

Epistemic Modality in Vietnamese EFL Students' Argumentative Writing

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Abstract

Epistemic modality plays a crucial role in expressing a writer's opinion, degree of certainty, and engagement with the reader, particularly in argumentative writing. Inspired by prior research, this paper aims to explore the epistemic modality markers used in 50 essays written by English-majored students. A combination of quantitative and qualitative data was employed to discover how the participants have used linguistic devices to express different degrees of commitment and categories of epistemic devices. The results suggest that epistemic modality is a common feature in this genre, with roughly one-third of the sentences in the data containing epistemic elements. The findings also show a clear preference for expressing probability through modal verbs. Additionally, the data reveal frequent use of epistemic lexical verbs and adjectives to convey certainty and modal verbs to denote probability. The study concludes with pedagogical recommendations for enhancing students' use of epistemic modality in argumentative essays.

Key words: academic writing, argumentative writing, epistemic modality, ESL, essays

1. Introduction

Argumentative writing is a crucial skill for EFL learners at tertiary educational institutions. In the Vietnamese context, English-majored students are expected to master this genre in order to perform a variety of academic tasks such as group assignments, written exams, research projects or graduation papers in English. Nevertheless, this type of writing proves to be demanding, as it requires not only language competence but also the skills to apply effective rhetorical strategies (Connor & Lauer, 1988). To produce successful argumentative essays in English, students must present their view using relevant facts, explanations or examples. Among varied linguistic tools, epistemic modality markers are one of the most useful devices to express levels of certainty.

Epistemic modality is concerned with the extent to which writers express their level of certainty or commitment to the statements they make. As stated by Coates (1983), epistemic modality (EM) reflects a speaker's assumptions through modals such as *must*, *should*, or *ought*, as well as his assessment of possibility, using forms like *may*, *might*, *could*, or *will*. These choices signal how confident or uncertain the speaker is about the truth of a given proposition (p. 18). Consequently, the effective use of epistemic modality markers (EMMs) plays a key role in constructing persuasive and coherent arguments.

However, epistemic modality poses significant challenges in writing instruction (Allison, 1995; Hyland & Milton, 1997; McEnery & Kifle, 2002). This difficulty often results from learners' limited exposure to authentic academic discourse and a lack of awareness of linguistic devices to convey opinions in English. Learners may also have troubles distinguishing different degrees of epistemic elements or to choose markers in line with the rhetorical purpose of their arguments. Therefore, an exploration of learners' usage of epistemic modality markers (EMMs) is essential not only to identify common patterns and tendencies, but also to draw pedagogical implications aimed at improving argumentative writing competence.

Following this line of inquiry, the current study seeks to examine how EFL students employ epistemic devices in their argumentative essays, with the goal of understanding the students' patterns of epistemic modality use. To achieve this, three research questions are put forward as follows:

- 1) To what extent is epistemic modality utilized in students' argumentative writing?
- 2) What kinds of epistemic modality markers are overused and underused by the students?
- 3) What is the dominant epistemic modality (EM) semantic meaning expressed in their argumentative writing?

2. Literature Review

2.1 Modality

According to Halliday (1970), modality plays the interpersonal function of language, enabling speakers to express a point of view and engage in communication. Lyons (1977, p. 452) characterizes it as the speaker's "opinion or attitude" regarding the meaning of a sentence or the circumstances conveyed by a proposition. Similarly, Quirk et al. (1985, p. 219) explain modality in broad terms as the means through which a clause's meaning is shaped to reflect the speaker's assessment of the likelihood that the proposition is true. According to Kiefer (1994, p. 2516), modality expresses the speaker's mental, emotional, or volitional attitude toward a particular situation. In more recent literature, modality is defined as the speaker's evaluation of whether a proposition is possibly or necessarily true, or whether an event is likely or required to occur (Depraetere & Reed, 2006, p. 269). In essence, modality reflects the speaker's perspective and stance on the proposition's content.

2.2 Modality Markers

While much of the literature on modality tends to focus on modal verbs, modality meanings actually come from a wide range of grammatical categories. Holmes (1988) identified more than 350 lexical items functioning as modality markers which can be grouped into modal verbs, lexical verbs, adverbs, nouns, and adjectives. Portner (2009) further added modality signals at multiple linguistic levels, including the sentence level, below the sentence level, and within broader discourse.

2.3 Modality Categories

Modality is generally categorized into two principal types: epistemic and deontic. Epistemic modality relates to knowledge, belief, inference, or opinion (Lyons, 1977). It refers to linguistic expressions that convey the speaker's evaluation of the likelihood or truth of a proposition, often reflecting the degree of certainty or uncertainty (Coates, 1995, p. 55). Essentially, it captures the speaker's assessment of the factual status of a statement (Palmer, 2001, p. 8). In contrast, deontic modality pertains to the necessity or possibility of actions undertaken by morally accountable individuals. It involves concepts such as obligation, permission, and appropriate behavior, which are influenced by cultural and societal standards or personal ethical frameworks (Lyons, 1977). Hinkel (1995, p. 329) emphasizes its cultural dimension, noting that it reflects "culture-specific norms, expectations, roles, and concepts defining relationships between people and events." Since this study places its emphasis on epistemic modality, the following sections will examine its classifications and associated markers in more detail.

2.4 Epistemic Modality Categories

The literature presents several ways of classifying subtypes of epistemic modality. For instance, Lyons (1977) distinguishes between subjective and objective modality, while Nuyts (2000) proposes a threefold distinction: subjective, intersubjective, and neutral. Another common method of categorization is based on varying levels of certainty. It is widely recognized that a speaker's degree of commitment to a statement and the perceived certainty of that statement is not fixed but rather exists on a continuum, reflecting varying levels of likelihood or probability.

One of the most widely accepted classifications of epistemic strength includes three core categories: possibility, probability, and (inferred) certainty (Bybee et al., 1994). Epistemic possibility signals a low level of confidence in the proposition's truth, epistemic probability reflects a moderate level of confidence, and epistemic certainty indicates a high degree of confidence, all based on the speaker's knowledge or belief. This study adopts this widely recognized tripartite model—certainty, probability, and possibility—as its framework for analyzing epistemic modality.

2.5 Epistemic Modality Markers (EMMs)

Lyons (1977) was among the earliest scholars to recognize that epistemic modality markers extend beyond modal verbs, arguing that speakers can express certainty through various linguistic forms, including lexical verbs, nouns, adjectives, adverbs, and multi-word expressions. A comprehensive examination of epistemic modals is provided by Gustová (2011), who identifies modal verbs such as *can*, *could*, *may*, *might*, *must*, *should*, *ought to*, *will*, *would*, and *shall* as carriers of epistemic meaning. Despite this, non-auxiliary expressions of epistemic modality have often been underrepresented in linguistic research. Studies by Hermerén (1978) and Holmes (1983), based on extensive discourse analysis, highlight a wide array of lexical items that convey modal meaning. Their findings suggest that, collectively, non-modal-verb categories, particularly verbs and adverbs, occur more frequently than modal verbs, while nouns and adjectives appear less often.

Chunyu Hu & Xuyan Li (2015) added that epistemic modality is expressed through a wide range of linguistic forms, including modal verbs (such as *could*, *may*, *might*, *will*, *would*), adjectives (e.g., *possible*, *likely*, *certain*, *necessary*), adverbs (e.g., *maybe*, *perhaps*, *possibly*, *probably*), nouns (e.g., *possibility*, *probability*, *certainty*), mental verbs that take sentential complements (such as *think*, *believe*, *doubt*), along with various other constructions."

Building on these earlier findings, My Nhat and Dieu Minh (2019) developed a classification system for lexical items expressing epistemic modality, organizing them by both word class and

degree of speaker commitment. This categorization, presented in Table 1, serves as the reference framework for identifying EMMs in the present study.

Table 1: EM Lexical Items according to Degrees of Commitment and Word Class (My Nhat and Dieu Minh (2019))

| | Certainty | Probability | Possibility |
|---------------------------------------|---|--|--|
| Verbs/ Verbal expressions | bet, can only think, can't think, come to a/the conclusion, couldn't believe, not doubt, have no doubt, have no reason to believe, know, emphatically say, see no reason to doubt, take it | appear, assume, believe, estimate, expect, feel, find, gather, guess, hope, imagine, look, occur to me, recall, regard, seem, sound, suggest, suppose, take the view, think, understand, if I remember | doubt, wonder, I cannot rule out the prospects |
| Adverbs/ Prepositional phrases | certainly, clearly, definitely, evidently, for all I know, for all I've been told, in all probability, in truth, indeed, (in) no doubt, obviously, of course, plainly, surely, without question | apparently, as far as I can see, as far as I know, as far as I remember, as I understand it, from what I (can) understand, in my mind, in my view, quite likely, most likely, (not) likely, presumably, probably, seemingly, so far as appeared, supposedly, to judge from, to my mind, probably | maybe, perhaps, possibly, conceivably |
| Adjectives | certain, clear, confident, convinced, evident, highly unlikely, incredible, obvious, positive, sure, true | alleged, apparent, likely, suggested | uncertain, unsure |
| Nouns/Nominal expressions | all I know, it's common ground, (that) conclusion, (the) claim, there is a considerable possibility, there is no doubt/ suggestion/ question | estimate, guess, guesswork, thought | possibility |

2.6 Modality in Learners' Writing

A substantial body of research has investigated how EFL learners use modality markers in academic writing. For instance, Torabiardakani et al. (2015) examined the semantic functions of nine modal verbs in essays written by adult Iranian EFL learners, using the Wordsmith Tool for analysis. The findings indicated that learners frequently employed *can* and *could* to express "ability," while their use of these modals to denote "possibility" was limited. Similarly, *may* and *might* were more often used to indicate "possibility" than "permission." The modal *should* was primarily used to express "obligation" or "advice," and less so for "necessity." Likewise, *must* was used more for "obligation" than "necessity," while *will* and *would* were most often associated with "volition" rather than "prediction." Notably, *shall* was entirely absent in the students' writing.

In a related study, Kongpetch & Thienthong (2021) analyzed the use of nine core modal verbs in discussion essays by Thai EFL students. The most frequently used modals were *can*, *will*, *may*, and *should*, in that order. In contrast, *must*, *could*, *would*, and *might* were significantly underutilized. The analysis also revealed that the predominant semantic function was "possibility," particularly expressed through *can*.

Surjowati (2016) explored the use of both epistemic and deontic modality in argumentative essays written by Indonesian undergraduate students. The results showed a preference for using

modal auxiliaries to express deontic meanings, whereas epistemic modality was more often conveyed through multi-word expressions such as *I think*.

Using a contrastive corpus-based approach, Btoosh (2019) compared academic essays written by Jordanian Arabic-speaking university students with those of native English-speaking students from the U.S. and U.K. The study found that Jordanian students used modal verbs more frequently than their native-speaking counterparts. The most commonly used modals were *can*, *will*, *would*, *should*, and *must*, with an overuse of *must*, *can*, and *should*, and an underuse of epistemic modals such as *may*, *might*, *would*, and *could*. This tendency was attributed to cultural influences emphasizing certainty. Btoosh's findings align with earlier studies by Chunyu and Xuyan (2015), and Karanasiou (2017), which similarly noted that L2 learners often struggle with epistemic modality, tending to rely on a narrower range of expressions and favoring simpler syntactic structures.

In contrast, more recent work by Pemberton (2020) suggests that the use of modality devices (MDs) is influenced more by topic than by cultural background. The study revealed that L2 writers generally preferred hedging over boosting, challenging the conclusions of earlier research. Additionally, factors such as curriculum design, topic perception, and an overreliance on certain MDs were identified as significant influences on modality use.

In continuation of this argument, the present study aims to investigate how Vietnamese EFL learners employ epistemic modality in their academic writing, contributing a perspective from a different cultural and linguistic context.

3. Research Methods

3.1 Data Description

The participants in this study are English-majored sophomores during their Writing Module 3 course at the Faculty of Legal Foreign Languages, Hanoi Law University. This course, which is preceded by two previous pre-requisite writing courses dealing with academic writing from paragraphs to short essays, focuses on writing longer academic essays on different topics and genres. To get the data for this research, the students were asked to write individually in class for 40 minutes under the researcher's supervision (see Appendix 1). Among 56 essays collected, six out of the total number of essays were not satisfactory as they were off the genre (they were not opinion essays); therefore, 50 essays were eventually used for data analysis.

3.2 Data Analysis

To address the research questions, a mixed-methods approach combining both quantitative and qualitative techniques was employed. Each essay was segmented, counted, and analyzed at the sentence level, with sentences defined conventionally as units starting with a capital letter and ending with a period, question mark, or exclamation mark. Epistemic modality markers (EMMs) were then manually identified, classified, and cross-verified by two experienced educators, using the frameworks established by Bybee et al. (1994) and the categorization summarized by My Nhat and Dieu Minh (2019). Finally, the analysis included calculating the percentage of sentences containing epistemic modality, along with the frequency of EMMs according to their syntactic forms and degrees of certainty.

4. Results

Analysis of the 50 argumentative essays showed that nearly one-third of the sentences (266 out of 812) contained epistemic modality markers of varying types and degrees of strength. Notably,

epistemic modality was present in every essay examined. The number of markers employed per sentence ranged from one up to three. For instance,

- (1) Moreover, colleges *tend to* place a higher value on extracurricular activities than on work experience.
- (2) Furthermore, working alongside studying *can* help teenagers develop essential life skills that *might not* be effectively taught solely through academic subjects.
- (3) While part-time job critics *argue that* the time commitment required for a job *might* impede academic performance, effective time management *will* mitigate this concern.

Table 2 summarizes the data on the levels of writer commitment. The analysis revealed a strong preference for expressing probability, which accounted for 86% (454 out of 526) of all identified epistemic modality markers. For example,

- (4) *I think* schools should make it mandatory for all teenagers to spend a short time working as well as studying academic subjects.
- (5) A part-time job for high school students is *deemed* unnecessary.

Table 2: The percentage of three levels of commitments

| | Possibility | Probability | Certainty | Total |
|-------------|-------------|-------------|-----------|-------|
| No. of EMMs | 0 | 454 | 72 | 526 |
| Percentage | 0 | 86% | 14% | 100% |

Contrary to the predominance of probability, certainty appeared far less frequent at 14% (72/526) and, surprisingly enough, possibility was not employed once by the students. Some examples of certainty are shown in (6) and (7).

- (6) *It is said that* young people are not aware of the working environment and schools should send them to work placements so that they can work along with studying their main courses.
- (7) *It is true that* working is often linked to social skills, which are essential for personal and professional success.

Table 3 displays the distribution of different types of epistemic modality markers (EMMs) used in the students' essays. Notably, modal verbs dominate, comprising 65.78% of all instances, significantly exceeding the use of other device types. This finding is in line with the results reported by Btoosh (2019), Chunyu H. & Xuyan L. (2015), Surjowati (2016) and Karanasiou (2017) among others that modals are the most frequent markers of EM.

Table 3: The percentage of categories of epistemic devices

| | No. of EMMs | Percentage |
|---------------|-------------|-------------|
| Modal verbs | 346 | 65.78% |
| Lexical verbs | 78 | 14.83% |
| Adverbials | 60 | 11.41% |
| Adjectives | 22 | 4.18% |
| Nouns | 20 | 3.81% |
| Total | 526 | 100% |

To express their attitude and opinion towards the given statements, the student writers also made use of lexical verbs and adverbials, each accounting for 14.83% and 11.41% respectively. It is obvious that adjectives and nouns are the least frequent types of markers in the explored essays, accounting for less than 5% of the data analyzed. This finding is conclusive with Btoosh (2019), Chunyu H. & Xuyan L. (2015), and Karanasiou (2017 that adjectives and nouns are the most frequent makers of EM. In Surjowati (2016)'s study, it is found that multi-word units such as “*We hope that ...*”, “*I'm sure that...*”, “*The most important thing...*” were the least used by non-native speakers. As Surjowati adopted a different classification of EMMs into modal auxiliaries, lexical verbs and multi-word units, with the multi-word units comprising adverbials, adjectives and nouns. Therefore, it can be inferred that adjectives and nouns in Surjowati (2016)'s study are among the least used, which is the same conclusion reached in the current research. Examples of each category are shown in (8) to (12) as follows.

- (8) Networking *may* help youngsters establish their name in the professional filed.
- (9) I *believe* that teenagers should have a part-time job because it helps them learn more about the outside world.
- (10) *As far as we know*, teenage years are one of the most complicated times of human lives.
- (11) One *noticeable* advantage of part-time jobs is building students' reputation.
- (12) *There's a chance that* practical working environments will help students prepare for their future job.

With regard to modal verbs expressing probability, *can* and *will* (including their negative forms) are used most frequently. *Can* emerges as the most commonly used epistemic modal, representing 56.23% of all modal verb instances, followed by *will* at 29.73%. This pattern aligns with the frequency findings reported by Btoosh (2019) in learner corpora. The next most frequently used modals are *may* and *would*, accounting for 4.86% and 4.32%, respectively. In contrast, *could*, *might*, and *must* appear far less often, collectively making up only 4.86% of the modal verbs used in the analyzed essays.

Then, of the epistemic lexical verbs, the three most frequent items are ‘*think*’, ‘*believe*’ and ‘*argue*’, each representing 12.82%; the other lexical verbs utilized by the students include ‘*say*’, ‘*agree*’, ‘*disagree*’, ‘*suggest*’, ‘*tend*’, ‘*see*’, ‘*remember*’, ‘*overstate*’, ‘*ensure*’, ‘*contend*’, ‘*seem*’, ‘*deem*’, and ‘*find*’.

Concerning epistemic adverbials, the epistemic prepositional phrases, ‘*in my opinion*’ is of the highest use (21.88%). The others are ‘*in reality*’, ‘*in my point of view*’, “*to a large extent*” and ‘*as far as we know*’. Besides those epistemic prepositional phrases, some epistemic adverbs found in the essays included ‘*typically*’, ‘*honestly*’, “*strongly*”, “*firmly*”, “*totally*”, “*greatly*”, “*completely*”, “*incredibly*” and ‘*personally*’.

Epistemic adjectives are placed fourth in terms of frequency. It is particularly significant that, within this category, speakers made limited use of epistemic adjectives to express their commitment. Few adjectives found are: ‘*noticeable*’, ‘*popular*’, ‘*true*’, ‘*evident*’ and ‘*obvious*’. Nouns appear to be the least utilized lexical category for conveying epistemic meaning. Just two epistemic nouns can be found including ‘*chance*’ and ‘*potential*’.

The analysis points to a relationship between the kinds of EMMs used and the certainty they represent. The results reveal that certainty is expressed chiefly by epistemic lexical verbs such as “*agree*”, “*believe*”, “*ensure*”, “*argue*”, “*cannot be overstated*”, “*have to*” accounting for as high as 44%, followed by epistemic adjectives realizing certainty (for example, “*evident*”, “*true*” and ‘*obvious*’) with slightly over 28%. In contrast, epistemic modals emerge as the primary means of expressing probability, accounting for 79.74%.

5. Discussion

The findings of this study help to reinforce the importance of epistemic modality in opinion essays. Additionally, the observed patterns and tendencies in the use of epistemic modality align closely with those reported in previous research by Torabiardakani et al. (2015), Btoosh (2019), and Kongpetch & Thienthong (2021).

Regarding the extent of EM usage, it is evident that EM appears in every essay and nearly 33 percent of the sentences of the whole data are epistemically modalized. This finding reveals that EM constitutes a frequent semantic domain in argumentative essay writing. Specifically in this writing task, which focuses on education topic, the students are required to employ facts, explanations and examples to argue for their own opinion, thus EM are helpful as it enables the writers to justify their reasons.

As far as the levels of EM are concerned, there is an obviously high usage of the devices denoting probability over the degree of certainty. There are no markers of possibility. From rhetorical perspectives, the fact that the students underuse markers of certainty might be attributed to their lack of confidence in their own opinion. The employment of less overtly assertive statements might also prevent writers from facing potential criticism from the audience. Given that, it is understandable that probability EMMs are apparently preferred compared to possibility and certainty by the student writers.

Concerning the distribution of epistemic expressions, epistemic modals significantly outnumber the other types of devices. The predominance of epistemic modals can be resulted from its mobility and simplicity as suggested by Kärkkäinen (2003), which means modals can be inserted in any assertive propositions to soften its truth-value. Meanwhile, epistemic adjectives and nouns are the least frequently found categories.

6. Conclusions, Implications, and Limitations of the Study

6.1. Conclusions

The study is an in-depth analysis of EM in students' argumentative writing. The findings prove that EM is an outstanding semantic feature in this writing genre. Regarding the degree of the writers' commitment shown in their essays, a marked preference for the devices denoting probability was unfolded. The high frequency of probability seems to be reasonable as overtly assertive statements may pose a risk of facing potential criticism from the audience, while the ambiguity of possibility can also diminish the writers' arguments. Besides, the results of the study reveal a disproportion in the use of different types of EMMs. Thanks to its mobility and simplicity, epistemic modal auxiliaries are significantly preferred among the student writers while epistemic adjectives and nouns prove to be the least frequent types of markers in the data.

6.2. Pedagogical Implications

This research has pointed out that though ESL writers are well aware of the power of EM in argumentative writing, they tend to rely more on possibility-based expressions and considerably overuse modal verbs to convey their commitments. This tendency might result from several factors such as the difficult structure and multi-language function of EMMs, learners' low motivation in learning modality, or outdated textbooks and pedagogy. (Mahdi, A. A, 2021).

Therefore, it is hoped that the findings of this study can be used as a basis for improving the current and potential writing courses at the researcher's educational institution. As for writing instructors, based on the statistics which indicate the students' repeated use of a small range of

epistemic devices, it is suggested that explicit instruction on less common EMMs should be integrated into academic writing courses. More exercises focusing on varied epistemic devices namely epistemic lexical verbs, adverbs, nouns and adjectives should also be added to the course materials. Additionally, ESL learners are recommended to make a greater effort to acquire and utilize a great variety of EM devices in their argumentative writing.

6.3. Suggestions for Further Research

Although the three research questions have been answered in this study, there remain some unavoidable limitations which need to be addressed in future research. Firstly, due to the limited number of participants, the findings in this study cannot be generalized on a larger scale. Also, since the data is collected from one essay topic regarding *education*, it would be instructive to investigate a wider population of participants and explore the use of EM in more essays on more topics other than *education*. Secondly, the data of this research is collected entirely from the students' written essays; thus, it is impossible to conduct deeper investigation on students' reasons for using such EMMs, their perceptions on epistemic modality or their EM learning strategies. Thus, further studies should employ more research instruments in order to draw a wider picture of the phenomenon. Additionally, technological tools should be utilized to ensure the data is accurate and free from bias. Finally, no comparison was made regarding the use of EMMs in the argumentative essays written by the English native writers and Vietnamese ESL writers. Therefore, conclusions about the employment of EM across the two groups cannot be reached. As a result, it is advisable for this approach to be included in later studies.

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