 occurrences. However, the NSTd outnumbered the rest of the two databases with 0.6 occurrences of the evidential markers indicating a high degree of reliability.

Table 4.36 demonstrates the frequency distribution of the evidential markers denoting a low/high degree of reliability.

Table 4.36 *Frequency Distribution of Evidential Markers with Low/High Degree of Reliability*

	NSEd Raw Frequency/Per 1000 words	NSTd Raw Frequency/Per 1000 words	WEd Raw Frequency/Per 1000 words
Low Degree of Reliability	1179/6,3	971/6,1	1467/5,0
High Degree of Reliability	63/0,3	90/0,6	75/0,3

It can be inferred that the evidential markers indicating a low degree of reliability are more frequent than the ones signaling a high degree of reliability in each of the three databases. The NSEd comes first with regard to the use of evidential markers downgraded with regard to the rate of reliability. However, these findings are not enough to come to a conclusion that the authors in the NSEd have a tendency to lower their commitment to the proposition with regard to the use of evidential markers. The ratio of the evidential markers with a low degree of reliability to the ones with a high degree of reliability is the biggest in the NSEd. Based on the findings of the ratio between the evidential markers indicating a low/high degree of reliability, it may be concluded that the authors in the NSEd have a tendency to downgrade the rate of reliability in the text and their commitment to the proposition with regard to the use of evidentiality. On the other hand, since the above-mentioned ratio is the smallest in the NSTd, it can be inferred that the authors in the NSTd are more prone to increase the rate of reliability in the text and to show a high degree of commitment to the proposition.

In addition to the classification of the evidential markers with low/high reliability, the epistemic devices in Table 3.1 in Section 3.1, that is to say, markers of reliability, matching knowledge against verbal resources, matching knowledge against expectations, are classified according to their meaning in the context into two as the epistemic markers denoting high degree of reliability and the ones denoting low degree of reliability.

Contrary to the tendency to use of evidential markers indicating indirect evidence, and accordingly, a low degree of reliability, each of the three databases shows a tendency to use of the epistemic devices denoting a high degree of reliability, which correlates with the high degree of speaker/writer commitment. Table 4.37 demonstrates the distribution of the epistemic markers with a low/high degree of reliability.

Table 4.37 *Frequency Distribution of Epistemic Markers with Low/High Degree of Reliability*

	NSEd Raw Frequency/Per 1000 words	NSTd Raw Frequency/Per 1000 words	WEd Raw Frequency/Per 1000 words
Low Degree of Reliability	863/4,6	652/4,1	914/3,1
High Degree of Reliability	1271/6,8	884/5,5	1474/5,0

As shown in Table 4.37, the epistemic markers increasing the rate of reliability on the propositions outnumber those downgrading the rate of reliability in each of the three databases. The ratio of the epistemic markers with a high degree of reliability to the ones with a low degree of reliability is the biggest in the WEd. Based on the findings of the ratio between the epistemic markers indicating a low/high degree of reliability, it may be inferred that the authors in the WEd are more prone to convey an advanced level of commitment to the validity of the proposition in the text with regard to the use of the epistemic markers. On the other hand, since the above-mentioned ratio is the smallest in the NSTd, it may be concluded that the authors in the NSTd show a lack of commitment to the validity of the proposition in the text with regard to the use of the epistemic markers.

Last, as for the overall analysis with the inclusion of both the evidential and the epistemic markers, it can be inferred that the overall outcome is totally in tune with the one in the epistemic markers. Table 4.38 shows the distribution of the overall analysis with the inclusion of both the evidential and the epistemic markers with a low/high degree of reliability.

Table 4.38 *Frequency Distribution of both Evidential and Epistemic Markers with Low/High Degree of Reliability*

	NSEd Raw Frequency/Per 1000 words	NSTd Raw Frequency/Per 1000 words	WEd Raw Frequency/Per 1000 words
Low Degree of Reliability	2042/10,9	1623/10,1	2381/8,1

High Degree of Reliability	1334/7,1	974/6,1	1549/5,3
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As shown in Table 4.38, the use of the evidential and the epistemic markers signaling a low degree of reliability is more frequent than those referring high degree of reliability. On the one hand, according to the ratio of the markers with low degree of reliability to the ones with a high degree of reliability, it may be concluded that the NSTd, in which the ratio of the markers with low degree of reliability to those with a high degree of reliability is the biggest, conveys a low degree of speaker commitment to the validity of the proposition in the text with regard to the use of both the evidential and the epistemic markers; in other words, with regard to all of the items available in the taxonomy. On the other hand, it can be inferred from the smallest ratio of the markers with low degree of reliability to those with a high degree of reliability that a high degree of speaker commitment to the validity of the proposition is available in the WEd with regard to the use of both the evidential and the epistemic markers.

4.11.1. Discussion of the results devoted to the rate of reliability

Academic writing is a means for the extension of knowledge from authors to audience. The source of this knowledge or how the authors attain this knowledge is both directly the scope of evidentiality and implicitly the key concern of the epistemic modality. de Haan (1999) underlines that “epistemic modality evaluates evidence and on the basis of this evaluation assigns a confidence measure to the speaker’s utterance. This utterance can be high, diminished, or low (p. 85)”. To what extent an author’s argument is evaluated as confident by the readers is germane to the evidence and its effect on the reader. As stated in de Haan (1999), the most frequently used types in the present data, markers of reliability, deduction and matching knowledge against expectations, represent the authors’ varying degree of commitment to the proposition and cause a different level of confidence on the audience. Similar to de Haan (1999), Chafe (1986) mentions that “knowledge may be regarded by a speaker (or writer) as more or less RELIABLE (or valid) (p. 262)”. According to him, evidential markers qualify the status of the information. Writers or speakers attribute a degree of reliability to their written or spoken outputs through markers of evidentiality (pp. 262-263). In addition, Chafe’s (1986) own words “mode of knowing implies something about

reliability, but not vice versa” implies that types of evidence consist of both the source of knowledge and the knowledge about to what extent the proposition is reliable. However, reliability markers do not inform the hearer/reader about the source of knowledge, that is to say, about evidentiality (p. 266). On the basis of these arguments, all of the markers in Table 3.1 in Section 3.1 inform us about to what extent the speaker/writer is reliable. For example, ‘I think’ is a marker of belief. It both gives information about the source of knowledge and alleviates the commitment of the writer. It functions as a device downgrading the reliability in the proposition. Furthermore, although both of them are markers of induction, ‘must’ and ‘seem’ do not have the same impression on the reader. The following excerpt from Matsui and Miura (2009) supports the integrity of evidentiality with epistemicity.

“English verbs such as *think* and *know*; adverbs such as *certainly*, *definitely*, *maybe*, and *perhaps*; and modal verbs such as *must* and *may* are among the many linguistic expressions indicating the speaker’s degree of certainty about, or commitment to, the truthfulness of the informational content of the utterance (p. 65)”.

Based on the data about the rate of reliability each of the three databases possesses, some predictions would be suggested.

First, according to the data on the evidential markers, one can assume that there is a consensus among the three databases about the use of evidentiality for toning the proposition down in the text. In other words, it can be said that a vast majority of the evidential markers in each of the three databases are used to lower the speaker/writer commitment to the truth of the proposition. Furthermore, one can allege that the source of the information the authors possess is mostly indirect. Namely, the data in the present study, the discussion parts of the dissertations, is written as a result of indirect evidence. What is written in the discussion parts is not based on the authors’ direct experience; instead, it is written based on the authors’ deduction, inference, etc. A report written based on the authors’ observation and his/her active participation would consist of more direct evidence and be more reliable.

Second, apart from the evidential markers, as for the epistemic markers, it can be alleged that the authors use them both for increasing and decreasing their commitment to the truth of the proposition in the text. However, these markers are mostly used to heighten the reliability of the text. At this point, the results for evidential markers and for epistemic markers coincide with one another. The authors have indirect source of

knowledge about what is written in the text. They have indirect evidence for what they have written; consequently, they have a tendency to write with a low degree of speaker commitment to the validity of the proposition. However, in addition to the epistemic markers downgrading the reliability, they have a tendency to make a very frequent use of the ones rising the credibility of the text. In spite of the lack of direct evidence and direct involvement to the issues, the authors' tendency to make an effort to increase the reliability of the text is confusing and seems artificial and unrealistic. This controversy would be a starting point for future research.

Third, as for the analysis of both evidentiality and epistemic modality together, it can be assumed that the use of these markers decreases the reliability of the information in the text. In general, it is inferred that the use of the items in the taxonomy in Table 3.1, also provided in Appendix B, lowers the trustworthiness of what is written in the text.

CHAPTER V

5. CONCLUSION AND PEDAGOGICAL IMPLICATIONS

This chapter consists of a summary of the study and the conclusion reached through the interpretation of the findings, and the pedagogical implications for language education, and the suggestions for further research.

5.1. Summary of the Study

The purpose of the present study is to investigate the use of evidentiality in the English dissertations written by the native and the non-native authors. Three different databases, the Native Speakers of English, the Native Speakers of Turkish and the World English, are formed of 89 dissertations selected through one of the non-probability sampling technique, purposive sampling. Each of the three databases consists of ‘discussion’ or ‘discussion and conclusion’ chapters of the dissertations. Throughout the study, in accordance with Contrastive Interlanguage Analysis (CIA) (Granger 1996, 1998) as the method of the present research, both the Native Language and Interlanguage (NL/IL) and the Interlanguage and Interlanguage (IL/IL) comparisons are made. The items underlined as the evidential markers in Chafe (1986) are integrated with the items compiled from the literature in Ifantidou (2001) to determine whether they function as evidential marker or not in the present data. Each of the markers is analyzed through AntConc 3.4.4. Software to identify each of them in its context. Both the raw frequencies and the normalized occurrences of the evidential markers are calculated in each of the three databases. In order to compare these three databases with regard to the use of evidentiality, the Log-likelihood calculator (Rayson & Garside, 2000) is used to determine whether the difference among the databases is meaningful or not.

Table 4.39 summarizes the whole Log-likelihood test results for the overall use of evidentiality and for the eight different types among the three databases. In each of the comparisons, the cut-off value for the Log-likelihood test is accepted as 15.13 critical value and above. The margin of error in each of these Log-likelihood calculations is 0.01%. Put it differently, the data obtained from the Log-likelihood calculations reflects 99.99th% accuracy. P value is accepted as $p < 0.0001$ in each of these Log-likelihood calculations. The numerical values over 15.13 cut-off value are written in bold. These

numerical values written in bold indicate that the differentiations between these databases are statistically meaningful.

Table 5.1 *Summary of the Log-Likelihood Test Results*

Log-Likelihood Test	In Total	Reliability	Belief	Induction	Hearsay	Deduction	Sensory	Verbal	Expectation
NSEd-NSTd	+17.14	+13.99	+4.95	-23.68	+0.05	+2.07	+14.86	-10.29	+17.71
NSEd-WEd	+159.06	+73.41	+1.88	-11.15	+6.10	+48.98	+15.56	+0.17	+54.71
NSTd-WEd	+55.51	+16.24	-1.74	+4.55	+4.45	+25.84	-0.56	+15.79	+5.76

The findings reveal that the use of evidentiality in total in the native database is more frequent than that in the other two non-native databases. As for the non-native databases, the frequency of the use of evidential markers in the NSTd outnumbers that in the WEd. That is, the WEd consists of the least frequent use of evidentiality.

Besides the overall use of evidentiality, markers of reliability, deduction and matching knowledge against expectations come to the forefront with frequent occurrences in each of the three databases. Aside from these frequently-used evidential types, markers of induction, hearsay and sensory evidence hardly ever occur in each of the three databases. Similarly, markers of belief appear a few times in the NSEd and the WEd but never occur in the NSTd.

As for the statistical comparisons, the Log-likelihood calculations reveal that, with regard to the overall use of evidentiality, there is a significant difference among each of the three databases. This means that, as for the NL/IL comparison, the non-native authors do not show native-like features with regard to the use of evidentiality. Similarly, with regard to the IL/IL comparison, the statistical difference between the non-native databases underlines that non-native authors do not resemble each other with regard to their overall use of evidentiality.

With regard to markers of reliability, a partial difference exists among the databases. While there is a statistical difference between the NSEd and the WEd, the NSTd does not differ from the NSEd. It can be concluded that, as for the NL/IL comparison, the authors in the WEd do not show native-like features but those in the NSTd do with regard to the use of markers of reliability. As for the IL/IL comparison, it

is inferred that the non-native authors' use of markers of reliability does not share common features. They significantly differ in use of markers of reliability.

As for the use of markers of belief and hearsay, the three databases do not differ. Each of these databases shows similarity with regard to the use of these evidential types. In other words, both of the non-native databases show native-like features with regard to the use of markers of belief and hearsay; and the non-native databases seem to be very much alike with regard to the use of these evidential markers.

Concerning the use of markers of induction, it can be inferred that the authors in the WEd show native-like features with regard to the use of markers of induction; however, those in the NSTd differ significantly from the authors in the NSEd in terms of the use of these markers. In addition, there is not any significant difference between the non-native databases. That is to say, the non-native authors convey similar use of markers of induction.

Contrary to the use of markers of induction, the authors in the NSTd show similarity with those in the NSEd with regard to the use of markers of deduction; however, the authors in the WEd do not show native-like features. Besides, it is inferred that the non-native authors' use of markers of deduction does not seem to be very much alike. These authors do not share common features in the use of these markers.

As for markers of sensory evidence, it can be concluded from the analyses that the authors in the WEd do not share similarity with the authors in the NSEd but the NST authors do. In terms of the IL/IL comparison, it can be inferred that the non-native authors show similar features in the use of markers of sensory evidence.

Last, a conclusion can be drawn from the analyses that the use of markers of matching knowledge against verbal resources and matching knowledge against expectations consists of differing results. As for the NL/IL comparison, both of the two non-native databases resemble the NSEd with regard to the use of markers of matching knowledge against verbal resources; however, they differ from the native authors with regard to the use of markers of matching knowledge against expectations. Similarly, as for the IL/IL comparison, while the authors in the non-native databases do not seem to be very much alike in terms of the use of markers of matching knowledge against verbal resources, they share common features with regard to the use of markers of matching knowledge against expectations.

In terms of the contribution of these markers to the rate of reliability in the text, among the three groups, while the native speakers of Turkish show high level of speaker commitment to the validity of the proposition in the text, the native speakers of English have a tendency to lower their commitment to the proposition as for the frequency analysis of evidential markers. On the contrary, as for the frequency analysis of epistemic markers, while the authors in the NSTd tend to lower their commitment to the validity of the proposition, the ones in the WEd have a tendency to convey an advanced level of speaker commitment to the validity of the proposition. Last, as for the inclusion of both the evidential and epistemic markers, the result is as the same as that in the frequency analysis of epistemic markers. In other words, the speaker commitment to the validity of the proposition in the NSTd is much lower than that in the WEd which conveys an advanced level of speaker commitment to the validity of the proposition.

5.2. Conclusion

The results of the present study show that there are similarities in the use of evidentiality in three groups of data. It can be inferred that there is a unity in teaching academic writing and employing academic writing conventions in the world.

First of all, all groups show low speaker commitment with regard to the use of markers of reliability, almost three quarters of which are comprised of *may* and *might* in each database. The authors tend to conjecture on their findings as a strategy in the discussion in academic writing. Similarly, in spite of the low use in number, each of the markers of matching knowledge against verbal resources lowers the speaker commitment in the text.

Second, along with the limited use of markers of induction in each database, the authors in each database avoid showing high speaker commitment by not using markers such as *must*, *obvious*, etc. For example, *must* is used only 3 times by native speakers of English and Turkish, which is a negligible amount. However, low commitment markers such as *seem to* and *seem* are higher in number in all three groups. It can be inferred that the authors tend to lower their commitment to the truth value of the proposition.

Third, with regard to the use of markers of deduction, similar to the use of markers of induction, the authors avoid adopting assertive language by not using *should* and *presumably*. Oxford English Dictionary Online defines *presumably* as “used to convey that what is asserted is very likely though not known for certain”. (http-2). Thus,

presumably is an adverb that marks high commitment on the part of the author and is avoided in their academic texts. In each database, the authors tend to use deduction markers such as *can*, *could* and *would* which mark low speaker commitment to what is being said.

Some possible explanations can be given for the authors' tendency to use markers denoting a low degree of reliability and to convey a low degree of commitment to the validity of the proposition. The data of the present study consists of dissertation discussions reflecting the conventions of academic writing (Hyland, 2005; Hyland, 2011; among others), although there may be differences in academic writing conventions (Duszak, 1997). Academic texts provide ideas that are falsifiable by the very nature of scientific research. According to Meyer (1997), the stronger the commitment of the author is, the easier it is to falsify the claims made by the author. Less commitment makes propositions in academic texts more difficult to rebut the ideas presented. According to Meyer (1997, p. 21), paradoxically, less commitment in academic texts makes the claims stronger due to their resistance to refutability. After all, academic texts are structured for persuading their readers by providing convincing ideas. Less commitment of the author may, for these reasons, can have a more persuasive effect.

Furthermore, in line with these conventions of academic writing, the authors discuss the results, associate them with theories and facts, make deduction based on logical reasoning, list potential reasons and conclusions, etc. Throughout this process, academic writing requires the authors to prefer to use tentative language rather than assertive one. Analyses of the present data indicate that the authors mostly have indirect evidence; but rather inferences, deductions, conjecturing, producing suggestions based on observed facts, consequently, their rate of reliability in the text is low. However, this would be due to the social communication between the authors and readers. The authors may abstain from using assertive language to keep the peace with the audience.

Vassileva (1997) emphasizes that “hedging reflects the relation between the writer and the reader, not between the writer and the proposition (or the degree of possibility/probability of the statement) (p. 205)”. She refers to the function of hedging markers instead of what they denote in the text. In the light of her explanation, in the present study, the authors avoid high speaker commitment by using tentative language in their discussion to preserve their relationship with the audience. The use of assertive

language may give offence to audience and let them think as if they were obliged to be in agreement with the authors. As Hyland (1998) suggests, firm assertions may turn into face threatening acts which have a potential for putting the social interaction between authors and readers into jeopardy (p. 350). To prevent a possible disharmony in interaction, the authors tend to avoid sounding like an impolite person and do not cause annoyance on the part of the reader by not boosting the tone of their statement.

Hyland (1998) underlines that “academics gain acceptance for their research claims by balancing conviction with caution, either investing statements with the confidence of reliable knowledge, or with tentativeness to reflect uncertainty or appropriate social interactions (p. 349)”. According to him, hedges and boosters not only convey the rate of reliability the authors possess but also reflect the stance they maintain against the audience (p. 350). Similarly, Gao (2012) suggests that the use of these markers shows “how writers position themselves, what kind of relation they wish to construct by using certain discourse markers, what kind of tone they prefer to set and what type of discourse community they would like to construct with their own effort (p. 360)”. These markers function in the context in a way that regulates the interaction between authors and audience. As Hyland and Milton (1997) suggest, the use of tentative language helps authors to “open discussion (p. 185)”. That is to say, by mitigating the strength in their propositions, authors create a tactful atmosphere which provides audience with an opportunity to include in discussions and express an opinion on the issue. Kreutz and Harres (1997) explain the use of hedges as “the need for interaction, the inclusion of the reader in the process of reading and writing (p. 184)”. According to them, “this type of discourse is, to some extent, more collaborative (p. 184)”. In academic field, especially in scientific journals, ‘letter to the editor’ and ‘reply to the author’ are the product of interpersonal communication for which tentative language paves the way. In the contrary case, boosting the propositions or using firm assertions cause audience to presume the author adopts an arrogant attitude towards them, which both includes one-way transmission of knowledge and eliminates the chance of exchange of views between the author and audience.

Fourth, apart from the above mentioned types, the use of markers of belief, hearsay and sensory evidence is very low in number. It can be said that the use of markers of belief does not show parallelism with the nature of academic writing. Evidence forms the basis of academic writing; and according to Chafe (1986), the

source of the knowledge “for belief is problematic (p. 263)”. This kind of knowledge does not persuade the reader of the validity of the text. Similarly, the use of markers of hearsay is very low in number in each database. Hearsay evidence means that the speaker attains the knowledge through the third party or someone else, which lessens the rate of reliability of the author. Also, the use of markers of sensory evidence is very low in number in each database. If the data of the present study was formed of result sections, these sensory markers would be very high in number in each database; however, the discussion sections form the data of the present study. The authors have to discuss some potential reasons for the findings in discussion sections instead of sharing the findings. For example, in result sections, the use of ‘I see’ is very natural and possible if the researcher has seen something while collecting data. However, s/he has to list some potential reasons for what is seen in data collection.

Additionally, the study consists of markers of matching knowledge against expectations. Chafe (1986) underlines that there is a matching process for the speakers’ knowledge with their own or someone else’s expectations. These markers serve both functionally and semantically. In order to connect differing ideas in the text, they function as transition markers. For example, *in fact* and *actually* serve in the text both as additive transitions and mirativity markers, which mark newly obtained and contrary-to-the-expectation information. In addition, while *however* shows concession, *of course* marks information that is expected. Thus, in the discussion sections, it is common to use these transition markers to organize the flow of ideas. Also, according to Berlin and Prieto-Mendoza (2014), these markers function as boosters in the text (p. 392). It can be said that they heighten the speaker commitment.

It can be argued that the present research may both shed some light on the importance of evidentiality in academic writing and contribute to the relevant literature in some ways.

Native/non-native and non-native/non-native distinctions in the use of evidentiality also set light to the agreement or disagreement in its use in academic writing in the world. Furthermore, these comparisons help the audience to see whether the non-native authors show different tendencies compared to the native authors in the use of evidentiality. Also, the data of the two different non-native groups reflects on us the use of evidentiality in the rest of the world where English is not the official language.

The literature on the lexical evidentiality compared to grammatical evidentiality lacks in number. The present study is about the lexical evidentiality in English, a language which codes the source of the knowledge through lexical items. Therefore, the present study contributes to the studies with the lexical evidential languages. The results of the present study as additional data make a contribution to the field with regard to the interpretation of the available knowledge about these languages.

As for its difference from the rest in the literature, although the literature consists of the analysis of the academic texts with regard to the use of evidentiality, the analysis of dissertation as a genre of academic writing is a novelty in the type of the data. Almost all of the academic texts analyzed are research articles. Even though dissertations are similar to these academic texts, they differ from research articles in terms of the scope of the content. Dissertations provide more data, and the authors do not encounter with the restrictions on length or word count of their texts, as in scientific journals, so that they do not feel themselves under pressure to fit their ideas in a predetermined template in the writing process.

As for its methodology and results, the present study also differs itself from the relevant studies. Even though the literature consists of the native and non-native comparison with regard to the use of evidentiality (Koutsantoni, 2005; Yang, 2012), it lacks the comparison of non-native speakers. The present study makes a comparison between both native/non-native speakers and non-native/non-native speakers by applying Contrastive Interlanguage Analysis (Granger, 1996, 1998).

Furthermore, the present study analyzes whether the databases convey an equally high/low degree of speaker commitment to the validity of the proposition in the text. Instead of just analyzing the use of evidentiality and determining what kind of evidential markers appear in the data, the present study takes it a step further by claiming that the authors in the X, Y or Z group make use of epistemic modality to reflect a higher or lower commitment towards the propositional content on the part of the writer, and that they convey the source of the information to the audience by using evidential markers which leave an impression on the audience that the knowledge conveyed to the reader is directly or indirectly attained. At the end, the study shows that the authors in the NSEd or NSTd or WEd tend to convey a high/low degree of speaker commitment to the validity of the proposition. Namely, the present study shares more than the frequency of use of evidentiality and its types or markers.

5.3. Pedagogical Implications

The studies based on naturally-occurring data in general and the present study in particular “are based on empirical evidence, thus leading to the elaboration of better quality learner input and providing teachers and researchers with a wider, finer perspective into language in use, that is, into the understanding of how language works in specific contexts (Campoy-Cubillo, Bellés-Fortuño, Gea-Valor, 2010, p. 3)”. These studies are beneficial to get first-hand knowledge about some variables, e.g. actual language use of various participators as novice or expert, spoken and written forms of languages, a variety of genres, non-nativeness of participators, even the historical development of languages, etc. They consist of so much more than word frequency or text compilation. In this context, the present study provides English Language Teaching (ELT) field with potential effects of the two variables, e.g. the non-nativeness of the learner language and the L1 background as a variety of the same language (Granger 1996, 1998), on academic writing, on dissertations in particular.

The non-nativeness of a learner language is important for the ELT field because of ultimate attainment; in other words, “variable success in second language acquisition (Birdsong 1992, p. 706)” is highly in demand among academics. The investigation of the partial issue of the present study, to what extent the non-native learners show native-like features in the use of evidentiality in academic writing, presents an overall analysis of the divergence between the native and the non-native usages devoted to evidentiality. The present results are useful to see tendencies in the use of evidentiality in academic writing both on the part of the native and the non-native speakers. For example, almost any use of markers of belief by the native speakers of English compared to any use of them by the native speakers of Turkish demonstrates that the NST authors are more strict in the use of these evidentials. Although this type of evidential markers is against the nature of academic writing, hardly any use of them by the NSE authors signals to the difference in the teaching of academic writing. Furthermore, the parallelism in the frequent use of markers of deduction and in the scarce use of markers of hearsay by both the native and the non-native authors refers to the unity in the teaching of academic writing.

Another partial issue of the present study refers to whether potential similarities and differences are available in non-native authors’ use of evidentiality. It serves for revealing potential discrepancy or uniformity among World English. The effect of L1

on the language teaching is a subject for not only Contrastive Analysis (Lado, 1957) but also Contrastive Interlanguage Analysis. (Granger, 1996, 1998). While the former links potential difficulty in language learning with differences between L1 and the target language; or potential ease with similarities between them, the latter investigates the L1 background as a kind of variety of the same language. Different L1 background as a kind of variety in the present study demonstrates the tendency the non-native authors show in the use of evidentiality in academic writing. The comparison of the non-native databases with each other not only reveals the differences and similarities on the use of evidentiality by the non-native speakers of English but also being the source of the information to make a further Contrastive Analysis to account for potential effects of L1/TL similarities and differences on the use of evidentiality.

The integration of the actual data content instead of invented instances in such studies into instructional materials for ESP courses “ensures that an accurate representation of actual use is presented to the learner”. However, in the contrary situation, that is to say, in use of invented instances in instructional materials, “there is always a danger that learners will be presented with a distorted picture of actual use (Flowerdew 2001, pp. 82-83)”. In this respect, the content of the present data as the instructional material is suitable for using in teaching academic writing as a reflection of the actual language. Authentic material use instead of fabricated supplies provides the learner with both interesting and outcome-oriented contents.

Furthermore, the findings may have implications for teachers of academic writing and provide suggestions on the aspects of evidentiality to be focused in classrooms, especially for novice writers of academic genre. It may also have some implications for those who are involved in academic publishing, i.e. editors and peer-reviewers.

5.4. Implications for Further Research

A couple of suggestions can be offered for further research as to the present issue.

First, the present research consists of the analyses of the written academic discourse, dissertations in particular. Further research could be planned to investigate the same issue on the spoken academic discourse and/or research articles by Turkish authors. In addition, research articles written in Turkish can be compared with those written in English by native speakers and Turkish speaker authors.

Second, the classification of different academic divisions under hard/soft science fields could provide in-depth results devoted to academic discourse about the present issue.

Third, although past research mostly consists of analysis of separate genre as data (e.g. newspaper reportages (Bednarek, 2006 in English); newspaper corpora (Clark, 2010 in English); newspaper article (Sbisa, 2014 in English); newspaper reports (Hsieh, 2008 in Chinese); research articles (Fetzer, 2014 in English; Koutsantoni, 2005 in English and Greek; Yang, 2012 in English by Chinese and NSE authors; Yang, 2013; Yang, 2014); political quarrels (Berlin&Prieto-Mendoza, 2014 in English), comparison of different genres or language forms (e.g. Chafe, 1986) lack in number. Comparison of different genres or language forms as data could enable the researchers both to achieve various use of evidentiality in different genres and language forms and to get a chance to experience the specific use of evidentiality peculiar to these genres.

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http-1:<http://ucrel.lancs.ac.uk/llwizard.html>

http-2:<https://en.oxforddictionaries.com/definition/presumably>

APPENDICES

APPENDIX A- L1 Confirming E-Mails from Some of the Authors

This screenshot shows a Yahoo! Mail interface. The browser address bar displays the URL <https://mg.mail.yahoo.com/d/folders/1/messages/875>. The page header includes the Yahoo! Mail logo, a search bar with the text "Find messages, documents, photos or people", and the user's name "Mustafa". The left sidebar contains navigation options: Compose, Inbox (with sub-items Unread, Starred, Drafts (76), Sent, More), Views, Photos, Documents, Tutorials, Folders, and a "Give feedback" button. The main content area shows an email from Larisa A Olesova, dated Sep 6, 2016 at 4:34 PM. The email text reads: "Hi Mustafa", "Thanks for sending this email to remind about your request. Thanks for your interest in including my data to your research as well.", "I have two mother tongues. My first L1 is Yakut or Sakha which is Turkish origin. My second L1 is Russian, the language of the country where I am from.", "Let me know if you need more data and I would be happy to help,", "Larisa", and "Larisa Olesova, PhD. Sr. Instructional Designer, Office of Digital Learning, Home of Mason Online, 433 Innovation Hall, MSN: 1F3, 703-993-4177, Faculty Web: odl.nmu.edu".

This screenshot shows a Yahoo! Mail interface. The browser address bar displays the URL <https://mg.mail.yahoo.com/d/folders/1/messages/870>. The page header includes the Yahoo! Mail logo, a search bar with the text "Find messages, documents, photos or people", and the user's name "Mustafa". The left sidebar contains navigation options: Compose, Inbox (with sub-items Unread, Starred, Drafts (76), Sent, More), Views, Photos, Documents, Tutorials, Folders, and a "Give feedback" button. The main content area shows a thread of emails. The top email is from Mustafa YILDIZ, dated Aug 11, 2016 at 1:28 PM, with the subject "your L1 or mother tongue". The email text reads: "Dear Dr. Sidek, I am Mustafa from Turkey and a Phd Candidate in the field of English Language Teaching at Anadolu Universit". Below it is an email from Harison Mohd Sidek, dated Aug 16, 2016 at 6:32 AM, with the subject "your L1 or mother tongue". The email text reads: "My native language is Bahasa Melayu or also known as Malay. You can search about the language online. -----Original Message----- From: Mustafa YILDIZ <myildiz55@yahoo.com> To: 'harison@usim.edu.my' <harison@usim.edu.my> Date: Thu, 11 Aug 2016 10:28:08 +0000 (UTC) Subject: your L1 or mother tongue", "> Dear Dr. Sidek", "> I am Mustafa from Turkey and a Phd Candidate in the field of English", "> Language Teaching at Anadolu University. I am conducting a research on", "> evidential marker use of PhD dissertation authors. I would like to use", "> your dissertation as a part of my data compiled with the addition of", "> about 90 PhD dissertations. I need some background information about", "> the authors, especially about their first language (L1). Could you", "> please inform me about your L1? Thanks in advance. Best", "> regards. Mustafa".

myildiz55@yahoo.com - X
https://mg.mail.yahoo.com/d/folders/1/messages/866

YAHOO! MAIL Find messages, documents, photos or people Mustafa Home

Compose

Inbox Unread Starred Drafts 76 Sent More Views Hide Photos Documents Tutorials Folders Hide + New Folder unicef Give feedback

Back Archive Move Delete Spam

Dr. Sultan Almuhaimeed <dr.salmuhaimeed@gmail.com> To: Mustafa YILDIZ Aug 13, 2016 at 11:33 PM

Dr. Mustafa
Hello,
My L1 is Arabic. You can find more about my dissertation on the following:

My study is published on this journal.
<http://journal.wima.ac.id/index.php/BW/article/view/741>

You can also find more about the author on this link
<http://journal.wima.ac.id/index.php/BW/issue/view/105>

Good luck,

Sultan

On Wednesday, August 10, 2016, Mustafa YILDIZ <myildiz55@yahoo.com> wrote:
> Show original message

Reply, Reply All or Forward

myildiz55@yahoo.com - X
https://mg.mail.yahoo.com/d/folders/1/messages/876

YAHOO! MAIL Find messages, documents, photos or people Mustafa Home

Compose

Inbox Unread Starred Drafts 76 Sent More Views Hide Photos Documents Tutorials Folders Hide + New Folder unicef Give feedback

Back Archive Move Delete Spam

Maja Grgurovic <maja@uic.edu> To: Mustafa YILDIZ Aug 12, 2016 at 7:48 PM

Hi Mustafa,
My first language is Serbian.
Good luck with your project!
Dr. Grgurovic
> Show original message

--
Maja Grgurovic
Clinical Assistant Professor
Clinical Director, MA TESOL Program
Department of Linguistics
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Mustafa YILDIZ Dear Dr. Chatpunnarangsee, I am Mustafa from Turkey and a Phd Candidate in the field of English Language Teaching at Ana Aug 11, 2016 at 2:24 PM

Kwanjira C <kwanjira@tu.ac.th> To: Mustafa YILDIZ Aug 12, 2016 at 5:09 AM

It's Thai.
Where did you find my dissertation? Your research sounds interesting.
Kwanjira

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Helena Roquet Pugès <hroquet@uic.es> To: Mustafa YILDIZ Aug 11, 2016 at 6:25 PM

Dear Mustafa,
My L1 is Catalan.
Good luck with your dissertation.
Best,
Helena

El dijous, 11 d'agost de 2016, Mustafa YILDIZ <myildiz55@yahoo.com> va escriure:
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ABU BAKAR BIN MOHAMED RAZALI / EDUC <mr_bakar@upmedu.my> Aug 11, 2016 at 5:16 PM
To: Mustafa YILDIZ

Hello Mustafa,

My first language is Malay language. I only speak two languages, Malay language and English language.

Abu Bakar Razali (PhD)
Senior Lecturer
Department of Language and Humanities Education
Faculty of Educational Studies
Universiti Putra Malaysia (UPM)
Serdang, Selangor, Malaysia

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Ulugbek Nurmukhamedov <unurmuk2@illinois.edu> Aug 11, 2016 at 2:37 PM
To: Mustafa YILDIZ

Dear Mustafa:

Thanks for your email. Your dissertation topic sounds very interesting. My L1 is UZBEK. I grew up speaking this language and still this is the major language I use when I talk to my immediate and extended family members.

Good luck with your study!
Ulugbek

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--
[Ulugbek Nurmukhamedov \(PhD\), Lecturer, Department of Linguistics, University of Illinois at Urbana-Champaign: Homepage/Research Projects](#)

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Linus Salö <linus.salo@biling.su.se>
To: Mustafa YILDIZ

Sep 5, 2016 at 5:52 PM

Hj,

My L1 is Swedish.

Best
Linus

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APPENDIX B- Chafe's Taxonomy (1986) revised by taking Ifantidou's (2001) suggestions

Markers of Reliability	Markers of Belief	Markers of Induction	Markers of Hearsay	Markers of Deduction	Markers of Sensory Evidence	Markers of Matching Knowledge against Verbal Resources	Markers of Matching Knowledge against Expectations
Certainly	I think	Must	People say	Should	I see	Kind of	Of course
Undoubtedly	I guess	Obvious	They say	Can	I hear	About	In fact
Surely	I suppose	Seem	I've been told	Could	I feel	Sort of	Actually
By definition	I know	Evidently	X told me	Would	Looks like		At least
Exactly	I suspect	Seems to	X said	Presumably	Sounds like		Even
Invariably		Must be	Supposed to		Feels like		Only
Literally		Must have	Apparently		It tastes		But
Particularly		So	It seems		Smells like		However
Specifically		I deduce	Have been said				Nevertheless
Basically		consequently	I hear				Oddly enough
Essentially			He is said				
Generally			He is reputed				
Primarily			allegedly				
Maybe			reportedly				
Probably			X tells me				
Might							
May							
Possibly							
Perhaps							
In some sense							
Normally							
Virtually							
Obviously							

APPENDIX C- Reference List for the Dissertations forming the Data

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