

Nghiên cứu các đặc trưng cú pháp của các phương tiện biểu đạt nghĩa tình thái trong bài báo khoa học viết bằng tiếng Anh

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TÓM TẮT

Công trình nghiên cứu các đặc trưng cú pháp của các phương tiện biểu đạt nghĩa tình thái trong bài báo khoa học viết bằng tiếng Anh trong chuyên ngành ngôn ngữ học ứng dụng. Công trình so sánh các cách biểu đạt nghĩa tình thái trong hai nhóm bài báo - bài đăng trên tạp chí quốc tế và bài đăng trên tạp chí chuyên ngành trong nước chưa thuộc danh mục Scopus của các tác giả là người Việt. Cứ liệu khảo sát là 30 bài báo khoa học, gồm 15 bài từ tạp chí *English for Specific Purposes* và 15 bài từ tạp chí *VNU Journal of Foreign Studies*. Kết quả nghiên cứu cho thấy trong số các phương tiện được thống kê, động từ tình thái chiếm một tỷ lệ vượt trội trong cả hai nhóm khảo sát; các động từ, trạng từ, tính từ, và danh từ lẩn lượt chiếm các tỷ lệ thấp hơn.

Từ khóa: Nghĩa tình thái, bài báo khoa học, đặc trưng cú pháp.

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A study on syntactic features of linguistic means expressing modality in English-medium research articles

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ABSTRACT

The present paper aims to shed light upon the employment of modality markers in the English-medium research articles in the discipline of applied linguistics. The study set out to investigate the syntactic features of the means denoting modality across two groups of authors - the international researchers and the Vietnamese researchers. Data were 30 research papers from *English for Specific Purposes* and *VNU Journal of Foreign Studies*. The findings indicate that the most common markers employed in both groups are modal verbs, followed by verbs, adverbs, adjectives, and nouns, in a descending order. Comparatively, the international articles present a wider range of expressions while those by the Vietnamese authors reveal a predominance of modal verbs. It is expected that issues unfolded from this study could theoretically contribute to a better understanding of modality in research papers in general and in those in the discipline of applied linguistics in particular; practically, the study is also hoped to promote the Vietnamese researchers in their endeavor to join the international academic community.

Keywords: *Modality, research article, syntactic features.*

1. INTRODUCTION

Modality, which is concerned with the speakers'/ writers' opinion and attitude towards the propositional content, has become the centrality of innumerable studies for decades. Regarding the field of academic written discourse, the implementation of modality markers has been explicitly acknowledged to enable authors to convey their stance, affection or judgment both to the propositions they make and to the readers, as well as to modify their statements and avoid the risk of face-threatening communicative activity on the potential addressees.¹ The proper use of modality would substantially support the pragmatic aspect in academic writing,^{2,3} assist scholars in accurately expressing their research findings,⁴ and also reflect an advanced level of both linguistic and pragmatic proficiency in the written mode.⁵ As research articles

(RAs) predominantly aim at an international audience, English, as the medium of research communication, has increasingly established itself as the lingua franca in academia.⁶ Since English-medium manuscripts submitted for publication in international journals would be judged by a panel of globally acclaimed editors and reviewers, it is essential that non-native researchers learn from insiders so as to fully develop the knowledge, skills and identity of that mainstream disciplinary community.⁷

This key linguistic notion in RAs presents a considerable challenge to non-native English researchers, which might be due to their imperfect language proficiency, native language transfer, and cultural transfer. Another explanation might be the underestimation and partial presentation of this phenomenon in the teacher and student textbooks, as well as in language teaching classrooms.^{4,8}

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However, the large number of cross-cultural and cross-disciplinary studies on modality in academic written genre has mainly centered around one of its subcategories, such as epistemic modality,⁹ or one type of its markers - predominantly modal verbs,^{1,4,10,11} leaving other modality devices rarely examined. This study is aimed to fill in this gap, investigating the various means to denote modality, namely five syntactic classes - modal verbs, lexical verbs, adverbs, adjectives, and nouns.

The main target of this study is to investigate the manipulation of modality in the RAs in the discipline of Applied Linguistics from a comparative perspective. The questions this research is aimed to answer are: (1) *What are the predominant syntactic features of linguistic means expressing modality in the RAs in applied linguistics?* (2) *To what extent do the syntactic features vary between two groups of authors - namely the international and the Vietnamese authors - in the investigated RAs?*

2. LITERATURE REVIEW

2.1. Modality

2.1.1. Definition

It is claimed that modality remains "one of the few slippery notions employed in linguistics that resists any satisfactory formal definition".¹² Various scholars relate the term '*modality*' to speaker's/writer's subjective stance. It has been widely argued that language is not merely used to convey factual information about the truth of the proposition contained in an utterance but also to express one's attitudes, opinions, ideas and ideologies about the events.¹³ To others, modality realizes the speaker's "opinion or attitude towards the proposition that the sentence expresses or the situation that the proposition describes".^{14,15} Modality can also be defined as the linguistic encoding¹⁶ or grammaticalization¹⁷ of the beliefs, subjective attitudes and opinions of the speaker/writer towards the proposition manifested. Modality is referred to as a speaker's/writer's attitude toward or opinion about the truth of a proposition expressed by a sentence as

well as the attitude toward the situation or event described by that sentence.¹⁸ Along the same line, at its most general, modality may be considered as "the manner in which the meaning of a clause is qualified so as to reflect the speaker's judgment of the likelihood of the proposition it expresses being true".¹⁹

In general, it is noted that with each scholar having their own way to approach the fuzzy notion of modality, a clear-cut definition of the term has not yet been determined. This paper, however, will consider modality as the realization of the speaker's/writer's opinion or attitude towards the situation of the proposition, or the proposition itself.¹⁵

2.1.2. Classification

This paper employs a threefold division of epistemic, deontic, and dynamic to differentiate modality.

Epistemic modality is considered to be "the simplest type of modality to deal with" as it is both syntactically and semantically distinct from others, and it has "the greatest degree of internal regularity and completeness".¹⁵ Epistemic modality is defined as "the modality of propositions" rather than of actions, states, events, etc. as it applies to any modal system that does not indicate a factual assertion but the speaker's judgments about the truth of the proposition, evaluating the possibility that "something is or is not the case".¹⁵

Conventionally, there seems to be a tacit agreement among linguists when it comes to the interpretation of deontic modality, which has been regarded as obligation and permission attached to the performance of certain actions.^{14,15,18} Generally, deontic modality is concerned with influencing actions, states or events as via its markers, a speaker may give permission, lay an obligation or make a promise or threat.¹⁵

The tradition of conflating dynamic and deontic modality has led to a lack of original materials concerning this domain. However, as the differences between these two domains are relatively apparent, it is essential to factor

dynamic out from deontic modality. Dynamic modality is concerned with “the ability or volition of the subject of the sentence, rather than the opinions (epistemic) or attitudes (deontic) of the speaker (and addressee)”.¹⁵ As the sense of ability or willingness that dynamic modality relates to originates from the individual concerned, it is reasonable to consider it to be subject-oriented.¹⁵

2.1.3. Modality Markers

It has been commonly agreed that the most pervasive and principal means of modality expressions is modal verbs, which serve to “give more information about the function of the main verbs that follow them”.²⁰ Nine **central modals** used to express modality are *can*, *could*, *may*, *might*, *shall*, *should*, *will*, *would* and *must*.¹⁶ Meanwhile, *need*, *dare*, *used to* and *ought to* are listed under the category of **marginal modals**.¹⁶ Another widely recognized subtype is that of **quasi modals**, a periphrastic modal form that are “formally distinguishable from, but semantically similar to the modal auxiliaries”.²¹ Within the set of quasi modals, modal idioms and semi-auxiliaries are distinguished as follows:¹⁹

- Modal idioms (those that have an auxiliary as their first element): *had better*, *would rather*, *be to*, *have got to*, *had best*, *would*

Table 1. Lexical epistemic markers.

| Word class | Lexical epistemic markers |
|----------------------------|---|
| <i>Lexical verbs</i> | allege, appear, argue, assume, attest, believe, bet, calculate, claim, conclude, consider, doubt, estimate, expect, fear, feel (like), figure, find, gather, guess, hope, imagine, imply, indicate, infer, know, look (like)/(as if), presume, propose, reckon, (would) say, seem (like), sound (like), speculate, suggest, suppose, suspect, tend, think |
| <i>Adverbs</i> | actually, allegedly, apparently, arguably, assuredly, certainly, clearly, conceivably, doubtlessly, decidedly, definitely, evidently, uncontestedly, for me, in my mind, in my opinion, in my view, in truth, incontrovertibly, indeed, indisputably, indubitably, inevitably, likely, manifestly, maybe, naturally, necessarily, needless to say, obviously, of course, ostensibly, patently, perhaps, plainly, possibly, presumably, probably, purportedly, reputedly, seemingly, so far as appeared, supposedly, sure, surely, to me, to my mind, unarguably, unavoidably, undeniably, undoubtedly, unquestionably |
| <i>Adjectives</i> | apparent, certain, clear, confident, convinced, doubtful, doubtless, evident, (un)likely, obvious, positive, possible, (im)probable, sure, true |
| <i>Nouns/ Noun phrases</i> | assumption, belief, certainty, chance, claim, danger, (beyond/ no/ without) doubt, estimate, estimation, evidence, fear, guess, hope, indication, likelihood, odds, opinion, possibility, potential, probability, question, speculation, tendency, theory |

sooner/ would (just) as soon, may/might (just) as well;

- Semi-auxiliaries (those that do not contain an auxiliary as their first element, but in most cases involve *be* and a lexical item): *have to*, *be (un)able to*, *be about to*, *be bound to*, *be going to*, *be obliged to*, *be supposed to*, *be (un)willing to*, *be apt to*, *be due to*, *be likely to*, *be meant to*.

Unlike modal verbs, lexical devices - lexical verbs, adverbs, adjectives, and nouns - have received a disproportionate amount of attention from linguists as there exists a long tradition to solely or predominantly concentrate on the modal verbs and exclude other expressions.²² However, the studies of modality in large amounts of discourse show a wide range of lexical items carrying modal meanings.²³ The analyses reveal that, put together, other word classes may express modality more frequently than modal verbs, and that lexical verbs and adverbs appear considerably more often than nouns and adjectives.

Drawn heavily on the results of the previous studies on this domain,^{7,13,16,19,24-28} the list of potential epistemic lexical items is presented in Table 1 and that of deontic lexical items is presented in Table 2.

Table 2. Lexical deontic markers.

| Word class | Lexical deontic markers |
|----------------------|---|
| <i>Lexical verbs</i> | advise, allow, ask, authorize, constrain, convince, force, indicate, menace, oblige, order, permit, promise, recommend, request, require, suppose, suggest, threaten, undertake, urge, warn |
| <i>Adverbs</i> | compulsorily, mandatorily, necessarily, obligatorily |
| <i>Adjectives</i> | advisable, appropriate, compulsory, critical, crucial, desirable, essential, expedient, fitting, good, important, indispensable, mandatory, necessary, needful, obligatory, possible, proper, vital |
| <i>Nouns</i> | necessity, order, permission, proposal, requirement, suggestion |

2.2. Previous Studies

The employment of modality in academic writing in general and in RAs in particular has become the frequent subject of various scientific papers in recent years. Some examine how *must*, *may* and *might* are used in chemical research reports as well as the level of certainty assigned to each of them,¹¹ or report on how different native and non-native English speakers employ *can(not)* and *could(not)* in both academic and informal texts to conclude that non-natives seem to overuse modal verbs in academic texts.¹⁰ The tendency of English learners to overuse modal verbs is also revealed in some studies,⁴ which look at modal verbs in academic writing produced by students and professionals. In addition to syntactic features, semantic aspects are investigated as well; researchers examine the meanings and functions of nine central modal verbs in the RAs, focusing on the differences between Linguistics and Engineering RAs. The findings indicate that modal markers appear the most in the Introduction and Conclusion section of the Linguistics RAs whereas the Background and Method segments in Engineering RAs contain the largest number of modal verbs. Semantically, epistemic modality is also found to be most frequently used, especially in the Introduction, Background and Method sections of Engineering RAs and in the Discussion and Conclusion sections of Linguistics RAs.¹

3. METHODOLOGY

3.1. Data Collection

The data includes an international subset of 15

RAs and a Vietnamese subset of 15 RAs. RAs in the international subset were selected from *English for Specific Purposes*, a well-established journal in the discipline of applied linguistics which takes a worldwide interest in all branches of the subject. The journal is included in the Social Science Citation Index, an indicator of quality research publication, which marks its reputation and credibility. RAs in the Vietnamese subset were taken from *VNU Journal of Foreign Studies*, a serial publication launched as part of the *VNU Journal of Science*. *VNU Journal of Foreign Studies* is an official and independent publication of the University of Languages and International Studies (ULIS) under Vietnam National University (VNU). The journal mainly concerns linguistics, foreign language education, international studies and related social sciences and humanities.

Traditionally, *English for Specific Purposes* publishes four volumes a year. On the other hand, *VNU Journal of Foreign Studies* releases bimonthly four English editions and two Vietnamese ones. The RAs collected for this study are from the former. The RAs in this research were compiled from the latest issues in the three most recent years since the data collection process began, which was in June 2019.

Between 2017 and June 2019, *English for Specific Purposes* contains 71 RAs whereas *VNU Journal of Foreign Studies* includes 73 English-medium RAs in total. The examination of the RAs collected reveals that while all RAs in *English for Specific Purposes* concern Applied Linguistics, 13 out of 73 RAs in *VNU Journal of*

Foreign Studies are those of Pure/ Theoretical Linguistics. To ensure consistency, 13 RAs of the Pure/ Theoretical Linguistics discipline were excluded. Additionally, three RAs in the Vietnamese journal which were found to be written by foreigners, not native Vietnamese writers, were also discarded. The criteria for the RAs to have been included as data were: they concern applied linguistics, not pure/ theoretical linguistics; they consist of five sections - *Introduction, Literature review, Method, Results and Discussion, and Conclusion*.

The 30 English-medium RAs which had been chosen based on the abovementioned

Table 3. Word count of two subsets.

| | Minimum length (words) | Maximum length (words) | Mean length (words) | Total word count (words) |
|----------------------|---------------------------|---------------------------|------------------------|-----------------------------|
| International subset | 5551 | 10,985 | 7,898.4 | 118,476 |
| Vietnamese subset | 2746 | 7912 | 5,088.0 | 76,320 |
| Total | | | 6,493.2 | 194,796 |

3.2. Data Analysis

3.2.1. Identification and categorization of markers

For each RA in the corpus, a manual verification was carried out in order to identify and categorize the modality markers into: Modal verbs, Verbs (lexical verbs), Adverbs (including adverbs and expressions functioning as adverbs), Adjectives, and Nouns. As mentioned above, the notion of modal verbs covers central modals, marginal modals and quasi modals. However, for the sake of simplicity, in this study *modal verb* serves as an umbrella term, subsuming all these categories. In addition, as semi-auxiliaries/ lexico-modals, a subtype of quasi modals, lie closer to main verbs than other subcategories²⁶, items belonging to this subclass or those that are closely related to lexical items would be treated as such. For instance, *be (un)able to*, or *be likely to* would be classified as adjectives, and *be obliged to* or *be supposed to* will be considered as lexical verbs. To serve the purpose of this investigation, the items categorized as modal verbs in this study are as follows: *be about to*, *be going to*, *be to*,

criteria and steps were compiled and downloaded as PDF files. Then the files were converted into text documents. Redundant details were also excluded to prepare the texts for later full-scale investigation. These details involve (1) information about author(s), volume and issue of the journal; (2) sections of abstract, acknowledgement, references, appendices; and (3) endnotes, page number, and all figures, tables, charts, and diagrams. The total word count of RAs chosen varies from texts to texts, but RAs by international writers would generally be of longer length than those by Vietnamese ones. The word count of each subset is presented in Table 3.

can, could, dare, had best, had better, have got to, have to, may, might, must, need, ought to, shall, should, used to, will, would, would rather, would sooner, would (just) as soon.

3.2.2. Calculation of Occurrence Frequencies

Since the texts in the corpus are not of the same length, the comparison of raw frequencies might lead to biased and unreliable results. A normed frequency allows users to know how many times an item occurs per X words of running texts, which represents the base of normalization.²⁹ Thus, to gain normed frequencies, researchers need to take the raw frequency of an item appearing in one section, divide it by the size of that section, and then multiply the result by the base of normalization. The base of normalization would depend on the size of the corpus: it could be set to per 1 million words of running texts if the corpus is of approximately 100 million words, or per 10,000 words of running texts if the corpus is of 1 million words.⁷ As the overall size of the present corpus is nearly 200,000 words, it is justifiable to

set the base of normalization at per 1,000 words of running texts. The formula to convert each frequency into a value per a thousand words is as follows: $F_N = F_o * 1000/C$, with F_N : the normalized frequency; F_o : the observed frequency; C : the corpus size. For instance, if it is found that there exist 1,604 occurrences of an item in Corpus A, which contains 481,988 words, the normalized frequency of the item in the corpus will be: $F = 1604 * 1000 / 481988 = 3.33$.

It was these normed frequencies that were based on to describe findings concerning the distribution of modality markers between the two subsets of data.

4. RESULTS AND DISCUSSION

4.1. Results

The data analysis discloses that the 30-text corpus consists of a total of 194,796 words,

3,053 of which are markers denoting modality. In detail, regarding RAs by international researchers, it is found that the 118,476-word subset includes 1,908 tokens of modality markers. Meanwhile, the RAs by Vietnamese authors, which are approximately 1.5 times shorter in length (76,320 vs. 118,476), contain 1,145 cases of modality realization in total. Looking at the raw tokens, it seems that international writers make use of a much larger number of modality devices; however, the normalized value indicates that the overall occurrences of modality markers employed by international authors are only slightly higher than those of Vietnamese researchers, with the distribution per 1,000 words being 16.10 and 15.00 respectively. The frequencies of modality markers found in the entire RAs produced by the two groups of authors are summarized in Table 4.

Table 4. Distribution of modality markers in the entire RAs.

| | C | F_o | F_N |
|----------------------|----------------|--------------|--------------|
| International subset | 118,476 | 1,908 | 16.10 |
| Vietnamese subset | 76,320 | 1,145 | 15.00 |
| Total | 194,796 | 3,053 | 15.67 |

Note. C = corpus size (words); F_o = observed frequency (occurrences); F_N = normalized frequency (occurrences per 1,000 words)

Figure 1 presents the proportion of modality subcategories regarding syntactic features in two subsets.

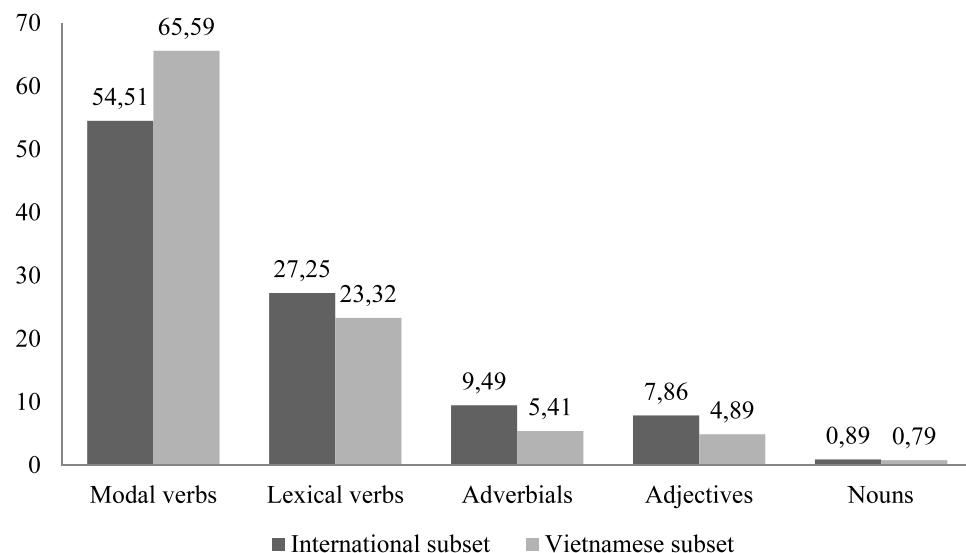


Figure 1. Percentage of syntactic subtypes.

As can be seen from Figure 1, it is noticeable that all five types of modality markers are made use of in the corpus, among which modal verbs are the most favored one. Additionally, it is worth pointing out that except for the category of modal verbs, international writers generally employ more modality markers of all the other lexical categories than their Vietnamese counterparts. In detail, modal verbs are found to be preponderant; this modality subtype significantly outnumbers other sorts of devices in both groups, making up over half of the total percentage in both groups with 54.51% and 65.59% in the international and Vietnamese subsets, respectively. The overall results show that writers also make great use of lexical verbs, which account for 27.25% in the international data set, slightly larger than that in the Vietnamese set, which constitute 23.32%. It is apparent that modality adverbs, adjectives, and nouns are less frequent types of markers in the corpus. Adverbs and adjectives are found to account for less than 10% in the international subset, taking up only 9.49% and 7.86% respectively. Meanwhile, the percentage of these two kinds of markers in the Vietnamese subcorpus is relatively smaller, just 5.41% for adverbs and 4.89% for adjectives. Nouns denoting modality are seldom used by both groups of scholars, comprising less than 1% in both subsets - with 0.89% in the international subset and 0.79% in the Vietnamese one.

At first look, it can be seen that modal verbs significantly outnumber other types with 1,791 occurrences in total, indicating that they are broadly preferred by both international and Vietnamese authors. Throughout the corpus, it is noticed that the same modal can be used to denote different modal meanings, which has clearly evidenced the polysemous characteristics of modal verbs. The following examples illustrate the use of this type of realization in the corpus.

(1) *The result of their study reveals that by specifying the learning goal of each language lesson, the teacher can reduce the learning stress, create a favourable and active learning*

environment and help learners build their goal management skills. [I1905]⁽¹⁾

(2) *On the one hand the strategy of preservation serves to perpetuate the exoticism of the original, but on the other hand it can be tough for the general recipients in Vietnam to explore the semantic implications conveyed through this meaningful name. [V1802]*

(3) *Actually, teachers could not improve the intercultural integration practices due to the overwhelming focus on teaching EFL [...]. Without comprehensive pedagogical apprehension, teachers could make intercultural integration dissociating and superficial (Sercu et al., 2005). [V1901]*

(4) *Another possible inference to be made from our cluster analysis is that the disciplines' comparability in the use of steps may be indicative of 'fast' and 'slow' Methods sections (Swales & Fpeak, 1994, 2000). [I1703]*

As can be seen from the above sentences, it is clear that the modal verb *can*, *could* and *may* can denote both epistemic and dynamic meaning. In (1), *can* is to indicate teachers' ability to improve their students' skills by specifying the learning objective of each lesson, whereas in (2), *can* refers to the possibility that Vietnamese readers cannot fully understand the semantic implications of the writer. Similarly, the first use of *could* in (3) carries the dynamic meaning as it concerns teachers' inability to enhance the intercultural integration practices while the second *could* is a marker of epistemic modality as it expresses the likelihood that teachers might turn the subject of intercultural integration into something dissociating and superficial. In the same vein, *may* is used to denote what is likely to happen - an epistemic meaning in (4).

The aforementioned instances also serve to prove that each modality type can be realized by various modal verbs, as both epistemic and dynamic modality can be expressed via the use of *can*, *could* and *may*. As for dynamic modality,

its mostly used markers are *should*, *must*, and *have to*. For example:

(5) [...], teachers should equip themselves with an understanding of English issues, in particular WE, to build students' appropriate understanding and attitudes to the importance of WE in English learning and in communication.

[V1701]

(6) [...], to become a modal lexical device, propositional attitude verbs like non-factive verbs must satisfy the following distinctive features: [...] [V1805]

(7) In order to interpret an utterance, a hearer first has to decode the message which is represented by "linguistically encoded logical form" and [...]. [V1904]

The overall results show that authors in both groups also make great use of lexical verbs, ranked second after modal verbs. For instance:

(8) In short, some of the primary doubts surrounding the efficacy of learning language through literature seem to be rooted in notions of insufficient learner payoff. [I1705]

(9) Business communication textbooks, for example, take little notice of this phenomenon, and tend to treat texts as standalone, decontextualised entities (Bremner, 2008). [I1805]

(10) RT's major claim is that cognitive processes in human beings are supposed to obtain as great "cognitive effect" as possible while making as little "processing effort" as possible (Sperber & Wilson, 1995, p. vii). [V1904]

(11) Moreover, like many other countries in the world, Vietnam higher education has applied a credit system for recent years. Under this system, students are required to rely more on themselves in learning rather than on their instructors in classroom. [V1801]

It is apparent that adverbs and adjectives are much less common than the other two

categories. Specifically, in 243 adverbs used, 181 tokens are found in the international subcorpus, and the other 62 occurrences belong to the Vietnamese subset. As regards adjectives, international and Vietnamese researchers employ respectively 150 and 56 items, amounting to a total of 206 markers in general. For example:

(12) Perhaps the most common cultural comparison, however, has been between 'English' and 'Asian' writing, [...]. [I1905]

(13) The letter is the most read portion [...], possibly the most broadly consumed business genre (Lee & Tweedie, 1981), and while it is ostensibly intended to present objective information, the letters engage in the evaluation of various entities [...]. [I1704]

(14) Specifically, the research seeks to provide a more contextualized understanding of where SFF fits as a resource for L2 vocabulary learning among the broader, seemingly dichotomous categories of "academic" and "nonacademic" writing, as well as [...]. [I1705]

(15) The understanding of such conventions is thus imperative for both producing and evaluating grant applications. [I1904]

(16) To examine conversational opening strategies, it is vital to clarify the meaning of the concept "opening". [V1703]

(17) It is evident that the metaphoric images of love are not strange but the problem is pointed out here is really uncommon. [V1702]

The least frequent type of modality markers in the corpus is nouns. With 17 cases from the international subset and only 9 tokens from the Vietnamese one, this category makes up a humble number of just 26 items in the entire data set. For example:

(18) Luo and Tsai (2002) also discussed the possibility that, because of their perceived low ability, these students may develop "learned helplessness" [...]. [I1801]

(19) In a number of instances the use or

omission of the definite article had the potential to result in misunderstanding, as seen below: [...] [I1805]

(20) While this does not explicitly cover all fourteen of the subjects represented in Coxhead and Hirsh's list, there is a good chance of overlap, as the subjects are pooled in much more general categories. [I1705]

(21) Yet there was likelihood that these two forms placed medium impacts rather than high impacts on the attendees. [V1902]

4.2. Discussion

The examination into the frequency of modality realization in the corpus reveals that modal verbs significantly outnumber the other types of modality realization, which has previously confirmed in previous studies.^{30,31} Scholars' strong preference for modal verbs can be attributed to its syntactic and semantic features.

Syntactically, modal verbs have a high level of mobility, which means they could be integrated with various grammatical forms functioning as the subject. In other words, modal verbs can follow personal pronouns (e.g. *He might be right*), noun phrases (e.g. *This problem can be solved easily*), nominal clauses (e.g. *What you do now will clearly affect your future*), prepositional phrases (e.g. *After seven might be a good time to meet*) and the impersonal *it* (e.g. *It could be a good idea*) or the existential *there* (e.g. *There should be a lot of butterflies in the garden*) to form a sentence. On the other hand, other types of modality actualization seem to occur within more fixed expressions. Specifically, some verbs need to be in the passive voice in order to carry modality meaning. For instance, the verb *suppose* in its active form does not convey a deontic meaning; however, its passive form *be supposed to* expresses the sense of expectation or requirement for a certain action (e.g. *He is supposed to be here at 10 a.m.*). Similarly, some adjectives and nouns only appear in certain patterns, such as *be able to*, *it is essential to*, *have a tendency to*, *there is a probability that*, etc.

Adverbs seem more flexible as they can appear at the beginning of a sentence (e.g. *Obviously it is correct*); however, in academic writing, this use rarely happens. Modal adverbs in the corpus mostly go with verbs, which would somewhat restrict their occurrences.

Semantically, the polysemous characteristic of modal verbs indicates that one modal could convey more than one meaning. This versatility enables modal verbs to be used in various situations, which possibly explains the highest tokens of modal verbs in the corpus. In contrast, other types of modality markers tend to exclusively denote one modality meaning only. For example, lexical verbs denoting possibility like *seem* or *tend* are exclusively epistemic. In the same vein, the adjective *able* is solely used to express dynamic meaning while *likely* is merely an epistemic marker. Also, such adjectives as *important*, *essential*, *vital*, *imperative* (used with the structure *It is + adjective + to infinitive*) can only convey deontic meaning. In addition, it should be noted that while all modal verbs convey modal meaning, other types of markers can only be classified as modality markers if they convey modal meaning in the specific context. For instance, the verb *find* in *I find it hard to accept the fact* will be an epistemic marker as it denotes personal feeling and opinion while the verb *find* in *I find the key under the bed* is not. Likewise, the adjective *important* in *The Internet plays an important part in our lives* is not considered a modality marker, but *important* in *It is important to be there on time* will be listed as a modality marker.

Comparatively speaking, it should be mentioned that modal verbs account for 65.59% of all modality markers in the Vietnamese subset, higher than the proportion found in the international one, which is 54.51%. The fact that Vietnamese writers employ a higher percentage of modal verbs in their RAs than international authors also indicates that the proportion of other types of markers in the Vietnamese group is smaller than that in the international one. As

modality can be conveyed not only through modal verbs but also through markers of different syntactic categories, the underuse of a variety of lexical means might suggest that Vietnamese researchers' repertoire of linguistic resources to denote modality is to some extent limited. Vietnamese authors are likely to have a more limited and basic list of vocabulary to convey modality as they tend to use a restricted and repeated number of markers, while international writers employ a relatively wide range of specialized linguistic devices such as:

(22) *It is plausible that [...].* [I1702]

(23) *It is evident in Figure 4c that [...].* [I1703]

(24) *This exchange shows the two workers continuing to gripe about the seeming contradictions in the client's design specifications.* [I1803]

(25) *[...] the differences in syntax and vocabulary likely have implications for rate and rhythm as well as perception and production of Aviation English.* [I1903]

(26) *[...] it is likely clear from the above discussion that disciplinary literacy shares much in common with English for Specific Purposes, despite these being ostensibly different fields of research in different educational contexts.* [I1901]

(27) *The metaphorical nature of this time continuum and the company's linear and purportedly inevitable [...].* [I1704]

(28) *There is, to be sure, a cultural dimension to this behavior, which [...].* [I1702]

(29) *While it was never directly discussed, his status as a former air force pilot in all probability helped him to secure venture capital funding [...].* [I1803]

(30) *[...] these differences have a tendency to become essentialized [...].* [I1905]

(31) *There is therefore a sense that Mei is drawing on both [...].* [I1905]

5. CONCLUSION

This paper reports an investigation into the syntactic means to denote modality in linguistics English-medium RAs by two groups of writers – the international researchers and the Vietnamese authors. Overall, the results suggest that modal verbs are the most preferred type of modality markers in both subsets. This clear dominance might be due to its high level of mobility and polysemous characteristic. Lexical verbs rank second. Adverbs and adjectives are much less frequent. Nouns are the least commonly used type of markers. From the comparison perspective, international writers are found to utilize more modality devices than Vietnamese fellows in every syntactic category except for modal verbs. The high proportion of modal verbs in the Vietnamese subset is somewhat equal to the underuse of other lexical means, which might hint that Vietnamese authors are not very proficient at the employment of various linguistic resources denoting modality.

It is hoped that this research paper could theoretically and practically contribute to a better understanding of modality and attract more attention to this domain. Theoretically, the overall picture of the modality employment in Linguistics RAs drawn from this study confirms the prevalence and significance of modality in RAs in particular and in scholarly written genre in general, thus pointing out the need for further studies on this notion in the future. Practically, the investigation into the modality use of both international and Vietnamese authors offers authentic models of commonly used modality markers in RAs and the writers' strategies and preference when expressing modality. It is expected that this knowledge would benefit the teaching and learning of modality in academic institutions as well as assist undergraduates and postgraduates in their thesis writing process. Additionally, the detailed description of the resemblances and discrepancies in the employment of modality between Vietnamese academics and their international counterparts is

believed to help Vietnamese researchers construct more stylistically appropriate RAs, adhering to the conventions and requirements laid down by international academic communities.

Although the research has reached its aims, there remain some unavoidable limitations which need to be acknowledged and addressed in future research. Firstly, the present paper applies the term '*international*' as a reference to authors whose works are published in the *English for Specific Purposes* journal; there is no uniformity regarding their nationalities. In other words, these writers may be native and non-native English speakers. Future analyses could therefore focus on only those written by English native speakers. Additionally, as this study only focuses on RAs written in English, RAs in Vietnamese are left unexplored. As a result, investigations in the future could look into the employment of modality in Vietnamese-medium and English-medium RAs in *VNU Journal of Foreign Studies*, a credible and widely-circulated Linguistics journal within the academic community in Vietnam.

⁽¹⁾ For the examples, I stands for articles by international writers, V Vietnamese writers; 17, 18, 19 for the year of 2017, 2018, 2019 respectively; 01-05 for the order of the RA in each subset of data.

REFERENCES

1. J. I. Marín-Arrese, J. Lavid-López, M. Carretero, E. D. Romero, M. V. M de la Rosa, & M. P. Blanco. Variation and function of modals in linguistics and engineering research papers in English. *Evidentiality and modality in European languages: Discourse-pragmatic perspectives*, Peter Lang, New York, 2017, 277-309.
2. K. Hyland. Hedging in academic writing and EAP textbooks, *English for Specific Purposes*, 1994, 13(3), 239-256.
3. G. Myers. The pragmatics of politeness in scientific articles, *Applied Linguistics*, 1989, 10(1), 1-35.
4. X. Yang. A corpus-based study of modal verbs in Chinese learners' academic writing, *English Language Teaching*, 2018, 11(2), 122-130.
5. H. Chen. Contrastive learner corpus analysis of epistemic modality and interlanguage pragmatic competence in L2 writing, *Arizona Working Papers in SLA & Teaching*, 2010, 17, 27-51.
6. D. Belcher. English for professional academic purposes: Writing for scholarly publication. *Teaching language purposefully: English for specific purposes in theory and practice*, Cambridge University Press, New York, 2007, 1-27.
7. R. S. Ngula. *Epistemic modality in social science research articles written by Ghanaian authors: A corpus-based study of disciplinary and native vs. non-native variations*, unpublished doctoral dissertation, Department of Linguistics and English Language, Lancaster University, United Kingdom, 2015.
8. L. Efstathiadi. *Epistemic modality markers in L1 and L2 discourse of modern Greek: A corpus-based study*, unpublished manuscript, School of English, Aristotle University of Thessaloniki, 2010.
9. A. Yang, S. Zheng & G. Ge. Epistemic modality in English-medium medical research articles: A systemic functional perspective, *English for Specific Purposes*, 2015, 38, 1-10.
10. J. F. G. Bonilla. The use of the epistemic and deontic modality in the modal verb "can" between English native and Spanish non-native students in the written discourse, *JACLR: Journal of Artistic Creation & Literary Research*, 2017, 5(2), 13-24.
11. A. K. Yamazaki. The pragmatic function of modal verbs in scientific papers, *The Report of Tokyo University of Fisheries*, 2001, 36, 17-29.
12. M. V. Stamatović. Scaling deontic modality in parliamentary discourse, *Logos et Littera: Journal of Interdisciplinary Approaches to Text*, 2016, 131-149.
13. N. A. Aidinlou & S. Mohammadpour. An investigation of epistemic modality in literary texts, *International J. Soc. Sci. & Education*, 2012, 2(4), 729-737.

14. J. Lyons. *Semantics*, vol. 2, Cambridge University Press, Cambridge, 1977.
15. F. R. Palmer. *Modality and the English modals*, 2nd edition, Routledge, New York, USA, 2013.
16. D. Biber, S. Johansson, G. Leech, S. Conrad, & E. Finegan. *Longman grammar of spoken and written English*, Pearson Education Limited, Harlow, 1999.
17. J. Bybee, R. Perkins, & W. Pagliuca. *The evolution of grammar: Tense, aspect and modality in the languages of the world*, University of Chicago Press, Chicago, 1994.
18. P. Simpson. *Language, ideology and point of view*, Routledge, London, 1993.
19. R. Quirk, S. Greenbaum, G. Leech, & J. Svartvik. *A comprehensive grammar of the English language*, Longman, Harlow, 1985.
20. K. K. Olaniyan, & A. Adeniji. Modality in statement of objectives in arts-based research article abstracts, *British Journal of English Linguistics*, **2015**, 3(1), 42-51.
21. P. Collins. *Modals and quasi-modals in English*, Rodopi, New York, USA, 2009.
22. M. Khosravi. *Epistemic modality in Iranian EFL learners' written performance*, the International Conference on Literature and Linguistics, Rome, Italy, 2016.
23. M. McCarthy. *Discourse analysis for language teachers*, Cambridge University Press, Cambridge, 1991.
24. G. Caliendo, & A. Compagnone. Expressing epistemic stance in university lectures and TED talks: A contrastive corpus-based analysis, *Lingue e Linguaggi*, **2014**, 11, 105-122.
25. M. Carretero. The influence of genre and register on epistemic modality in spoken English: A preliminary study, *Estudios Ingleses de la Universidad Complutense*, **2002**, 10, 11-41.
26. I. Gustová. *The ways of expressing epistemic (extrinsic) modality in spoken English*, unpublished bachelor's thesis, University of West Bohemia, Plzeň, 2011.
27. A. Šolienė. *Realizations of epistemic modality in English and Lithuanian: Parameters of equivalence*, summary of doctoral dissertation, Vilnius University, Vilnius, Lithuania, 2013.
28. A. Van linden, & J. -C. Verstraete. Revisiting deontic modality and related categories: A conceptual map based on the study of English modal adjectives, *Journal of Pragmatics*, **2011**, 43, 150-163.
29. T. McEnery, & A. Hardie. *Corpus linguistics: Method, theory and practice*, Cambridge University Press, Cambridge, 2012.
30. F. de Haan. Typological approaches to modality. In W. Frawley (Ed.), *The expression of modality*, Mouton de Gruyter, Berlin, 2006.
31. B. Aarts, & A. McMahon. Mood and modality in English. *The handbook of English linguistics*, Blackwell Publishing Ltd., Malden, 2006, 269-290.