

**An Evidentiality-Discourse Analysis of Adverbials and Epistemic Modality
in Discussion Sections of Native and Non-Native ELT Papers**

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Abstract

Integrating the triplex notion of evidentiality into its theoretical framework, this study aimed at contrastively scrutinizing the ELT academic papers authored by non-native Iranian and native English researchers in terms of the utilization of evidentiality, focusing on the adverbial and epistemic-modality types. To this end, the discussion sections of 20 online papers were randomly selected from both groups. Then, postulating Ifantidou's model (2001) as its analytical framework, this investigation identified the other evidentiality types in the collected corpora, and then classified them into appropriate subtypes based on the subcategories of the model. Furthermore, the frequency and the rate of evidentials in each group were compared and contrasted to see their rate differences. The findings indicated that the "adverbial" type of evidentiality enjoyed the first-ranked frequency, and the "epistemic modality" was the fourth frequently-used type of evidentiality in both native and non-native ELT papers. The other frequent types of evidentiality in these papers included "inferring," "reported," "memory," and "propositional attitude," respectively, which were not the types this study concentrated on. Finally, it was observed that there were subtle differences in both the degree and the way these authors draw evidentiality in their papers.

Keywords: evidentiality, native, non-native, research paper

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1. Introduction

Reasoning processes in the academic language of ELT research papers are equipped with some crucial functional devices which may illuminate the authors' experience in presenting the source of the given information or claim, especially in the discussion sections of the papers (Chafe, 1986). One of such functional devices is *evidentiality*, which refers to a linguistic device that marks the author's commitment for qualifying the validity of what s/he believes to be true with regard to the proposed information in question (Palmer 1986; Willett 1988). In other words, evidentials are items which show "the kind of justification for a factual claim which is available to the person making that claim" (Anderson, 1986, p. 274). Evidentiality is the expression of the author's source or mode of information. It represents a very complicated issue in linguistics because scholars agree on neither its linguistic nature and status nor how evidentials should be approached at from a methodological standpoint (Almeida, 2012). Evidentiality encodes primarily the type of information source, and secondary the author's certainty either made explicit with a modal expression or determined pragmatically from what is known about that source (Speas, 2008). Originally, Sweetser (1990) observes that evidentiality involves "the metaphorical extension of root-modal meanings," (p. 50) i.e. the tendency to use the pragmatic language of the external world to apply to the internal semantically-oriented mentality on modals, which can be schematized in terms of force and barriers.

In fact, for evidentials to be regarded as 'epistemic modals', one should rely on how the modal base is grammatically and semantically related to classification as a modal. If such dependence on a modal base illuminates that an item is grammatically and semantically a modal, then evidentials seem to be modals pragmatically as well. However, if modals are more narrowly specified as items whose pragmatic interpretation involves quantification over real-world contexts or conditions, then evidentials do not seem to qualify (Speas, 2008, p. 953). Moreover, according to Nuyts (2001), if an author does not have any kind of evidence pertaining to a proposition or a claim, one cannot evaluate its probability pragmatically. In other words, modal pragmatic interpretations are typically made based on some type of evidence, and one can often infer the author's modal judgment from the type of information source indicated grammatically in the research paper (Rooryck, 2001). In terms of the issue of how evidentiality should be approached, there are two main streams, the difference between them being based on a semantic-pragmatic distinction. Some scholars consider evidentiality as a subdomain of epistemic modality, while some others think that evidentiality represents an independent category. Halfway between these two lines of thought, a third emerges that calls for the independent status of both evidential and epistemic categories although this does not mean that a particular form may not render both readings providing a suitable context for interpretation is given. These three approaches are identified as inclusion, disjunction and intersection, in this order (Dendale and Tasmowski 2001).

2. Literature Review

Diverse studies in different fields have assessed academic writing in order to investigate its evidentiality (Kanoksilapatham 2005; Nwogu 1997; Peng 1987; Posteguillo 1999; Swales 1990; Thompson 1993; Wood 1982; among others). All of them coincide in following Swales' (1981, 1990) model of genre-analysis in which the research paper can be divided into different sections, that is, Introduction, Methods, Results, and Discussion. Evidentiality have been investigated extensively in the past three decades under various terms such as epistemic modality, stance, hedge, evaluation, and affect (e.g. Chafe & Nichols, 1986; Conrad & Lukas, 1995; Guentcheva, 1996; Nuyts, 2001; Rooryck, 2001; Speas, 2008; Sumbatova, 1999). Also, evidentiality has been investigated in various meta-discursive settings and materials, such as in ordinary interaction (Schiffrin, 1980), in educational materials (Crismore, 2003), in scientific affairs (Crismore & Farnsworth, 1990), in theses (Bunton, 1999), in some Darwin's books (Crismore & Farnsworth, 1989), in organizational annual accounts (Hyland, 1998b), in introductory textbooks (Hyland, 1999), in undergraduate materials (Hyland, 2000), in slogans and headlines (Fuertes-Olivera *et al.*, 2001), and in academic research and writing (Hyland and Tse, 2004).

Hyland (1999) who studied the utilization of evidentiality in course books and research papers came to the conclusion that there were generally more genre discrepancies than disciplinary differences, and the textbooks had an inclination to show tracks of more disciplinary variety than the research papers. In the same vein, Dahl (2004) investigated two kinds of evidentials, i.e. locational and rhetorical meta-text, and came up with diverse interdisciplinary and cross-linguistic discrepancies in the use of meta-textual evidentiality. Besides, Hyland and Tse (2004) who studied on the use of evidentiality in postgraduate dissertations relevant to six disciplines showed that the humanities and social science disciplines employed more evidentiality than the non-humanities, and that greater evidentiality was applied in the humanities and more interdisciplinary balance of interactive evidentiality was observed in the science dissertations. Moreover, investigating the interdisciplinary evidentiality use, Zarei and Mansoori (2007) examined the meta-discursive patterns of evidentiality across Persian and English languages in applied linguistics and found out that both English and Persian languages emphasized coherence-oriented evidentials over interpersonal ones. Furthermore, aiming at exploring evidentiality in English and Spanish research papers, Adams (2012) explored that the two languages use similar constructions to show the authors' source and mode of information.

Finally, in a contrastive study exploring the epistemic stance in university lectures and web-mediated talks or speech events to share or transfer knowledge from different domains, Caliendo and Compagnone (2014) represented that web-mediated talks differentiate evidentially from university lectures, where an alternative pragmatic space construes the academics' image

by laying stress on their affiliation to a community of experts, and promoting their group's research and findings, presented through diverse discursive evidentials regarded as tangible and highly reliable referential hints. Although the respective literature generally indicates that the notion of evidentiality has got an important role to play in academic genre, the amount of research in this area is so limited, and in fact, the paucity of research in this area can clearly be observed accordingly. In particular, no research has been published to date, specifically focusing on ELT academic articles as well as contrasting natives and non-natives regarding the use of evidentiality. In other words, no study has been conducted contrastively scrutinizing the ELT academic papers authored by non-native Iranian and native English researchers in terms of the utilization of evidentiality types.

The triplex theoretical framework of the present study involves an integration of three main perspectives towards the notion of evidentiality. The first one considers evidentials to be grammatical markers, and, in its narrow sense, the concept is exclusively a grammatical phenomenon (Aikhenvald, 2004; Anderson, 1986). A second view of evidentiality is semantic. This position is followed by Palmer (1986) and Chafe (1986), and most explicitly by Crystal (2001), who defines the concept as a term used in semantics for a type of epistemic modality where propositions are asserted which are open to challenge by the hearer, and thus requires justification in terms of the available evidence, rather than in terms of possibility or necessity. They add such nuances of meaning to a given sentence as 'I saw it happen', 'I heard that it happened', 'I have seen evidence that it happened... (though I wasn't there)', or 'I have obtained information that it happened from someone else'. A third tenet considers evidentiality within the realm of pragmatics. This view is included in Ifantidou's (2001) and Faller's (2002) views. Ifantidou (2001) points out the fact that studies on evidentials have relied heavily on pragmatic interpretations of the phenomenon including the two previous approaches in one way or another. Accordingly, this study took into account the above-mentioned three tenets, and put them into an integrated theoretical framework, based on which the objectives of the study were postulated.

This study was a contrastive scrutiny of the ELT academic papers authored by non-native Iranian and native English researchers in terms of the utilization of evidentiality, focusing on the adverbial and epistemic-modality types. In other words, this study offered a characterization of ELT research papers in terms of the sentential evidentials, i.e. adverbials and epistemic modality affecting a complete proposition written by native speakers of Persian and English. In particular, this study aimed at answering the following research questions:

1. How frequently were the evidentiality types used in the discussion sections of the ELT academic research papers authored by natives and non-natives of English?

2. What are the ranks of the adverbial and epistemic-modality types of evidentiality among the other types of evidentiality in both native and non-native ELT papers as well as in each?
3. Are there any significant differences in terms of the evidentiality frequency in the discussion sections of the ELT academic research papers authored by natives and non-natives of English?
4. What types of adverbials and epistemic modalities were applied in the discussion sections of the ELT academic research papers authored by natives and non-natives of English?
5. How can the utilization of the adverbial and epistemic-modality types of evidentiality be interpreted in the discussion sections of the ELT academic research papers authored by natives and non-natives of English?

3. Method

This study involves a dominant qualitative discourse analysis accompanied by a supplementary, subordinate chi-square quantification enabling the researcher to include large amounts of textual information from the academic papers, and to systematically identify its properties, such as the frequencies of most used keywords by locating the more important structures of its communication content in the discussion sections of the papers, providing a meaningful reading of content under scrutiny.

3.1 Materials

The materials utilized in the present investigation consisted of the discussion sections of 20 online ELT research papers, including both native and non-native academic articles, amounting to about 50,000 words as a whole. The articles were downloaded from "www.elsevier.com." They were selected randomly from those papers published from 2008 to 2015 so as to investigate the types and frequency of different types of evidentials introduced by Ifantidou (2001) in his framework.

3.2 Procedure

As formerly mentioned, the data were collected through the Internet, i.e. 20 academic papers pertinent to the field of ELT were downloaded from a credited website. The articles were authored by both native and non-native scholars. The data were just concerned with the discussion sections of these papers which were randomly selected for analysis. After collecting the corpora, the types of evidentials were identified, and then were classified into appropriate subtypes based on the categories and subcategories in Ifantidou's (2001) model. Furthermore, the frequency and rate of evidentials in each group of natives and non-natives were compared and contrasted in order to see the

differences in the rate of evidentials in the two groups of authors. To ensure the reliability of the analysis in the process of data categorization, one third of the data was rechecked and reanalyzed independently for evidential types and frequencies by a second rater, who was an MA graduate in TEFL, and was briefed about the objective of the study by the researcher. The occurrence of each type of evidential in discussion sections was calculated as well as the chi-square value to see if there was statistically significant difference between the sets of discussions in terms of different groups' genres.

3.3 . Analytical Framework

The framework of Ifantidou (2001) was chosen because it gave a good overview of the lexical structures that expressed English evidentiality. Considering the definition of an evidential as a functional one, Ifantidou organized the categories around the two main functions (in the broad sense). The first function, i.e. the indication of source of knowledge, can be obtained by observation (sensory/perceptual evidence), by hearsay (from other people), by inference and by memory. The observational evidence is mainly expressed by perception verbs like *I see, I hear, I feel, it tastes*, or by verbs which express less reliability like *looks like, sounds like, feels like, smells like*. Hearsay can be indicated by the expressions *tells me, I hear, people say, he is said, he is reputed, allegedly, reportedly*. Ifantidou (2001) also included less direct hearsay devices which primarily perform other functions like *it seems, it's supposed to, apparently*. The structures *presumably, seems to/must be, must have, I gather* are typical of inferential evidence and even though not frequently treated as evidentials, Ifantidou (2001) adds *so, I deduce, and consequently*. Finally, the information source can also be one's own memory, expressed by *I remember, I recall, as I recollect* (Ifantidou, 2001, pp. 5-7). In the present study, the researcher tried to ignore the direct evidence containing visual and non-visual types of evidential, because these categories related to the speaking aspect of language rather than written or textual aspect of a language. But the other types of evidentials that stands for the degree of certainty are of prevalent importance; therefore, the focus in this study was on the author's degree of certainty.

Secondly, Ifantidou's (2001) evidentiality system for English includes the author's degree of certainty, characterized by propositional attitude and parenthetical expressions (*I think, I know, I suspect, I guess, I suppose*), adverbials (*probably, certainly, possibly, undoubtedly, surely, evidently, obviously*), and epistemic modals (*may, might, can, could, must, will, ought/should*). (Ifantidou 2001, pp. 5-7). Such categorization represents a broad view on evidentiality, based on the suggestion that "in its broadest sense, an utterance has an evidential function if and only if it overtly communicates evidential information, whether this information is linguistically encoded or pragmatically inferred" (Ifantidou, 2001, p. 161). This broad view is suggested by the inclusion of expressions which are not conventionally treated as evidential. These are lexical expressions not included by the majority of the scholars, but for Ifantidou (2001) important enough to mention.

As it is represented in Table 2, adverbial evidentials are higher in frequency in the papers written by Persian researchers as non-natives in comparison with English native authors. After adverbials, the other EVs from highest to lowest include inferring, reported, epistemic modals, and propositional attitude that are used by Persian researchers in ELT papers. Therefore, regarding the status of the adverbials and epistemic modality in both native and non-native papers, again the adverbials have the first rank, and the epistemic modality has the fourth rank of evidentiality use.

This research also attempted to investigate whether there are differences in using EVs between two groups of researchers in terms of nativity. To this end, Chi-square test was run so as to analyze the data and show the respective frequencies. Table 3 shows authors' frequencies of EVs Use in two groups.

Table 3

Native and Non-Native Researchers' Use of EVs

Non-natives	875 (49.89%)
Natives	879 (50.11%)
Total	1754

As Table 3 indicates, the total number of evidentials are 1754 in the research papers written by different groups of researchers, out of which 875 (49.89%) are used by non-native researchers, and 879 (50.11%) are used by natives. A comparison between non-native and native researchers revealed that there is little difference between the frequencies of EVs use in two groups. In order to see whether the difference is significant or not a Chi-Square test was run. Table 4 shows the results of the Chi-Square test, indicating the extent of frequency difference in the two groups.

Table 4

Results of Chi-Square Test

	Evidentials
Chi-Square	.009 ^a
Df	1
Asymp. Sig.	.924

As Table 4 illustrates, the Chi-Square test indicated that there was a significant difference in the proportion of evidentials identified in the samples, $\chi^2(1, n = 1754) = 0.009, p = 0.924, p > 0.05$. As a result, it can be concluded that there is no significant difference between the two groups regarding the use of evidentials. In other words, it can be inferred that the native and non-native researchers use evidentials to the same extent.

4.2 Discussion

In response to the first question, there were 1754 occurrences of different categories of evidentiality found in the entire academic papers without considering the groups' nativity. In terms of frequency, the first rank referred

to “adverbials” (F=823; 47%), the second referred to “inferring” (F=423; 24%), the third was related to “reported” (F=178; 10%), the fourth referred to “epistemic modals” (F=138; 8%), the fifth was related to “memory” (F=96; 6%), and the last referred to “propositional attitude” (F=96; 5%). In response to the second research question, it was indicated that the “adverbial” type of evidentiality enjoyed the first-ranked frequency, and the “epistemic modality” was the fourth frequently-used type of evidentiality in both native and non-native ELT papers. Also, the same ranks were observed in the Persian papers as non-native ones in comparison with the English native papers. Moreover, in response to the third research question, Chi-Square test was run so as to analyze the data and show the respective frequencies. The results indicated that there was no significant difference in the native and non-native use of evidentiality in their ELT research papers. The reason may be the fact that since Iranian EFL students as future researchers in the field of teaching learn the international and standard methods of writing research papers, so they may apply the so-called standards and APA style of writings in their own research papers.

Furthermore, the last two research questions were answered together as follows. With regard to the adverbial type of evidentiality, it was revealed that from the six evidentiality types used in the corpus, adverbials like *probably*, *certainly*, *possibly*, *undoubtedly*, *surely*, *evidently* and *obviously* were the most frequent type of the evidentials. As a result, it can be deduced that for the notion of adverbials that shows the degree of certainty, evidentiality in general and adverbials in particular are vital features of scientific writing in both native and non-native genres (Ifantidou, 2001). In fact, the corpus gives a wide range of meanings for an adverb like *probably*, such as possibly, likely, very likely, most likely, almost certainly, and apparently. In many respects, the use of *probably* seems to lead to the presentation of truth or correctness of the assertion being the thing that is possible. This relationship between truth and probability has been challenged by Barker and Taranto (2002), who claim that the pragmatic meaning or the illocutionary force cannot be clarified due to the implications that the assertion has for the state of the discourse. In fact, the adverb *probably* shows a conditional-authorial commitment since it is based on the evidence, whose source or quality is not strong enough to justify such a claim. For the academic author, the addition of *probably* to frame a proposition may have the same meaning as if this device were removed since, contextually, it may not affect its partial-truth-conditional semantics. Thus, the epistemic meaning of *probably* and the like adverbs is of a pragmatic nature.

Also, *evidently* is more effective in insisting on the idea of obviousness and verisimilitude than *probably* or *possibly*, which patently lies in the realm of beliefs and subjectivity. It is not to say that *evidently* is less subjective than *probably*, but it appears to be more convincing since the idea of evidence may wrongly be associated with truthfulness. The use of adverbs like *evidently* or *obviously* is not semantically speaking a warrant of truth of the proposition, or

even of the logical operation. Actually, *evidently* seems to affect the consequence of the conditional, rather than the complete formula. In fact, *obviously* indicates how information is obtained, but also shows a pragmatic evaluation of the information. Semantically, to claim that something is obvious does not necessarily lead to truthfulness. The notion of obviousness pertains to what is obvious and conveniently recognized through the senses, i.e. evident, but the notion of what is evident is so subjective and it depends on individuals and their selection of contextual ideologies.

In fact, the implication of using *obviously* in the ELT academic discussions is to present the impression of factuality devoid of requiring the authors to give further evidence. The pragmatic impact on the audience leads to a sort of sureness. A claim accompanied by *obviously* is proposed to be accepted. The evidentials like *certainly*, *undoubtedly*, or *surely* are a type of adverbials that clearly present an idea of the author's subjective viewpoint towards the claim, especially in academic writing since certainty or doubt is not scientifically measured. Certainty is a mode of knowing, and so *certainly*, *undoubtedly*, and *surely* should be considered as evidential adverbs. The use of *certainly* puts the claim into the frame of faith and belief rather than factuality. An epistemic reading of such adverbial evidentiality like *certainly* indicates only more powerful commitment than the adverbs like *probably*. The authors' certainties, no matter how certain they may feel about the claim, may not be reliable, and may need further experimental uncovering to attest the factuality.

Moreover, regarding the epistemic modality, both native and non-native ELT research papers were imbued with some attitudinal colorings expressed by the modal verbs, including *can*, *could*, *will*, *would*, *shall*, *should*, *may*, *might*, and *ought*, whose meanings involved the power of the authors' propositions. It was observed that some authors gave suggestions, implications, or recommendations using *could* which is interpreted as weaker than *must*. The authors tended to use *could* interpreting as a weak suggestion rather than a directive piece of advice. In contrast, the authors' propositions carried a strong sense of directive force, nearly considered as a command, through using *must* in certain contexts. The appropriateness of using the strong form of *must* in the papers was generally tied to the author's status in presenting empirical evidence, a clear citation, or a quotation. When *should* was used to give advice, the authors tended to introduce a logical aspect not revealed by *could* or *must*. In addition, almost all the modals used in both native and non-native papers showed two general implications; one including the domain-general, physical-social world of ability, commitment, or authorization, which involves a basic conspicuous interpretation, and a second implication involving the author's internal mental reasoning and logical conclusion, which entails an epistemic interpretation. The crucial point regarding the authors' use of epistemic modality deals with their utilization of present-tense modals to show a higher extent of certainty, reality, and commitment, in contrast to the use of past-tense modals to illustrate a lower extent of certainty, reality, and a reduction of authors' commitment. For example, in the academic discourse of the studied

papers *shall* indicated a more limited condition for the authors' commitments or claims while *should* indicated a preferred, but non-limited condition.

Such interpretations of the epistemic modality can also be supported by Sweetser's (1990) notions of conceptual metaphor and embodied meaning, through which not only has a systematic account of the relations between the basic and epistemic interpretations been offered, but also the uses of present and past modal forms have been justified. Also, the extent of authors' certainty or commitment in proposing their claims can be in line with the distinction between subjective and objective epistemic modality which were formally captured in scopal terms in Lyons' (1977) system. It is assumed that subjective epistemic interpretations are illocutionary force indicators and have higher scope than objective epistemic interpretations (see also Drubig, 2001; von Stechow and Iatridou, 2002; von Stechow, 2003). In addition, the interpretations related to epistemic modality in the present study can be supported by Lyons (1977), further suggesting that the majority of epistemic interpretations of modal expressions in natural language are subjective and that these interpretations are more 'basic' than objective ones, which are closer to the logicians' 'alethic' modality (Papadopoulos, 2006).

In sum, as it was mentioned formerly in the present investigation, "evidentiality" was regarded as an umbrella term to refer to diverse related terms in this area such as stance (Biber et al., 1999), evaluation (Hunston, 1994; Hunston & Thompson, 2000), evidentiality (Chafe, 1986), affect (Ochs 1989), hedge (Hyland 1998), and epistemic modality (Diewald, Kresic & Smirnova, 2009). This study can be endorsed by Conrad and Biber's (2000) findings regarding the classification of adverbials in the identification and categorization of these forms in the corpus. Conrad and Biber (2000) characterize adverbials according to three parameters: semantic class, grammatical realization, and placement in the clause, and these are further divided into some subcategories. Moreover, the findings of this study can be congruent with the study done by Biber et al. (1999) who considered stance as an evidential in relation to the expression of the writers' personal feelings, attitudes, value judgments, or assessments. Furthermore, in one way or another, the study done by Zarei and Mansoori (2007) may confirm the results of the present study, explaining that both English and Persian languages emphasize coherence-oriented evidentials such as adverbials over the interpersonal ones. Also, the results of the study can be in line with Adams' (2012) findings, exploring evidentiality in English and Spanish research papers, and concluding that the two languages use similar constructions to show the authors' source and mode of information. This study also converges with other studies, such as Haumann's (2007), in that the adverbials under scrutiny are primarily classified as evidentials with possible epistemic nuances as a pragmatic effect.

5. Conclusion and Implications

The academic inclination towards utilizing the pragmatic system of communication via the internal semantically-instigated mentality on linguistic structures provoked the present study into conducting a scrutiny of evidentialities applied in the discussion sections of ELT academic papers authored by non-native Iranian and native English researchers. In this vein, the “adverbial” and “epistemic modality” were regarded as the most crucial and the most frequently-used evidentiality types in both native and non-native ELT papers. In other words, it can be concluded that evidentiality in general, and adverbials and epistemic modality in particular are indispensable underpinnings of academic writing in both native and non-native genres. Consequently, it can be inferred that authors’ academic posture constituted through empirical evidence, a clear citation, a quotation, or so at the right moment and setting in order to give an appropriate impression of certainty, reality, commitment, etc. might essentially be centered around the congruity extent of employing an apt version of modalities and/or adverbials in their academic compositions. Thus, the interpretation of what is discursively evident in the academic paragraphs can be essentially subjective depending on individuals’ selection of contextual ideologies via adverbial or modal evidentialities.

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