

## Functional Analyses of Metadiscourse Markers in L2 Students' Academic Writing

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### Abstract

Stance in general and metadiscourse markers, in particular, have attracted the interest of several studies. Therefore, this study explores the use of metadiscourse in the second language (L2) academic writing by English as a foreign language (EFL) postgraduates in one of the Malaysian public universities. We analyzed the frequency and wordings of modality within the citations of the literature review chapters of 20 Ph.D. theses employing the Systemic Functional Linguistics. Data were analyzed manually utilizing the technique of quantifying the findings to highlight the similarities and differences in using metadiscourse markers. The findings revealed the dominance of full declarative clauses in both Applied Linguistics and Information Technology. Besides the Finite Modal Operators, Mood Adjuncts and Comment Adjuncts were also used to demonstrate modality with a variety in their stance, degrees, and frequencies. Pedagogically, these findings could help supervisors in identifying the implications of their students' writings. In addition, students can be directed towards reading EAP textbooks and materials that are dedicated to areas of academic writing, metadiscourse markers, and citations.

*Keywords:* EAP/ESP, metadiscourse markers, stance, EFL postgraduates, Systemic Functional Linguistics

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## Introduction

Writers have to meet the expectations of their readers by means of understanding the linguistic structures and norms of each discipline. Therefore, advanced academic literacy assumes that mastering the disciplinary practices could enhance students' control of the varied cultural and linguistic structures that are essential for them to engage critically with texts (Hyland & Jiang, 2018a) by means of using the metadiscourse markers. The significance of adopting an authorial stance in academic writing has recently received a considerable amount of research (Hyland & Jiang, 2018a, 2018b; Jiang & Wang, 2018; Jomaa & Bidin, 2017). Therefore, successful writers should be familiarized with using a range of rhetorical features to highlight the novelty of their research, evaluate their findings, and establish harmony with their readers (Hyland & Jiang, 2018b). However, university students (Donahue, 2004; Morton & Storch, 2018) particularly EFL postgraduates (Jomaa & Bidin, 2017) seem to have difficulties in academic writing (Almatarneh, Rashid, & Yunus, 2018), in adopting a stance and projecting their voice due to having insufficient guidelines on using evaluative expressions and/or being unaware of using metadiscourse markers. Hence, this study explores the use of metadiscourse markers utilizing the Systemic Functional Linguistics approach.

## Literature Review

The role of metadiscourse is to organize texts, reveal the attitude of the writer, and engage the readers. These metadiscourse markers were defined by Hyland (2005) as: '*the self-reflective expressions used to negotiate interactional meanings in a text, assisting the writer (or speaker) in expressing a viewpoint and engaging with readers as members of a particular community.*' p. 370

Hyland and Tse (2004) distinguish between interactive and interactional metadiscourse; the former is concerned with organizing the text for guiding the reader through it, whereas the latter is concerned with engaging the reader in a relationship with the writer in order to direct the reader towards the perspectives of the writer on the propositional content.

An earlier study by Hyland (1998) on metadiscourse in 28 research articles in four academic disciplines explore how the appropriate use of the metadiscourse depends on the rhetorical context. Hyland adopted the metadiscourse taxonomy of Crismore, Markkanen, and Steffensen (1993), which classified the metadiscourses into textual and interpersonal types, and these are classified into more specific functions. Textual metadiscourse devices are used to form a coherent and convincing text, depending on the functions of five categories, among them is using evidential (Yang, 2013) to indicate the source of information, such as '*according to*' and '*Hyland (2000) argues*'. Regarding the interpersonal metadiscourse, it is used to convey the stance of the author, including certainty, assertiveness, negativity, doubt, neutrality, and uncertainty (Thompson & Ye, 1991; Hyland, 1999). In other words, this type of metadiscourse is mainly interactional and evaluative to indicate the writer's persona, intimacy, and commitment, and includes several subcategories. For instance, hedges are used to reveal the writer's cautious attitude towards the statements through using *perhaps*, *might*, *about*, *it is possible*, and *possibly*. In Hyland's (1994) examination of hedging in 22 EAP textbooks intended for L2 students around the world, it was found that modal verbs occupied the majority of the textbook coverage. However, only *English for Science* and *Writing up Research* addressed the epistemic usage of the modal verbs to reveal the writers' attitude of uncertainty. The modal verbs included *will* as the most certain, through *would*, *should*, *may*, and *could* as the most tentative modal verbs. Hence, these textbooks did not include sufficient information on the modal verbs. Emphatics as the second subcategory are used

to reveal certainty (Szczyrbak, 2017) by using expressions like *'it is clear, clearly, obviously, obvious, in fact'*, and *'definitely'*. According to Hyland and Tse (2004), boosters are effective linguistic expressions in strengthening the illocutionary force of speech acts (Holmes, 1982). Obviously, the function of boosters is revealing confidence in an assertion (Holmes, 1988; Crismore *et al.*, 1993) or ending the debate and the possible alternative argument (Hyland, 1998; Gillaerts & Van de Velde, 2010): *"by closing down possible alternatives, boosters emphasize certainty and construct rapport by marking involvement with the topic and solidarity with an audience, taking a joint position against other voices"* (Hyland, 2005, p. 53).

The third subcategory of the interpersonal metadiscourse is the attitude markers which are used to reveal the writer's affective attitude towards the textual information, but this is relatively different from hedges in the sense that they convey more varieties, including obligation, agreement, importance, and surprise. Attitude markers include examples, such as *X claims, I agree, and surprisingly*. Hence, metadiscourse devices are significant and highly effective when used appropriately. In this context, writers usually attempt to establish a recognizable social world by means of rhetorical options which enable them to create interpersonal negotiations and make balanced claims for the originality, significance, and plausibility of their studies (Hyland, 2005). Within citations, situating one's research in the academic community and indicating gaps in previous studies is achieved by means of reporting verbs (Thompson & Ye, 1991; Thomas & Hawes, 1994; Francis, Hunston, & Manning, 1996; Hyland, 1999; Yang, 2013). Polarity, mood adjuncts, and finite modal operators (Halliday, 1985; Eggins, 1994) can be also used to carry an evaluative stance, attitude, commitment or certainty. However, very few studies explored modality used in citations employing the Systemic Functional Linguistic approach. In this regard, Hu and Wang (2014) and Jomaa and Bidin (2016) suggest examining citations through the *Functional Theory* in the social context (Halliday & Martin, 1993). In communicating, the clause represents not only the process of doing but also a proposition to inform or express the speaker's attitude towards the addressee or the event. This is called the interpersonal metafunction which is both personal and interactive to suggest *'language as action'* (Halliday & Matthiessen, 2014, pp.10-30).

In adopting the Systemic Functional Linguistics, the focus is on the lexico-grammatical patterns through the words and structures used in the clauses of citations. The lexico-grammatical analysis involves the three language metafunctions: Ideational, Interpersonal, and Textual that are associated with the three register variables: Field, Tenor, and Mode, respectively (Halliday & Martin, 1993; Eggins, 2004, Halliday & Matthiessen, 2014). In this regard, the clause can reveal three distinct types of meanings: clause as a message, clause as an exchange, and clause as a representation as in Table 1.

Table 1. *Three Lines of Meaning in the Clause*

Metafunction	Clause as.	System	Structure
Textual	Message	Theme	Theme ^ Rheme
Interpersonal	Exchange	Mood	Mood[Subject+ Finite]+ Residue[ predicator+ (Complement) (+Adjunct)]
Experiential	representation	Transitivity	Process+ participant(s) (+circumstanc), e.g. Process+ Actor+ Goal

(adapted from Halliday and Matthiessen, 2014)

In the present study, modality was examined in the clauses of the citations used in the literature review chapters of Applied Linguistics and Information Technology. Hence, the present study addresses the following questions:

1. How are the clauses of citations structured to realize the interpersonal meanings?
2. What types of metadiscourse markers are used by EFL postgraduates to reveal their stance?

## Methodology

### Procedure

The present study is based on analyzing the use of metadiscourse markers by EFL postgraduates. Swales' (1990) classification was followed in order to identify all citations in the literature review chapters of 20 Ph.D. theses. The metadiscourse constituents were analyzed based on the modality under the Systemic Functional Linguistics (Halliday, 1985). Figure 1 describes the conceptual framework that guides the present study.

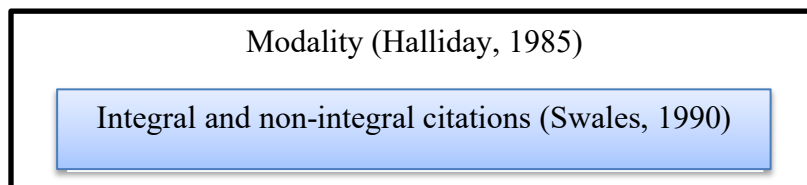


Figure 1. The conceptual framework of the present study

The present study analyzed the use of metadiscourse qualitatively. The technique of quantifying the findings was also utilized in order to highlight the possible similarities and differences in using metadiscourse markers, as advocated by Maxwell (1992, 2010).

Table 2. *Number of Citations in the Literature Review Chapters of AL and IT Theses*

	<b>Integral citation</b>	<b>Non-integral citation</b>	<b>Mixed type of citation</b>
Applied Linguistics	2,350 66.40%	1,079 30.48%	96 2.71%
Information Technology	1,184 54.58%	917 42.27%	60 2.76%

Table 2 includes the total number of citations used in the literature review chapters of Ph.D. theses by EFL postgraduates in two disciplines: Applied Linguistics and Information Technology. Each sentence with either a clause simplex or a clause complex that involves either a single citation or multiple citations is considered one citation.

### *Sampling*

The study employed a purposeful sampling in choosing the literature review chapters of 20 Ph.D. theses in Applied Linguistics and Information Technology by EFL Arab postgraduates. These Ph.D. theses were deposited in a library of one of the Malaysian public universities. Using these Ph.D. theses for academic purposes was approved by the Dean of the Graduate Schools at the university. Ten Ph.D. theses belong to Information Technology discipline (IT) in the hard domain, whereas ten Ph.D. theses are from Applied Linguistics in the soft domain. The total pages that were analyzed included 656 pages from IT Ph.D. theses and 736 pages from Applied Linguistics Ph.D. theses.

### **Results**

The findings involve looking at the relationship between the semantic organization of the interaction and the grammatical differences in the mood structure of the clauses. In addition, the findings focus on exploring modality, including modalization and modulation.

### *Mood Class of the Clause*

Table 3 represents the Mood classes of clauses in citations used in the literature review chapters of 20 PhD theses.

Table 3. *Mood Class of Clauses in IT and AL Literature Review Chapters*

<b>Mood class</b>	<b>Information Technology</b>		<b>Applied Linguistics</b>		<b>Total</b>
	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>	
Full declarative	5386	37.55	8956	62.45	14,342
Imperative	-----	-----	1	100	1
Total citations	2,163	38.6	3,520	61.94	5,683
Clause/s per citation	2.49		2.54		

As Table 3 shows, the literature review chapters of IT and AL theses include 14,342 full declarative clauses. 8956 (62.45%) clauses are used in the literature review chapters of AL, whereas 5386 (37.55%) clauses are used in the literature review chapters of IT. This implies that the literature review chapters of AL include a higher number of full declarative clauses. On the

other hand, only one clause is imperative. The dominance of the full declarative clauses illustrates the similarity of the two domains in terms of the speech functions. In other words, using the language to exchange information entails that the clauses used in the citations are employed in the form of a proposition in order to show familiarity with the research topic. Thus, there is an opportunity to argue, claim, support, negate, report, affirm or doubt. The dominance of only one Mood class that is the full (non-elliptical) declarative indicates that the texts are written genres. In these types of written genres, it is not possible to exchange feedback between the writer and the reader, as well as the common shared focus is giving information.

### *Components of the Clause*

In clauses of the citations used to exchange information, two components are involved: MOOD and RESIDUE. MOOD involves the 'Subject' and the 'Finite', whereas the RESIDUE consists of a 'Predicator', a 'Complement', and an 'Adjunct'. The followings are some extracted examples from the literature review chapters by EFL Arab postgraduates.

#### **Example 1:**

Argamon et al. (2005)	analysed	the texts of the applied science, arts, commerce, and leisure.
MOOD		RESIDUE

(P.4/YE/AL/S.2.5.2/Pr.4/L.571-572/Pg.65)

#### **Example 2:**

Types, details, and flavors of TCP protocol	can	be found in [36, 37, 38, 59, 60].
MOOD		RESIDUE

(P.7/SY/IT/S.2.1.4/Pr.2/L.86-87/Pg.22)

In both examples 1 and 2, each citation consists of one clause simplex, and each clause has two components: MOOD and RESIDUE. What makes example (1) different from example (2) is using the Finite 'can' in example (2).

### *MOOD Component of the Clause*

The MOOD component of the clause consists of two constituents which are the 'Subject' and the 'Finite', as in example 3.

#### **Example 3:**

<b>CMDA</b>	<b>May</b>	be applied to four levels of language (Herring, 2004, p. 3):
Subject	Finite	
MOOD		

(P.10/JO/AL/S.2.5.2/Pr.3/L.1762/Pg.110)

The second essential constituent of the MOOD in full declarative clauses is the 'Finite' which is the verbal type element. The functional role of the 'Finite' in the clause is to make the proposition definite and arguable. In other words, the 'Finite' is used to express modalisation

(probability/certainty) and modulation (obligation/inclination). Example (4) demonstrates the 'Finite' as a constituent in the clause.

(4) *These controls **may not** reduce the effect of vulnerability, but they **can** reduce natural risk in different ways [9]. (P.16/YE/IT/S.2.4.1/Pr.7/L.146-148/Pg.20)*

In example (5), the citation is a clause complex because it consists of two clauses. In the first clause, the Finite 'may' is used, whereas in the second clause, the Finite 'can' is used.

(5) Clause one

These controls	may not	reduce the effect of vulnerability...
Subject	Finite	
MOOD		RESIDUE

(5) Clause two

...they	can	reduce natural risk in different ways [9].
Subject	Finite	
MOOD		RESIDUE

Table 4 shows the number and frequencies of using the 'Finite' to express modality in the citations of EFL postgraduates' academic writing. The citations of the literature review chapters of AL include a higher percentage of modalisation (58.43%) and modulation (66.66) compared with IT.

Table 4. 'Finite' in the Citations of the Literature Review of AL and IT Theses

Modality	Applied Linguistics		Information Technology		Total
	F	%	F	%	
Modalisation (probability/certainty)	419	58.43%	298	41.57%	717
Modulation (obligation/inclination)	136	66.66%	68	33.33%	204
Total Finite	555	60.26%	366	39.74%	921

On the other hand, the citations in the literature review chapters of IT have a lower percentage of 'Finite' to express modalisation (41.57%) and modulation (33.33%). These findings probably reflect the effect of tenor that is represented by EFL postgraduates. Those who belong to the academic community of the soft domain tended to use a higher frequency of modality since the soft domain is based on the strength of the arguments. On the other hand, those who belong to the academic community of the hard domain used modality with a lower frequency in citations since the hard domain is based on facts rather than arguments. Consequently, modality was used with a lower percentage.

Identifying the 'Finite' constituent is based on the sequence. In other words, when there is a group of verbal elements, the 'Finite' constituent is the first part of the verbal group, as in example (6).

- (6) *It **can be** used for different purposes (Ling, 2005; Thurlow, 2003). (P. 10/JO/AL/S.2.5.1/Pr.4/L.1723/1724/Pg.107)*

In some examples, there is no explicit 'Finite' constituent in the clause. Rather, the 'Finite' is fused with the predicator, as in example (7).

- (7) *Sadiq (2010, p. 33) **indicates** that the language of the Holy Qurān is full of numerous examples of ellipsis. (P.11/LI/AL/S.2.4.2.3.3/Pr.2/L.1179-1180/Pg.64)*

In example (7), the first clause (Sadiq (2010, p.33) *indicate...*), has no explicit 'Finite' constituent. Rather, the 'Finite' is fused with the Predicator '*indicate*'. Hence, the 'Finite' constituent is of two kinds; **Temporal Finite Verbal Operators** anchor the proposition by reference to time. These give tense to the finite, including the present, past or future. The examples below demonstrate the usages of 'Finite' as a '*Temporal Finite Verbal Operator*':

- (8) *IT infrastructure **consists** of IT architecture, processes, and skills (Papp, 1995). (P. 17/JO/IT/S.2.2/Pr.9/L.123/Pg.23)*
- (9) *They then **proposed** fine-tuning strategies for these RTO component parameters. (P.7/SY/IT/S.2.3.1.1/Pr.17/L.552-553/Pg.45)*
- (10) *As such, the system **will affect** older users who have a lot of experience (Venkatesh et al., 2003). (P.13/JO/IT/S.2.11.10/Pr.8/L.990-991/Pg.78)*

In examples (8) and (9), the 'finite verbal operator' in '*consists*' refers to the simple present and the 'finite verbal operator' in '*proposed*' refers to the simple past. However, in example (10), the 'finite verbal operator' represented by '*will*' refers to the future tense explicitly.

The other kind of Finite is called '**Finite Modal Operators**'. These kinds of 'Finite' make the proposition arguable by allowing the writer to adopt a stance and project his/her voice. In other words, the writer can express his/her attitude through either modalisation involving probability and/or usuality or modulation involving obligation and/or inclination. This stance can range from high, though median to low. The examples below illustrate such a usage of the 'Finite Modal Operators' to express modalisation (probability and certainty).

- (11) *Like Saussure, Chomsky argued that the structural characteristics of language **must** be the linguists' primary object of concern. (P.1/IR/AL/S.2.3.1/P.3/L.85/87/P.34)*
- (12) *When it is correctly implemented, it **will** enable constant improvement in performance and decision making [74, 79, 80]. (P.16/YE/IT/S.2.2/P.4/L.71-73/P.17)*
- (13) *Filter and wrapper approaches **may** be further classified into five main methods: forward selection, backward elimination, forward/backward combination, random choice and, finally, instance-based method (Basiri, Aghaee & Aghdam,*



2008 and Kanan, Faez & Taheri, 2007). (P.8/IR/IT/S.2.2.2/Pr.2/L.698-701/Pg.47)

In example (11), the Finite Modal Operator 'must' is used to express a high stance of probability. Similarly, the Finite Modal Operator 'will' in example (12) expresses a median stance of probability. The Finite 'may' also reveals a low stance of probability. Consequently, between positive and negative clauses, three degrees of probability were found, including high, median and low, as in Figure 2.

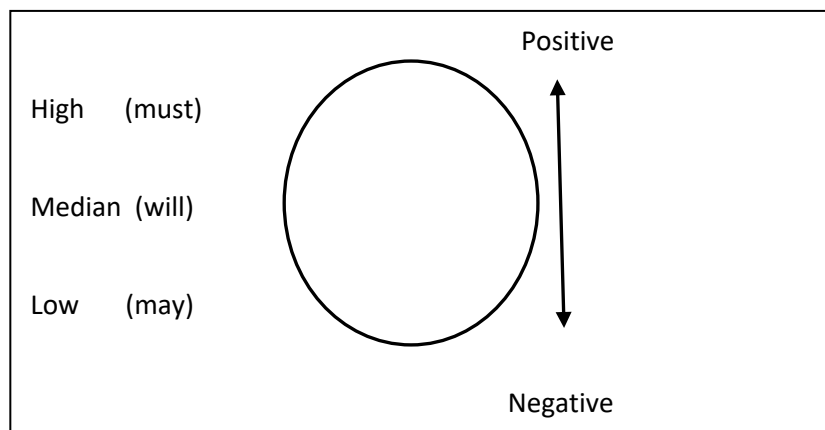


Figure 2. Finite modal operators to express degrees of probability

Finite Modal Operators are not limited only to Modalisation to express probability, but they are also employed to express Modulation with different rates of stance ranging from high through median and low. Modulation included expressing either obligation and/or inclination, as in examples (14) and (15).

- (14) *Approximately 70,000 employees of the Ministry **must** participate in this program (ICDL foundation, 2007). (P.13/JO/IT/S.2.10/P.7/L.603-605/P.56)*
- (15) *Such type of reflection-on-action **should** be encouraged and practiced collectively and in groups in universities or centers of higher education (Akbari, 2007). (P.5/YE/AL/S.2.2.9/P.1/L.306/308/P.45)*

In example (14), the Finite Modal Operator 'must' is used to express a high stance of obligation. Similarly, the Finite Modal Operator 'should' in example (15) expresses a median stance of obligation, as demonstrated in Figure 3.

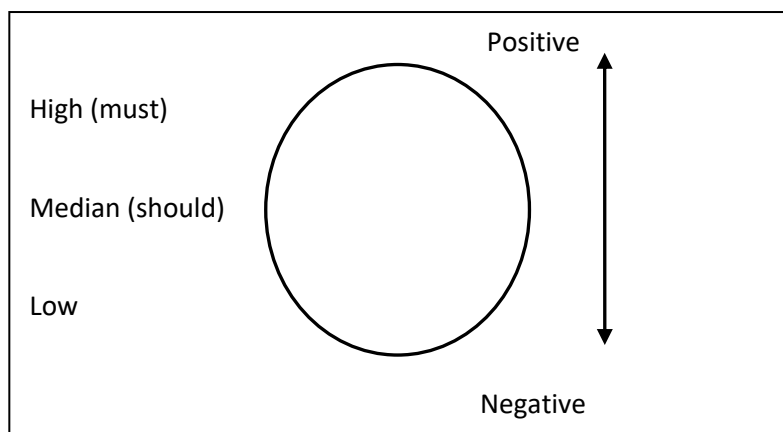


Figure 3. Finite modal operators to express degrees of obligation

These Finite Modal Operators are also used to express inclination, as in example (16).

(16) *Some researchers, such as Ahmed et al. (2009) **would** argue that many of the previous studies focused mainly on the USA when representing the Western world. (P.20/JO/IT/S.2.2.3/P.21/L.1350-1352/P.94)*

Finite constituents can carry another semantic feature which is *polarity*. This polarity makes the proposition either positive or negative, as in example (17).

(17) *This difficulty arises when EFL writers **cannot** distinguish between opinions from facts (Hyland & Milton, 1997). (P.4/YE/AL/S.2.7/P.5/L.728-729/P.73)*

However, in non-finite clauses, there is no 'Finite' constituent. This includes perfective and imperfective clauses as in examples (18) and (19).

(18) *They analyzed the data **using Structural equation modeling.** (P.20/IT/Jo/S.2.2.1/Pr.83/L.810-811/Pg.65)*

(19) ***To examine Hybrid genres,** Bhatia (2010a) examined a number of annual reports that were taken from companies in Hong Kong. (P.2/JO/AL/S.2.3.2/P.5/L.790-791/P.53)*

In conclusion, 'Finite' constituents were either explicitly used or implicitly fused with the predicator. These 'Finite' constituents significantly indicate the tense, make the proposition arguable, and imply polarity. The high density of citations and the effect of the academic community to which the tenor belongs were the main reasons for using the Finite Modal Operators with a higher number of frequency in the citations of AL compared to IT.

### **RESIDUE component of the clause**

The second component of the clause is RESIDUE, which is less essential to the arguability of the clause. Similar to MOOD, the RESIDUE includes more than one constituent, including a 'Predicator', a 'Complement', and an 'Adjunct'.

The predicator, which is the lexical part of the verbal group, carries the lexical meaning and specifies the type of the processes that is involved in the clause, as demonstrated in examples (20) and (21).

- (20) *Milad et al. (2012) evaluated BA and Skipjack performance.*  
(P.9/IR/IT/S.2.3.3.1.2/Pr.7/L.667/Pg.57)
- (21) *Clark (2005) provides a summary of the beliefs about the causes of writing apprehension among freshman students at Chandler-Glibert Community College.* (P.3/JO/AL/S.2.5/Pr.9/L.1173-1174/Pg.74)

In both examples (20) and (21), when analyzing the clause based on the constituents used, the predicator '*evaluated*' is divided into two parts; half a part is in the MOOD component of the clause, whereas the other part is in the RESIDUE component of the clause, as in example (22) .

(22)

Argamon et al. (2005)	analysed		the texts of the applied science, arts, commerce, and leisure.
Subject	Finite	Predicator	Complement
MOOD		RESIDUE	

(P.4/YE/AL/S.2.5.2/Pr.4/L.571-572/Pg.65)

The 'Complement' constituent that follows the predicator is the second constituent of the RESIDUE, as in example (23).

- (23) *Shannon (1949) deduced the theoretical principles of confusion and diffusion.*  
(P.9/IT/IR/S.2.1.1/Pr.1/L.98-99/Pg.16)

The main function of the 'Complement' is for enhancing the clarification of the communicated information.

'Adjunct' is another constituent of the RESIDUE that is either adverbial or prepositional rather than a nominal constituent and adds additional information that is not essential to the clause.

- (24) *Also, their simulation results showed dramatic improvement in the TCP-FeW performance.* (P.7/SY/IT/S.2.3.2.1/Pr.13/L.888-889/Pg.61)

Adjuncts that add information to the interpersonal meanings encompass two types: **Modal Adjuncts** and **Comment Adjuncts**. Modal Adjuncts are also constituents that add interpersonal meanings to the clause. Only two types of Modal Adjuncts including **Mood Adjuncts** and **Comment Adjuncts** were found in the citations of EFL postgraduates' Ph.D. theses. **Mood Adjuncts** are considered as a part of the MOOD component of the clause, thus revealing a meaning that is closely related to the Finite Modal Operators. In other words, the Mood Adjuncts were used to express modalisation (probability and usuality). For more clarification, in example (25), the Mood Adjunct '*likely*' expresses a median stance of probability, whereas example (26) includes the Mood Adjunct '*usually*' to reveal a median degree of the usuality of the action.

- (25) *Furthermore, women are more likely to use more standard forms in speech than men* (Coates, 1993; Holmes, 2008; Trudgill, 1983).  
(P.10/JO/AL/S.2.3.1.3/P.9/L.566-567/P.52)

- (26) *For example, Jones and van Rijsbergen (1976) showed that 250 queries are usually acceptable while Leung suggests that 20 queries are enough* (Leung & Ip, 2000). (P.18/IR/IT/S.2.1.6/P.12/L.337-339/P.34-35)

Figure 4 demonstrates the number of Mood Adjuncts used in Modalisation to reveal either probability or usuality. (170) Mood Adjuncts are used in the citations of the literature review

chapters of AL and IT theses. (75.29 %) of Mood Adjuncts are used in the literature review chapters of AL theses, whereas only (24.71%) are used in the literature review chapters of IT theses.

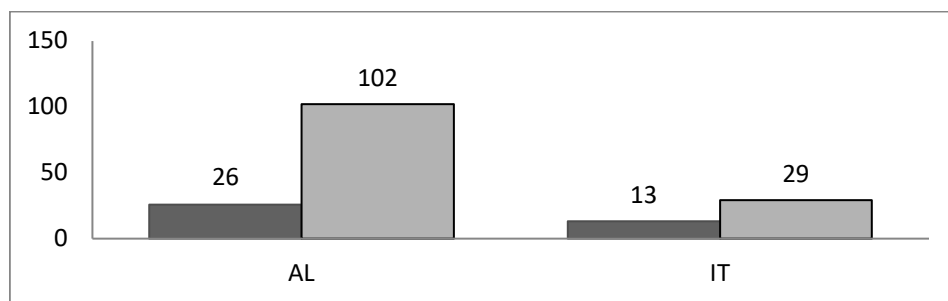


Figure 4. Mood adjuncts in the literature review chapters of AL and IT theses

The majority of these Mood Adjuncts express modalisation (usuality); (77.86%) are used in AL, whereas (22.14%) are used in IT theses. This is followed by Mood Adjuncts to reveal probability. The similarity in using a higher number of Mood Adjuncts to express usuality, followed by probability reveals the effect of tenor on using modality. In other words, in spite of the different fields to which AL and IT belong, EFL postgraduates were similar in using a high frequency of Mood Adjuncts to express usuality. However, the low use of Mood Adjuncts to reveal a stance of probability in both disciplines can be due to the low level of knowledge in using such expressions by EFL postgraduates. On the other hand, the high use of usuality can be due to the Mood Adjuncts which are emphasized in teaching English tenses in the Arab countries.

The stance of revealing probability by means of the Mood Adjuncts is also of different degrees ranging from high through median to low, as in examples (27), (28), and (29).

(27) *The relevant descriptors to this thesis are **certainly** the MPEG-7 colour descriptors that include scalable colour.....(Chang, Sikora & Purl, 2001; Manjunath, Ohm, Vasudevan & Yamada, 2001). (P.18/IR/IT/S.2.1.2/Pr.3/L.87-91/Pg.22)*

(28) *This substitution is **probably** made to achieve brevity by omitting insignificant details.....(Al-Salem 2008, p. 181). (P.11/LI/AL/S.2.4.2.3.2/Pr.6/L.1161-1163/Pg.64)*

(29) *In [110], a dynamic placement algorithm was proposed that takes into account the dynamicity of sites in the data grid, since a site can at any time leave the grid and **possibly** join again later. (P.15/PA/IT/S.2.4.8/Pr.11/L.545-547/Pg.40)*

The Mood Adjuncts 'certainly', 'probably' and 'possibly' are used to express certainty and probability, ranging from high certainty through using 'certainly' to a median probability through using the Mood Adjunct 'probably' and a low stance of probability by using the Mood Adjunct 'possibly'. Similarly, Mood Adjuncts are also used to reveal the stance of frequency and usuality. This stance has different grades, ranging from high through median to low, as in examples (30), (31), and (32), respectively.

(30) *Their senses and meanings **always** overlap, and scholars define them in various ways (Sun, 2012). (P.11/LI/AL/S.2.5/Pr.1/L.1201-1202/Pg.65)*

- (31) Akar and Louhiala-Salminen found that communicators **usually** fax back the same fax adding their comments on it. (P.2/JO/AL/S.2.3.1/Pr.4/L.738-740/Pg.51)
- (32) **Sometimes**, they tend to mix writing apprehension with other terms (Hettich, 1994; Rose, 1980). (P.3/JO/AL/S.2.3.2/Pr.1/L.249-250/Pg.31-32)

Figure 5 illustrates the Mood Adjuncts of probability and frequency and their different degrees used in the literature review chapters of Applied Linguistics and Information Technology.

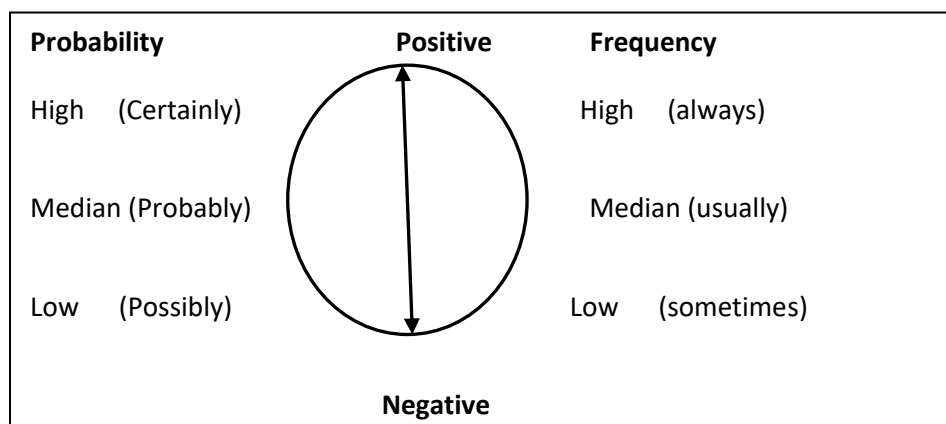


Figure 5. Mood adjuncts of probability and frequency

Mood Adjuncts are also used to express other aspects of stance. These included expressing **PRESUMPTION** through using the Mood Adjunct 'clearly', as in example (33).

- (33) *On the other hand, Hettich (1994) states that writing apprehension has not been clearly defined.* (P.3/JO/AL/S.2.3.2/Pr.1/L.247-248/Pg.31)

Another type of Mood Adjunct is used to express **TIME** by means of using the adverbial 'still', as in example (34).

- (34) *Class was still a determining factor, but women from the working classes and the middle classes behaved more similarly to each other than to men from the same social class as themselves (see also Horvath, 1985).* (P.1/IR/AL/S.2.7.1/Pr.5/L.502-504/Pg.53-54)

Mood Adjuncts can express **DEGREE** through using the adverbial 'approximately' as in example (35).

- (35) *TCP DOOR can significantly enhance TCP throughput by an average of approximately 50%, as shown by their simulation results.* (P.7/SY/IT/S.2.3.1.1/Pr.11/L.502-503/Pg.43)

Other Mood Adjuncts can also express **INTENSITY** through using the adverbials 'simply' in example (36) and 'only' in example (37).

- (36) *The authors utilize a hold-out approach as a measure to judge which feature to delete at each iteration instead of a measure to build simply on one dataset, gradient-based measure or Fisher correlation score.* (P.8/IR/IT/S.2.2.2/Pr.24/L.982-985/Pg.60)

(37) *Other researchers noted that TAM just focuses **only** on extrinsic motivation, not intrinsic motivation (Davis et al., 1989). (P.13/JO/IT/S.2.11.1/Pr.4/L.666-667/Pg.60)*

Figure 6 presents the number of Mood Adjuncts used in the literature review chapters of AL and IT theses. (491) Mood Adjuncts are used in the citations of the literature review of AL and IT by EFL postgraduates. A total number of 310 (63%) of Mood Adjuncts is used in the literature review chapters of AL theses, whereas only 181 (37%) Mood Adjuncts are used in the literature review chapters of IT theses. Since Applied Linguistics is based on arguments, EFL Arab postgraduates used a higher percentage of Mood Adjuncts. On the other hand, EFL postgraduates in IT used a lower percentage of Mood Adjuncts since they belong to a discourse community that prefers facts rather than arguments.

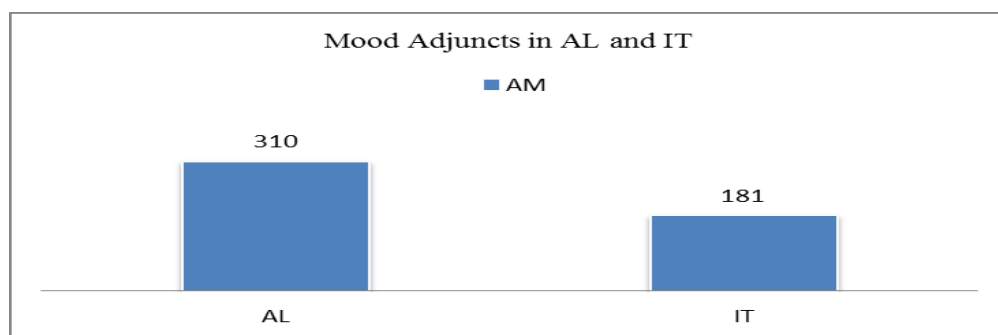


Figure 6. Mood adjuncts in the literature review of AL and IT theses

Although Mood Adjuncts are secondary rather than basic constituents of the clause, they play highly significant functional roles in revealing different aspects of the writer's stance. However, in spite of the importance of adopting a stance in the citations, Mood Adjuncts were less used in comparison with the 'Finite' constituents. This can be attributed to the low level of knowledge in using Mood Adjuncts by EFL postgraduates.

Adjuncts can also add to the interpersonal meanings through using **Comment Adjuncts**. These types of Adjunct express the writer's stance about the whole clause, thus occurring in an initial position or directly after the 'Subject'. These adjuncts express different types of meanings. For example, some Comment Adjuncts express **ASSERTION** through using the adverbials 'importantly' in example (38) and 'actually' in example (39).

(38) ***Importantly**, Qiume's does not mention any information about the questionnaire in terms of its developer, or how it was developed and designed. (P.19/YE/AL/S.2.8.1/Pr.12/L.745-747/Pg.42)*

(39) ***Actually**, this problem cannot be using low-level features only (Boykov & Jolly, 2001; Cour & Shi, 2007; Ferrari, Tuytelaars & Gool, 2004). (P.18/IR/IT/S.2.2.2/Pr.1/L.528-530/Pg.43)*

Some Comment Adjuncts express **HOW DESIRABLE** something is through using the adverbial 'unfortunately', as in example (40).

- (40) *Nevertheless, UTAUT incorporates the constructs from TAM and has received widespread support but **unfortunately** was not published like TAM (Srite, 2006). (P.14/JO/IT/S.2.5.6/Pr.1/L.847-848/Pg.74-75)*

Some Comment Adjuncts reveal the **VALIDITY** of something through using the adverbials 'generally' in example (41) and 'broadly speaking' in example (42).

- (41) ***Generally**, Tarone's interactional perspective views OCSs as cooperative in nature. (P.19/YE/AL/S.2.5.3.2/Pr.2/L.326/Pg.18)*
- (42) ***Broadly speaking**, while innovation is defined as exploring something new which has existed before, quality is seen as a dynamic threshold which firms have to meet to satisfy customers (Cho & Pucik, 2005) (P.17/JO/IT/S.2.3/Pr.6/L.393-395/Pg.36)*

Some Comment Adjuncts are employed to express **HOW SOMETHING IS EXPECTED** through using the adverbial 'surprisingly', as in example (43) below.

- (43) *This is worrying because as demonstrated by Hubbard [65] and Allen [45], human experts **surprisingly** make consistent types of errors in their judgments..... (P.16/YE/IT/S.2.5.5/Pr.3/L.594-597/Pg.46-47)*

Figure 7 shows the number of using Comment Adjuncts in the literature review chapters of AL and IT theses by EFL postgraduates.

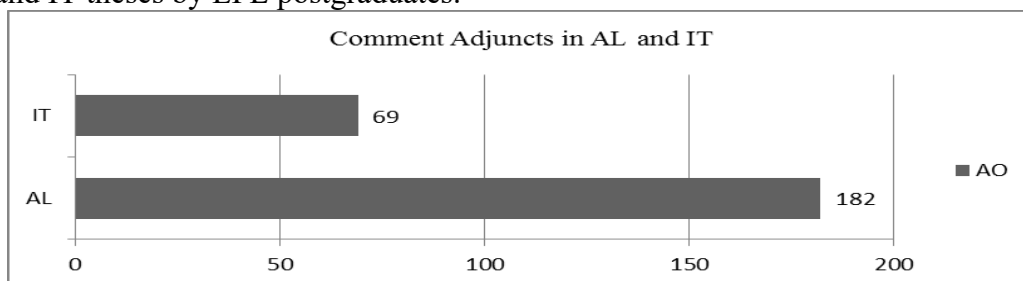


Figure 7. Comment adjuncts in the literature review of AL and IT theses

As shown in Figure 7, (251) Comment Adjuncts are used in the citations of the literature review chapters of AL and IT theses. A total number of (n=182) comment Adjuncts (73%) is employed in the citations of the literature review chapters of AL, whereas (n=69) (27%) Comment Adjuncts are used in the citations of the literature review chapters of Information Technology. This shows that the literature review chapters of AL have comment Adjuncts more than IT. These findings imply two significant issues. First, the writers in each domain probably try to attract the readers' attention by using the adjuncts that are expected by their readers. In other words, the readers of each academic community possibly have certain conventions and norms when reading and writing. Second, the unfamiliarity of EFL postgraduates in IT of using Comment Adjuncts might be the reason for the lower occurrence of these types in their academic writing.

## Discussion

The findings focused on analyzing how the clause/s of the citations is/are structured to reveal the interpersonal meanings. This involved exploring the Mood Class of the clauses, whereby the full declarative mood dominated the clauses of the citations in the literature review chapters of the 20 Ph.D. theses. In revealing a stance towards the citations, Finite Modal Operators as 'Finite' constituents and adverbials as Mood adjunct were used to reveal either modalisation or modulation. Modalisation included probability and usuality, whereas modulation included obligation and inclination. The stance that was expressed ranged from a high stance through median to low. Comment Adjuncts were another type of Adjuncts employed in revealing varied stances.

The clause constituents at the interpersonal metafunction showed a sort of similarity to John's (2012) study that presented a description of the linguistic structures used in citations. The similarity was mainly in using the verb and the adverb which correspond respectively to the 'predicator' and the 'adjunct' in the present study. However, the linguistic structures in John's findings were limited only to the integral citations, as well as the constituents that express a writer's stance such as Finite modal operators were not mentioned. On the other hand, in the present study, identifying the constituents of the clause involved mood adjuncts, comments adjuncts, and finite modal operators used to communicate modalisation and modulation in the integral and non-integral citations. Hyland (2005) and Hyland and Tse (2004) point out that metadiscourse markers that involve adverbs, such as hedges and boosters, are used to reveal the writer's stance and establish his/her membership to a certain academic community. The high density of mood adjuncts, comments adjuncts, and finite modal operators in AL compared with the low number in IT shows the effect of field on the interpersonal meanings (Halliday, 1985; Halliday & Martin, 1993; Eggins, 1994; Halliday & Matthiessen, 2014). In other words, each field has its own readers who expect certain expressions and vocabulary from the writers.

Dunleavy (2003) emphasized that a thesis writer should meet the expectations of their readers since English language is 'writer-responsible'. That is, the writer or the speaker is responsible for clarifying and organizing the concepts to make readings/speech easily understood by the readers/listeners (Hinds, 1987). One significant key to acknowledge their roles as writer responsible is through using metadiscourse (Dahl, 2004) in order to organize the text and interact with the reader. Hence, metadiscourses play these highly significant roles by revealing the academic voice which is rather challenging for non-native speaker writers (Jomaa & Bidin, 2017). EFL postgraduates showed lack of knowledge in the evaluative expressions and the difficulty in adopting an authorial positioning. Consequently, students' weakness in citations-related issues need further emphasis and enhancement (Hei & David, 2015) since showing a stance towards the citations was limited only to revealing methodological limitations, employing contrastive conjunctions, and using some reporting verbs, such as '*stated*', and '*claimed*'. Hence, lack of knowledge of the evaluative vocabulary resulted in limited use of Mood Adjuncts. It is clear that moderating a writer's claim is fundamental which should be neither too strong nor too weak. These



challenges in using citations occur since citation competence, as Ma and Qin (2017) argue, is an inter-textual skill that involves cognitive proficiency of source use, academic reading proficiency, academic writing proficiency, and citing motivation.

As pointed out by Halliday (1985), tenor is a register variable that can affect stance. Dontcheva-Navratilova (2016) advocated that the interpersonal aspect of the academic discourses is associated with the epistemology and literacy convention of the national disciplinary of academic communities, thus resulting in intercultural variations. This was obvious in the high use of modality in the citations of AL compared with IT. In other words, each academic community follows certain evaluative expressions. Consequently, English for Academic Purposes materials could present the possibility of increasing our understanding of the variety in language use taking into account the different academic communities in order to introduce highly strong foundations for pedagogical purposes (Hyland and Hamp-Lyons, 2002). ESP researchers can explore the applicability of learning theories from SFL and North Rhetoric to ESP (Cheng, 2006). For example, a typical ESP genre-based writing class directed towards non-native speakers and novice writers could lead students from different disciplines to explore the genre-specific features and the disciplinary practices used in research articles, dissertations or Ph.D. theses. EFLs can be also engaged in a discipline-specific writing task. Such focuses and practices could be considered an effective tool that the learners need in order to develop their L2 academic writing (Cheng, 2006).

One approach to academic language is influenced by a genre-based literacy program (e.g., Christie, 1992, 1999) that is grounded in SFL (Halliday, 1985; Halliday & Matthiessen, 2014). Genre-based pedagogy supports explicitly teaching academic registers that students need. Particularly, it consists of teaching linguistic features employed in specific academic genres that students are usually involved in (Aguirre-Muñoz, Park, Amabisca, & Boscardin, 2009). The increasing number of learners of English for Academic Purposes has led to a similar expansion in the number of EAP teachers. However, the majority of the teachers of EAP around the world are non-native speakers of English, and the non-native teachers' needs are different from the native speakers' ones.

Consequently, this recognition has resulted in new developments in EAP materials and teacher training courses (Hyland & Hamp-Lyons, 2002). This raises the need to train teachers/instructors and equip them with the grammatical elements that constitute an academic language in order to cope with the challenges faced by non-native speakers in writing academically (Aguirre-Muñoz, Park, Amabisca, & Boscardin, 2009). Hence, training teachers to teach citations explicitly can be achieved through several stages. Considering the three register variables (field, tenor, and mode) that can affect the use of language, teachers can be trained on the three language metafunctions (ideational, interpersonal, and textual) that are associated with these three register variables, respectively.

For example, at the interpersonal metafunction, students can be taught how to use clauses based on the register, focusing on the explicit instructions of using modals (Geist, 2017) and how to show their stance by means of the Finite modal operators, mood adjuncts, and comments adjuncts. Students can be also taught the constituents that make a clause. In this regard, students will learn which constituents are primary or basic and which ones are secondary or not essential.

Similarly, at the ideational metafunction, students can be taught the types of processes used in each clause. Students could learn how to create sentences with clause complexes employing expansion and projection with their various subcategories (Jomaa & Bidin, 2019). Thematic structure involving Theme and Rheme can be also an effective tool when used appropriately. This thematic structure is taught at the last stage since it involves both the ideational and the interpersonal metafunctions. Hence, utilizing the SFL approach to language learning/teaching entails deconstructing the linguistic features in order to make the linguistic expectations of the academic language explicit and discernible to the instructors and students.

### Conclusions and Future Research

The general Academic Writing textbooks should be modified in accordance with the disciplinary specificity, thus focusing on the norms and conventions of each discipline, such as using citations, reporting verbs, metadiscourse markers, and other discipline-specific linguistic structures. Swales' (1990, 2014) findings, Thompson and Tribble's (2001) taxonomy, Hyland's (1999) taxonomy, and Jomaa and Bidin's (2019) findings related to reporting and quoting can be significantly beneficial for students when included in the academic writing courses. The findings of the present study are based on analyzing the text in context and the practices of the student writers. Thus, such outputs are quite applicable to be used in English for Academic Purposes (EAP) teaching (Gardner, 2012). Future studies are recommended to analyze the metadiscourse markers by non-native speakers in other genres or other disciplines in order to enrich the findings related to the field of stance and the authorial voice.

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