Research Article

A Corpus-based Analysis of Epistemic Stance Adverbs in Essays Written by Native English Speakers and Iranian EFL Learners

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Abstract

Academic essays entail taking a stance on the truth value of propositions. Epistemic adverbs deal with the speaker's assessment of the truth value of propositions. Employing a corpus-based approach with descriptive statistics and qualitative description, this study explored the use of epistemic stance adverbs in academic essays written by native English speakers and Iranian EFL learners. Following Biber et al.'s (1999) framework of stance adverbials, the researchers employed a corpus of 62077 words taken from class assignments written by Iranian EFL learners and a corpus of 65268 words taken from British Academic Written English (BAWE) to investigate the use of epistemic stance adverbs. Antconc software 3.4.3 version was used to search the most frequent stance adverbs. Frequency counts for each of the adverbs were extracted and normalized per 1000 words; then, Chi-square was run to pinpoint any differences between the two groups. The findings revealed both similarities and differences in the use of stance adverbs between the two groups. For example, EFL writers used more *confident* adverbs to show their authorial presence while native speakers used more *maybe* adverbs which are less authority-oriented. The findings may have implications for second/foreign language learners and writing instruction.

Keywords: academic essay, BAWE, corpus analysis, EFL learners, epistemic adverbs, stance

Introduction

Academic discourse enjoys certain rhetorical and grammatical norms and structures which dictate how authors indicate their stance on a subject, express their viewpoint, and engage with their audience. Studies conducted on scientific discourse genres have shown that academic language is a reflection of the cultural norms and conventions of the discourse community (e.g., Hyland, 1998, 2002; Hyland & Tse, 2005; Swales, 2004).

Over the past couple of decades academic writing has gained much momentum as texts that have interaction between readers and writers as their modus operandi. There is now a widely held view that interactive relationships which enable writers to interact with their readers is a sine quo none of academic discourse (Hyland, 2005a; Thompson, 2001). However, different scholars have come to refer to this relationship between writers and readers by a range of terms such as evaluation (Hunston & Thompson, 2000), Appraisal (Martin & Rose 2003), epistemic modality (Hyland, 1996), stance (Biber & Finegan, 1989), and meta-discourse (Hyland & Tse, 2005).

Written texts involve interactive relationships between readers and writers (Hyland, 2005; Thompson, 2001). One way of looking at this connection between writers and readers is through 'stance' (Biber & Finegan, 1989). Notwithstanding different frameworks on stance (Hyland, 2005; Chafe & Nichols, 1986), it is defined by Biber and Finegan (1989) "as the lexical and grammatical expression of attitudes, feelings, judgments, or commitment concerning the propositional content of a message"(p. 95). Therefore, authors' stance present writers' perspectives on the elements of their work they engage in. Put another way, linguistic expressions of stance function to convey the standpoint writers adopt towards a proposition (Biber, 2006). We have opted for the stance framework developed in Biber, Johansson, Leech, Conrad and Finegan (1999) since it offers a semantic taxonomy of stance markers that facilitate the identification of resources used by writers to express their stances. Our operational definition for the concept of stance is taken from LGSWE (Biber et al., 1999) where they are defined as "those adverbials that overtly mark a speaker's or writer's attitude to a clause or comment about its content" (p. 382). The authors make a distinction between epistemic, attitude, and style stance adverbials. Our focus in this

study will be on epistemic stance adverbials which are defined as those adverbials which express the speaker's judgements about the information in a proposition. According to LGSWE, "there are six major areas of meaning: certainty and doubt, actuality and reality, source of knowledge, limitation, viewpoint, and imprecision" (Biber et al., 1999, p. 382).

Stance is a complicated issue of paramount significance in academic writing from second language writing at all proficiency levels to published research papers by both native and non-native writers. Most of the studies on stance have focused on the ways writers in academic contexts involve themselves by commenting on the plausibility and rigor of their claims in a multitude of majors (Adams & Quintana-Toledo, 2013; McGrath & Kuteeva, 2012), different cultures (Dahl, 2004; Martinez, 2005; Sheldon, 2009) and differences between males and females in L1 and L2 contexts (Kuhi, Azar, Shomoossi, & Shomoossi, 2012). In addition, a plethora of studies have concentrated on published articles either with emphasis on students' writing or published research articles by both native and non-native writers (Abdollahzadeh, 2011; Ahmad & Mehrjooseresht, 2012), even some focusing on hard and soft sciences (vold, 2006; Taki & Jafarpour, 2012; Sayah & Hashemi, 2014; Milan, 2008).

Epistemic stance adverbs have been the subject of some studies in the area of academic discourse. One of the leading studies in this regard is Biber and Finegan's (1988) work on stance adverbials in academic prose. They use a corpus of texts from diverse scientific disciplines. The authors found a more frequent use of *maybe* adverbials, that is, adverbials expressing possibility, and likelihood, than *surely* adverbials which express certainty in academic writing (Biber & Finegan, 1988).

In another study Simon-Vandenbergen and Aijmer (2007) investigated the distribution of certainty adverbs across academic disciplines. They studied their frequencies in the humanities, social sciences and natural sciences. The authors' focus was on how adverbs function in different text types, rather than their association with specific disciplines. The findings indicate that some adverbs appear more frequently by the writers in the fields of the humanities and social sciences, but have far less of such frequency in natural sciences, for example, *indeed*.

Hyland and Milton (1997) conducted an analysis of English L1 and L2 students' writings at the end of high school period. The authors used a corpora based on written exam essays from Chinese students and British learners of similar age and educational level. The findings revealed that for expressing epistemic stance, L2 writers had a more limited access to grammatical resources. However, the British students made use of a greater number of adverbials for expressing uncertainty. The findings indicate that L2 writers used more certainty adverbs and that they were more assertive and authoritative in putting forth a proposition. On the other hand, the English native speakers were more doubtful when they were expounding on a proposition.

Vold (2006) investigated the use of epistemic markers in English, French and Norwegian research articles in the fields of linguistics and medicine. Another variable under scrutiny in her research was the role of gender. The results of her analysis showed that Norwegian and English speaking researchers used more epistemic markers than the French speaking researchers. Further analysis on the role of gender revealed that this variable did not have much impact on the use of epistemic markers in academic written texts. Nevertheless, subtle variations were identified between disciplines with regard to how authors used different markers. All in all, the role of first language and nationality were more significant than that of the disciplinary conventions in how writers employed modality markers. In another yet similar study, Orta (2010) examined one type of epistemic stance marker, namely, *modal verbs* in research articles written by Spanish and English native speakers. The findings revealed that English native writers differed significantly from their Spanish counterparts in their use of modal verbs in their research articles. Orta concluded that Spanish authors had a tendency to use modality resources as hedgers and boosters, hence, failing to establish a proper tenor. Another study by Sameri and tavangar (2013) was conducted on English and Persian research articles in soft and hard sciences written by three groups of writers with different linguistic and cultural background. The study was to reveal any relationship between disciplinary and cultural background on the one hand and epistemic modality use on the other. The findings point to the fact that researchers in

soft sciences made more frequent use of epistemic modality markers in comparison to the hard science researchers. In addition, the researchers also reported that certainty markers were employed more by hard science authors whereas authors in soft science disciplines used more of possibility and probability markers. A significant difference was also reported between native English writers and Persian writers in using certainty and possibility markers in their texts. Similarly, Auria (2008), researched stance devices in the introduction sections of 20 research articles in IT science and applied linguistics. The findings pointed to a similar number of stance markers in the two disciplines in addition to discipline-specific conventions regarding the use of stance devices.

Aull and Lancaster (2014) explored instances of stance in the writings of freshmen university students and made a comparison with higher level undergraduate student papers as well as published research papers. The results revealed that the freshmen made use of stance markers to a lesser degree compared to their advanced peers and academia. Likewise, Hood (2004) investigated evaluative stance in student writers and academics and discovered dissimilar patterns between the two groups. Hood's analysis involved the introduction section of four research articles and six dissertations penned by the same group of students. The findings depicted that student writers employed more stance markers to show their emotional evaluations. However, authors of published research articles engaged in more evaluation of the material compared to student writers.

Rozumko (2017) explored epistemicity in different majors, namely, linguistics, law, and medical science in order to discover to what extent writers differed in their use of stance adverbs with regard to their field of study. A corpus of 160 research articles was used for the primary analysis. The findings pointed to the fact that there is a predominant presence of stance adverbs in linguistics and law articles. However, writers in medical research papers had lower number of epistemic adverbs in their articles.

In another study Cakir (2016) investigated stance adverbs in abstracts of research articles written by Turkish writers and English writers. 240 abstracts extracted from six different branches of science representing soft and hard sciences were analyzed. As far as the total number of stance adverbs was concerned, significant differences were identified. The number

of stance adverbs in English writers' abstracts outnumbered those of the Turkish writers. Discipline-related variations were also present between hard and soft sciences. Soft science writers employed more stance adverbs in their abstracts compared to their hard science writers' counterparts. Notwithstanding differences, all of these scholars have delved into the ways writers express their viewpoint and how they interact with their audience. An apparent gap, however, in previous research is that most of these studies have focused on disciplinary differences and journal articles. We are faced with a dearth of research in which stance is investigated in students' essays as part of class assignment. This study, therefore, was an attempt to explore the use of epistemic stance adverbs in the essays of native English speakers and Iranian EFL learners. More specifically this study sought to answer the following research question:

RQ: Are there any significant differences in the use of epistemic stance adverbs in academic essays written by English native speakers and Iranian EFL learners?

Method

Corpus

Two corpora were employed in the current study; the main corpus and a comparison corpus. The main corpus comprised of 98 academic essays containing 65268 words written from 2016-2018 by Iranian BA level students studying English translation at Shahrekord University in Iran. The texts were written as part of class assignments over the course of the term. The students were male and female young adults ranging in age from 18-24. They were studying English as a foreign language. They had passed some general proficiency courses including: three grammar courses, three reading comprehension courses, listening courses and two writing courses. In their writing courses, they had become familiar with paragraph development, types of essays such as expository, cause and effect, process writing and argumentative essays. All in all, they might have ranged in proficiency from upper-intermediate to advanced level learners. The comparison corpus included 25 essays comprising 62077 words extracted from British Academic Written English. This corpus was a record of proficient

university-level student writing. It contained about 3000 student assignments distributed across four broad disciplinary areas (Arts and Humanities, Social Sciences, Life Sciences and Physical Sciences) and across four levels of study (undergraduate and taught Masters Level). Detailed information regarding genre family (critique, essay, research report etc.), discipline (engineering, biology, English, etc.), level of education, age, gender, nationality, and number of words per piece of writing is available in an Excel spreadsheet accompanying the BAWE corpus. Since the EFL learners' major was English language, the texts for the native corpus were selected out of language essays under the Arts and Humanities discipline in order to make a comparable corpus to that of the EFL corpus of English Languages. From different genres, the essays were selected which were written by English native speakers. The students ranged in age from 20 to 23 and they were both male and female at BA level. Since the texts written by English native speakers were longer and contained more words per essay, 25 essays were selected, simply for the sake of word count, to create a corpus roughly similar to the EFL corpus in terms of word count considerations. Therefore, the basis for comparison was total number of words per corpus not the number of essays. In contrastive studies, a similar number of words is required in order to validate the findings. Also, great care was taken to have two corpora similar to each other in every aspect in order to be able to provide considerable illustrative material and discuss the tendencies in the use of epistemic adverbs, hence, arriving at more reliable results. Moreover, it could be argued that due to the speed of processing electronic corpora and concordance software afford and also the ease with which the data could be manipulated (searching, selecting, providing concordance lines), more accurate and consistent results could be obtained devoid of any human bias in an analysis which would contribute to making the results more reliable. Moreover, in order to ensure the reliability of the analysis, one more rater familiar with corpus studies and informed about the purpose of the study was asked to carry out the process of the data analysis for half of the two corpora, due to time constraint, as per advice of H. Nessi (personal communication, June 23, 2020). Using the Kappa statistic, the researchers found that there exists an inter-rater reliability index of 0.92

between the analyses. Therefore, the consistency between the raters turned out to be high.

Procedure

The software AntConc (version 3.4.3) by Laurence Anthony (2014) was selected by the researchers to search the epistemic stance adverbs in two corpora. AntConc is a corpus analysis toolkit for text searching and text analysis which includes a range of functions such as concordance, clusters, collocates, word list, keyword list, and N-grams. Before importing the texts into the software, the sampled texts were first saved in text format which is the required format for AntConc. Then, the stance adverbs were fed into the software in order to be searched one by one. Consequently, the total frequency count of occurrence of each adverb and concordance lines were obtained. In order to guarantee a valid analysis, the items in the concordance lines were individually checked and crosschecked to discard anomalous (if any) items. A list of the most frequent adverbs in each corpus was established and discussed with respect to the functions of the adverbs in each corpus. It is important to note that it is standard practice in corpus studies to turn raw frequencies into normalized frequency (particularly when the two corpora are not similar in size) per 100000, 10000, etc. Since the corpus used in this study was a small one, raw frequencies were normalized per 1000 words.

Design of the study

The current investigation is a corpus-based comparative study on epistemic stance adverbs in academic essays. To address the research question, a qualitative analytical approach involving both descriptive statistics and qualitative description of the results was adopted. Based on the list of epistemic stance adverbs taken from LGSWE, the researchers compared two corpora written by English native speakers and Iranian EFL learners to discover similarities and differences between the two groups. See Appendix for a complete list of stance adverbials which express epistemic meanings.

Results

Using corpus analysis toolkit Antconc 3.4.3w version by Anthony (2014), the researchers searched for the adverbs and checked them one by one for their possible occurrence in two corpora of Persian EFL texts and a sample of British academic written English texts taken from BAWE. Since the corpus used in this study was a small one, raw frequencies were normalized per 1000 words. The results showed different patterns of adverb use for the two corpora under study. In other words, the EFL learners used a number of different adverbs with different frequencies from the native speakers in BAWE corpus. Tables 1 and 2 present the adverbs and their frequencies in both corpora.

Table 1

Adverbs in Academic Essays Written by Native English Speakers (BAWE)

Epistemic stance adverbs in BAWE	Raw frequency	Normalized frequency per 1000 words
Indeed	15	0.24
probably	14	0.22
Certainly	11	0.17
Perhaps	9	0.14
Arguably	7	0.11
Of course	5	0.08
possible	3	0.04
Necessarily	2	0.03
total	66	

Table 2
Adverbs in Academic Essays Written by EFL Learners

Epistemic stance adverbs in Persian texts	Raw frequency	Normalized frequency per 1000 words
Of course	25	0.38
definitely	12	0.18
Certainly	11	0.16
Likely	11	0.16
Obviously	11	0.16
Maybe	8	0.12
Perhaps	7	0.10
Probably	6	0.09
clearly/no doubt	4	0.06
Indeed	3	0.04
total	98	

As depicted in Tables 1 and 2, the two groups differ in their frequency of adverbs. Surprisingly enough most of the adverbs used in two corpora belong to the doubt and certainty category and no other adverbs from other categories were found. The most frequent adverb was *of course* with 0.38 (25) occurrences in EFL corpus whereas the same adverb had a frequency of 0.08 (5) in BAWE. The most frequent adverb in the BAWE was *indeed* with a frequency of 0.24 (15) while in the EFL corpus it was used in 0.04 (3) contexts. The second most frequent adverb in BAWE was *probably* which was used 0.22 (14) times in this corpus. The same adverb had a frequency of 0I09 (6) in the EFL learners' corpus. On the other hand, the second most frequent adverb in the EFL corpus was *definitely* (0.18) while it was never used by native speakers in BAWE. Other adverbs were used with variable frequencies. However, in order to make sure if the two groups differed significantly in their use of stance adverbs a Chi-square test for independence was run. Table 3 presents the results of Chi-square for independence of samples.

Table 3
Stance Adverbs Chi-square Test for Independence of Samples

	Value	Df	Sig. (2-sided)
Pearson Chi-Square	87.881[a]	11	.000
Likelihood Ratio	112.297	11	.000
Linear-by-Linear Association	.008	1	.928
N of Valid Cases	176		

The results of the Chi-square for independence of samples indicate that there was a significant difference between the two groups in their use of stance adverbs, x2 (N=176) = .000<0.05. The adverbs with the frequencies of less than 5 occurrences were excluded from further functional analysis. Simple frequency count provides only a brief sketch of how the two groups have made use of adverbs in their essays. A functional analysis of these adverbs would provide us with a more crystal clear picture of the differences in the use of adverbs between the two groups.

Functional Analysis of the Most Frequent Adverbs

The most frequent adverb used by EFL group was the confident adverb *of course* with a frequency of 25 while native speakers preferred to use the same adverb only in 5 contexts. The same is true for other confident adverbs *definitely* (12) and *certainly* (11) in the EFL corpus with a similar frequency of *certainly* (11) in the native corpus. Simon-vanvenbergen and Aijmer (2007) believe that "*certainly* occurs in the context of uncertainty rather than certainty where there is a great deal of hesitation and personal qualifications of the truth value" (p. 82). This is quite evident in the native speaker corpus as shown in Example 1.

Example 1:

A key claim, that IQ differences in the results are not generally found in culturally biased assignments, is here backed by only one source, Jensen. The work of this scholar, however, is certainly not uncontroversial and may even be racially motivated.

However, no such use of *certainly* was found in the EFL corpus. In the EFL corpus *certainly* functions as a booster or intensifier to add emphasis to what the writer is expressing. Example 2 shows the use of *certainly* by EFL learners.

Example 2:

Probably you have heard many would-be mothers asking: "how should we feed our babies?" and you may have answered:" human milk is certainly the best feeding for all infants".

Certainly is more of a double-face agent; while it explicitly connotes epistemic certainty, on the implicit side, it conveys epistemic uncertainty.

Of course has a completely different distribution in the EFL corpus (25) compared to BAWE (5). *Of course* could be used to dismiss potential criticism prompted by the writer's need to prevent threats to his facevSuch a use is demonstrated in EFL corpus.

 Example 3:

I want a life full of interesting events. Of course money is necessary for life but it is not sufficient.

Here, the writer makes the reservation that his or her position may not be true. He uses *of course* to declare his awareness of the fact that his position may come under attack. In contrast with *certainly* which is softer in tone, *of course* carries with itself the sense of superiority expressed by the author.

In contrast with *of course* which is the adverb used most frequently by EFL writers, the most frequent adverb used by native English writers is *indeed* (15) while EFL writers had only 3 cases of *indeed* in the corpus. Simon-Vandenbergen and Aijmer (2007) suggest that *indeed* is more associative with authority on the part of the speaker and also more characteristic of persuasive, argumentative discourse. It is an epistemic adverb not only lacking the central meanings of expectation or evidence but also possessing a function of referring back, confirming and emphasizing some proposition that is not new in the context, which suggests it could also be categorized as an expectation element (Simon-Vandenbergen & Aijmer, 2007). *Indeed* is also used as a discourse marker meaning '*what's more*'. According to Wierzbicka (2006), *indeed* could also be used as a connective to add something to a proposition. The following example reveals how *indeed* functions to support a general claim asserted in the previous sentence. Most of the uses of *indeed* in the native speaker corpus are of this type.

Example 4:

Especially into the nineteenth century as the middle class began to emerge as a distinctive class, emphasized and luxurious clothing were replaced by more austere and sober dress. Indeed, sobriety and democratic value formed part of its claim to political power.

In the EFL group there are three cases of indeed. In two of the cases, it is used to introduce a statement which provides supports for a claim made in the previous sentence.

See Example 5:

Nowadays people use cash card. Indeed, they are so useful; they save time, can be used anywhere and in any time…

There is one example of misuse of *indeed* in the EFL corpus. In this example from the EFL group, the writer makes use of *indeed* which does not seem to be the right choice. In this sentence, *in fact* seems to be functioning more properly instead of *indeed*. Another example of misuse of *indeed* in EFL corpus could be found in Example 6:

Example 6:

Indeed, it is not as simple as represented above. Considering your reader, your text, and sociolinguistic differences.

Here, the writer expands on a proposition, developed in the previous paragraph, and wants to make a conclusion in the last paragraph which calls for an expression such as *in fact or as a matter of fact.*

One of the adverbs that had an almost similar distribution in both corpora was *perhaps* with a frequency of 7 and 9 in the Persian and the native speakers' corpora respectively. *Perhaps* has a softening, mitigating function toward claims and criticisms. The two groups do not differ significantly in the use of *perhaps* in their essays. See these two examples from the Persian and the native speakers' groups respectively. Examples 7 and 8:

Example 7 from the EFL corpus:

If you go to a doctor for stress, she or he will likely tell you that perhaps the best treatment for stress is meditation.

Example 8 from the BAWE corpus*:*

The customers downstairs seemed to be more reactive to other customers. They seemed, perhaps, less accustomed to the unwritten rules of the bookshop etiquette.

Wierzbicka (2006) categorizes *perhaps* as a dialogic particle and Ernst (2009) classifies it as a "weak modal marker which expresses the speaker's subjective judgment" (p. 276). In the corpora examined here, both groups use *perhaps* in the absence of any concrete evidence to support a claim. Absence of such evidence renders a claim unwarranted which may lead to a speaker's loss of face.

Closely related to *perhaps* is the reflective and careful adverb of *probably*. Wierzbicka (2006) contends that *probably* is cautious and intellectually responsible. She also believes that "it reflects the speaker's desire not to say more than what one has grounds for saying" (p. 281). See Example 9 from the Persian corpus.

Example 9:

If your job is stressful, find a way to relax yourself after work. In such conditions, probably you will feel better by changing your lifestyle and your diet.

In this example, the EFL writer is using *probably* with some degrees of uncertainty to indicate his caution in saying something he has no grounds for saying, which is in line with what Wierzbicka believes to be the case. The native speaker group uses uncertainty adverbs like *probably* (2) and *possibly* (3) with less frequency compared with the EFL group who used *probably* six times in the corpus. The EFL group did not use *possibly* at all.

One of the high frequency adverbs used only by the writers in the EFL corpus is *obviously*. *Obviously* is very similar to *of course* but with slight differences. Simon-Vandenbergen and Aijmer believe that "*Of course* means 'as everyone knows or should know' and sound a bit authoritarian. *Obviously* means 'as evidence shows' which hints to the evidential meaning" (p. 204). It is less authority-oriented than *of course* which emphasizes the speaker's belief that the hearer should know. In addition, this stress on the speaker's point of view that hearer should know renders *of course* a solidarity marker too. See Example 10:

Example 10:

Man's mind possesses many capabilities such as imagination, morality, admiration, responsibility and recall which obviously monkey's brain lack.

Here, it may be tempting to replace *obviously* by *of course*. Its meaning 'everybody knows' would fall into place, and the effect it creates would be similar to that of *obviously*. However, *of course* is an authoritative back-grounding device, used to downplay other alternatives while *obviously* is less forceful and more concessive.

Discussion

The present study aimed to investigate whether there was a difference or similarity between native English speakers and Iranian EFL learners in terms of the use of stance adverbs in their essays. The quantitative analyses revealed differences between the two corpora. The findings point to the fact that both EFL learners and native speakers use epistemic adverbs with different frequencies. Pondering over the reasons for such differences between the EFL and native speaker groups could be interesting. The findings in this study point to the universality of epistemic adverbs in argumentative writing. Epistemic adverbs are used by both L1 and L2 writers to express their stance toward the propositional content and take a stance on a proposition. By use of these adverbs both the writers' assumptions of possibilities and the writers' confidence or lack of confidence in the truth value of a proposition are indicated. The findings are not in line with Cakir's (2016) study in which native English speakers used stance adverbs to a greater degree than Turkish writers did. In the current study EFL learners used slightly more adverbs than their native speaker counterparts.

Despite the universality of epistemic adverbs mentioned above, differences between the EFL and the native speaker groups revealed that the two groups made use of similar adverbs with different frequencies. Confident adverbs (of course, certainly, definitely) are used by EFL writers more than their native speaker counterparts. This pattern is in line with Rozumko (2017) who found that confident adverbs outnumber non-confident ones. One function of this category of stance adverbs is to express authority. In the native speaker group, the confident adverb *indeed*

has the highest frequency (15) but the Persian writers used *indeed* only in three contexts. This is similar to Rozumko's findings. with regards to humanities in which *indeed* has the highest frequency. The EFL writers have used *of course* (25) to a much more degree to express the same proposition which could be expressed with *indeed*. A possible explanation for this could be that EFL writers are not familiar with this confident adverb to express high degrees of certainty. This finding is in stark contrast to Biber and Finegan's (1988) research indicating that *maybe* adverbials are more frequent than *surely* adverbials in academic prose. In a study by Hyland and Milton (1997), the authors found that L2 writers expressed more doubt when putting forth propositions which is the opposite of what L2 writers did in this study. This could be, as Flottum et al. (2006) believe, due to individual authorial preferences which play an important role in academic genre. The use of adverbs such as *indeed*, *perhaps*, and *certainly* point also to a preference for dialogic style of writing in both corpora. Both groups made use of solidarity-building elements *certainly* with equal frequency. As Halliday (2004) put it "*certainly* expresses a high degree of speaker commitment on the probability scale, it expresses a high value in contrast with *probably,* which expresses a median value, and *perhaps* which expresses a low value" (p. 298). The use of *certainly,* thus, occurs in a context of uncertainty rather than certainty. Unlike *of course*, the adverb *certainly* puts forth the proposition as certain from a subjective point of view. With *of course* there is no power strategy. *Obviously* has a high rate of occurrence in the EFL corpora. It is very similar to *of course* as far as semantic closeness is concerned. According to Simon-Vandenbergen and Aijmer, "*of course* means as everyone knows or should know and thus sounds authoritarian. *Obviously* means as evidence shows hence it is evidential in meaning and less authority-oriented than *of course*" (p. 219). The EFL writers have used both of these adverbs to express authority, an element which is absent in the native speaker corpus. It could indicate that native speaker writers tend to be less authority-oriented than Persian EFL writers. This finding is in line with Biber and Finegan (1988) in that the authors held that more *maybe* than *surely* adverbials are typical of academic essays.

This study aimed to explore how native speakers of English and Iranian EFL learners make use of epistemic stance markers in academic essays. Previous studies have looked at stance-taking in published research articles. This study, however, tried to adopt a corpus-based research design to investigate stance in students' written assignments as part of the classroom requirements. Thus, this study was mostly concerned with how student writers present stance when they write an assay as part of the course requirement, which represents an authentic but under-researched phase in academic writing development.

The frequency and types of adverbs used in both corpuses show to what extent native speakers and Iranian EFL learners are similar and/or different from each other in terms of their use of adverbs in academic writing. Higher use of certainty adverbs in the EFL corpus could be an indication of author presence or authority in the written academic discourse. On the other hand, their low frequency in the native speakers' corpus indicates that their authors are inclined to mitigate their authority and presence in such genres.

Taking the findings of this study into consideration, L2/FL writing pedagogy may benefit from a central focus on the specific items which differ between the EFL and native speaker corpuses. EFL instructors can emphasize the functions of these elements in grammar and writing/reading courses. Teachers can bring these similarities or differences to their students' attention and make them aware of how different EFL learners are from their native speaker counterparts. This may promote novice writers' awareness of how stance markers are used by native English writers. This awareness could lead to better student writing skills.   Finally, it is worth mentioning that some limitations such as the size of the corpus and the semantic category of adverbials would limit the scope of generalization that could be drawn from the findings of this research. Future studies may focus on other aspects of students' essays and their comparison with the native writers. Also, more studies on the use of stance markers used by EFL student writers in other academic genres such as research papers and theses may shed more light on our better and clearer understanding of these elements.

Declaration of interest: none

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Appendix. Epistemic Stance Adverbs as listed in Longman Grammar of Written and Spoken English.
Admittedly, allegedly, apparently, arguably, assuredly, avowedly, certainly, clearly, conceivably, decidedly, definitely, doubtless, evidently, incontestably, incontrovertibly, indeed, indisputably, indubitably, ineluctably, inescapably, likely, maybe, manifestly, necessarily, no doubt, obviously, of course, patently, perhaps, plainly, possibly, presumably, probably, purportedly, reportedly, reputedly, seemingly, supposedly, surely, truly, unarguably, undeniably, undoubtedly, unquestionably.

Biodata

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