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# Metadiscursive Markers in Second Language Theses Abstracts

**AKINSEYE Tolulope Adeoluwa (Ph.D.)**
*Department of English, University of Ibadan, Nigeria*
✉**Corresponding Author:** AKINSEYE Tolulope Adeoluwa (Ph.D.) **E-mail**: tolulopeakinseye01@gmail.com

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**ABSTRACT**

The rhetorical choices in academic theses have attracted many linguistic researchers over the years. Such researches, and in particular, studies on metadiscourse, have been outstanding in capturing the interactive and interactional characters of writers. In this paper, metadiscursive markers in the second language (L2) theses abstracts of five disciplines in the University of Ibadan, Nigeria were examined using Hyland's (2005) model of metadiscourse. The corpora comprised a total of 75 theses abstracts (15 abstracts per discipline) written in English. The data for this study were manually analyzed and quantified using simple percentages. The analysis revealed the similarities and the differences between the metadiscursive resources across the five selected disciplines. Although the analysis revealed the predominant occurrence of interactive resources, the results further showed a significant utilization of the interactional resources, which specifically engage the readers in the arguments of the theses.

## 1. Introduction

In academic writings, it is generally required that a text must pass the test of cohesion and coherence, which Halliday and Hasan (1976:4) called the relation of meaning within a text. Hallidayan grammar is interested in the textual function of a text. The textual metafunction is one of the three metafunctions of language, which focuses on the organization of the text, and the interpretation of linguistic forms and norms of each discipline.

Thus, the study of text organization is not only limited to the understanding of the metafunctions but also how text coherence relates to both the writer of texts and the readers. Some of the previous studies have examined cohesive elements deployed in academic writings (Akinseye, 2019; Sujatna, 2012; Zhu, 1995). However, one major way of interpreting the metafunctions is through the concept of metadiscourse. The history of metadiscourse, a sister concept to Halliday's metafunctions, is a term traceable to Zellig S. Harris(1959). He referred to the concept as the 'passage in texts that contain information of only secondary importance. Later on, the concept was developed by scholars in respective studies ( Vande Kopple William, 1985 Crismore Avon, 1984,1993; Halliday Michael, 1994; Thompson Susan,2001; Hyland Ken, 1998,2005, Adel Annelie, 2006, among others).

In recent times, metadiscourse studies have been explored with special interest, particularly in non-native contexts, to understand the message of the texts in various academic and sub-academic disciplines. Therefore, this study, using Hyland's model of Metadiscourse markers explored the interactive and the interactional resources employed as cohesive devices in seventy-five selected L2 theses abstracts across five disciplines.

## 2. Literature Review

Metadiscourse, in the words of Harris (1959) emerges as 'a way of understanding language use, representing a writer or speakers' attempts to guide a receiver's perception of a text'. This definition has developed into different perceptions by latter scholars who considered it more than just 'discourse about discourse' (Vande Kopple, 1985), but now refers to it as the range of devices used by writers to explicitly organize texts, engage readers, and signal their attitudes to both their material and their audience(Hyland, 2005). Hyland further defined metadiscourse as the 'self–reflective expressions used to negotiate interactional meanings in a text, assisting the writer in expressing a viewpoint and engaging with readers as members of a particular community' (2005: 370).

As noted above, metadiscourse has different models. The first among the developers is Vande Kopple's categorization. He identifies four main reasons why metadiscourse is necessary. First, it reveals how intricately organized language is. Second, it opens up interesting issues about ethnics and language use; and third, it shows the distinctions in how metadiscourse is applied, and four, it provides justification why metadiscourse merits a particular place in second language pedagogy. Based on the reasons above, his categorization of metadiscourse into textual and interpersonal has been applied to texts in both second language and native language situations. The textual category includes connectives, code glosses, validity markers, and narrators, while the interpersonal category includes illocution markers, attitude markers, and commentaries. Although this categorization has been criticized and refined, for instance, validity markers were changed to epistemological markers in his later version of the category, his contribution to the development of metadiscourse has been acknowledged and adopted.

Crismore et. al (1993)'s model is another contribution that has been used in analyzing academic texts. Though, a disciple of Vande Kopple, he succeeded in reorganizing the earlier categorizes which was later criticized for not having sufficient justification. The textual markers were later re-modified into logical connectives, sequencers, reminders, topicalisers, code glosses, illocution markers, and announcements, while the interpersonal markers comprised hedges, certainty markers, attributes, attitude markers, and commentary. Although Crismore and Vande Kopple differ in their sub-categorization, they, however, agree on the discourse areas, which include the connectives, hedges, and text commentary.

Using the same functional headings of textual and interpersonal metadiscourse, Dafouz-Milne (2008) identifies seven main categories: logical, sequencers, reminders, topicalisers, code glosses, illocutionary markers, and announcements, as well as the interpersonal metadiscourse with five categories: hedges, certainty, attributors, attitude markers, and commentaries. Her work is different from earlier scholars because of the introduction of some sub-categories in the micro and macro-categories. Dafouz-Milne's work has been found to be remarkable in contrasting texts and constructing persuasion using British and Spanish columnists.

### *2.1 Metadiscourse markers in Academic Writing*

Metadiscourse has gained popularity in academic writing research over the years. It has contributed to the interpretation of academic texts and has also revealed how they function interpersonally. Studies have shown that researchers of metadiscourse have evaluated the rhetorical functions of language. This means that academic texts produce language that offers a linguistic representation of writers and their writings.

Several studies (Akote,2019; Hyland 2004, Musa 2014) have examined metadiscourse in academic writings, and they have identified main similarities and differences in metadiscourse use. One notable research is Hyland (1998), who examined the rhetorical situation of four academic texts. The study showed that both linguistic forms and their contexts play significant roles in text interpretation. His later works also investigated the roles of academic textbooks in students' acquisition of certain disciplinary literacy (Hyland 1999). The findings of the study revealed the argument in the analyzed textbooks.

Likewise, Ozdemir and Longo (2014) analyze metadiscourse markers between the USA and Turkish post-graduate students' abstracts from the Department of English language teaching. The result showed the occurrences of endophoric markers, evidential, boosters, code glosses, self-mention, attitude markers were fewer in Turkish theses, but they use more hedges, frames, and transitions than USA students.

Apart from the above researches on academic text, Marandi (2000), also examined the introductory and the discussion chapters of 30 master's theses written after 1990 by English-speaking and Persian-speaking graduate students. The result showed that textual metadiscourse was deployed in the introductory chapters, while there is more interpersonal metadiscourse in the discussion chapters.

Rahimpour and Faghih (2009), investigated English texts written by Iranians, Persian texts written by Iranians, and English texts written by native English speakers, using Hyland (2004)'s model of metadiscourse. The findings suggest that Iranians use lesser interactional metadiscourse than the native speakers of English, and the Iranians use more attitude markers, code glosses, evidential and self-mention markers when they write in Persian.

The studies above have revealed different roles and distribution of metadiscourse markers across different academic genres. This study will therefore examine the interactional and the interactive resources in second language theses abstract from five specialized disciplines with a view to identifying and comparing the metadiscoursal resources and functions in the disciplines.

## 3. Conceptual Framework

Hyland's (2005) model of metadiscourse is an adaptation of Thompson's (2001) interactive and interactional resources. Tse and Hyland (2006:770) state that interactive resources 'are concerned with the ways of organizing discourse to anticipate readers' knowledge and reflect the writers' assessment of the readers' possessing abilities, background resources, and intertextual experiences in order to decide what needs to be made explicit to constrain and guide what can be recovered from the text'. Interactional resources, on the other hand, refer to the writers' efforts to control the level of personality in a text. Burneikaite(2008) refers to interactional resources as participant-oriented metadiscourse. These macro-purposes are realized below:

***3.1 A model of metadiscourse in the academic text (Hyland, 2005)***

| **Category** | **Function** | **Examples** |
|---|---|---|
| **Interactive Resources** | Help to guide the reader through the text | |
| Transition | Express semantic relation between main clauses | In addition/but/thus/and |
| Frame markers | Refers to discourse acts, sequences, or text stages | Finally/to conclude/my purpose is |
| Endophoric markers | Refer to the information in other parts of the text | Note above/see figure/in section 2 |
| Evidentials | Refer to source of information from other texts | According to X/(Y, 1990)/Z states |
| Code glosses | Help readers grab meanings of ideational material | Namely/e.g/such as/in other words |
| **Interactional resources** | Involve the readers in the argument | |
| Hedges | Without the writer's full commitment to the proposition | Might/perhaps/possible/about |
| Boosters | Emphasize force or writer's certainty in the proposition | In fact/definitely/it is clear that |
| Attitude markers | Express writer's attitude to the proposition | Unfortunately/I agree/ Surprisingly |
| Engagement markers | Explicitly refer to or build a relationship with the reader | Consider/note that/you can see that |
| Self-mentions | Explicitly reference to author(s) | I/we/my/our |

Hyland explained that both 'interactive and interactional elements are two sides of the same coin so that metadiscourse becomes a coherent set of options which draw on both organizational and evaluative features' Hyland (2017).

However, these categories are open to meet the writers' needs, thereby, deciding on the possible effects they want the text to have on the readers and thus, adjust the language to best achieve these purposes. It is, therefore, the interest of this paper, to identify a range of devices that help organize thesis abstracts in a second language situation, as well as to unfold how writers manifest their idiosyncrasies into these writings, thus signaling social relations with the readers.

## 4. Methodology

### *4.1 Data*

The data for this study comprised seventy-five (75) theses abstracts of five disciplines (fifteen theses per discipline) from the University of Ibadan, Nigeria. The disciplines are Arts, Social Sciences, Pure, and Applied sciences, Medical Sciences, and Education. Four compendiums of abstracts (2009-2012) were purposively selected. Each data was analyzed based on the abstract paragraphs which were divided into introduction, methodology, findings, and conclusion.

### *4.2 Methods*

This paper used both quantitative and qualitative methods of analysis. The description of the findings is in line with the objectives which include the identification of ranges of metadiscourse markers and then, the comparison of interpersonal resources used in the five selected disciplines. Hyland's (2005) taxonomy of metadiscourse was adopted. This study focuses on the use of interactive and interactional metadiscourse markers in the data. All the sub-categories of the resources were employed for the analysis. The identification, categorization, and analyses were manually done to reflect the functionality of each marker. The frequency of occurrences and the result of the resources were presented in tables using simple percentages.

**5. Analysis and Discussion**

This section presents the analysis of both the interactive and interactional metadiscourse resources in the abstracts.

***5.1 Interactive Metadiscourse Marker in the selected L2 Theses Abstracts***

Transitions: These are markers that comprised devices, mainly conjunction, used to mark additives, contrastive, and consequential steps in the abstracts. They are exemplified in the following examples:

a. Text 5(3) Medical Sciences
*Similarly, (*additive), the home GMFM scores were significantly higher in the 8th month...

b. Text 14(3) Arts
*In addition,* (additive) some pilgrims, mostly women, utilized pilgrimage trips to shop for trade articles like Jewelling.

c. Text 15(3) Pure and Applied sciences
*Also,* (additive) 17.2%...28, 3%...and 54.5% had high, moderate, and low marketing performance, respectively.

d. Text 2(1) Social science
Thus, this study evaluated the effects of market access… *as well as (*additive) supply capacity on African exports….

e. Text 13(3) Education
*Furthermore* (additive), the independent variables made a significant relative contribution to grassroots sports development.

The above examples are instances of additive connectors in the selected abstracts. These connectors varied in classifications. For instance, examples a, b, and e above belong to the sentence connectors, which were deployed by the writers to begin a sentence and to show a relationship between that sentence and the previous one. They are usually physically separated by a comma to mark their role in a sentence. On the other hand, 'also' as well as 'and' in examples c and d above are examples of linkers which are adverbs and coordinating conjunction, respectively. They are deployed in the text to link arguments together. It is interesting to note that the adverb 'also' which usually does not occur at the beginning of a sentence in some academic writings was found to start sentences in the analyzed abstracts. Likewise, the use of 'and', coordinating conjunction, was found to dominate the entire text. It is the most deployed transitional marker in the data. The simple explanation for this is that the L2 abstracts are guided with results of findings that are derived from several arguments. These arguments, in turn, are presented not in isolation, but in relationship to both the previous and subsequent arguments. Apart from the additive markers in the text, there are also instances of a conjunction such as consecutive, adversative, causative, and comparison. Some examples include the following.

a. Text 7 (1) Education:
This study, *therefore*, examined the influence of citizen participation in self-help projects….

b. Text 15 (1) Social science:
*Yet,* such organizations are usually composed of ruling and opposition figures.

c. Text 13 (2) Medical science:
Group 5 animals were bled…, *while* group 6 consisted of 2 subgroups.

d. Text 9 (1) Pure and applied science:
*However*, utilization of HIV/AIDS prevention information is advocated….

Table 1a: Table of occurrence of transitional markers in the five faculties

| | **Arts** | **Education** | **Social Sciences** | **Medical sciences** | **Pure and Applied Sciences** | **Total** |
|---|---|---|---|---|---|---|
| Paragraph **1** | 80 | 81 | 78 | 60 | 64 | |
| Paragraph 2 | 72 | 65 | 95 | 140 | 92 | |
| Paragraph 3 | 175 | 110 | 130 | 179 | 196 | |
| Paragraph 4 | 33 | 44 | 45 | 27 | 39 | |
| Total | **360** | **300** | **348** | **406** | **391** | **1805** |
| Percentage Total | 19.9% | 16.6% | 19.3% | 22.5% | 21.7% | 100% |

Table 1b: Types of translations and frequency of use in the five faculties

| **Specific connectives** | **Frequency of use** | | | | | **Total** |
|---|---|---|---|---|---|---|
| | **Arts** | **Educations** | **Social sciences** | **Medical sciences** | **Pure and applied science** | |
| **and** | **274** | **220** | **299** | **339** | **294** | **1087** |
| **Therefore** | **13** | **20** | **9** | **2** | **11** | **55** |
| **also** | **3** | **6** | **2** | **1** | **3** | **15** |
| **while** | **15** | **10** | **8** | **24** | **25** | **82** |
| **however** | **8** | **6** | **9** | **5** | **9** | **37** |
| **nevertheless** | **-** | **1** | **-** | **-** | **-** | **1** |
| **but** | **6** | **6** | **5** | **2** | **9** | **28** |
| **though** | **-** | **1** | **-** | **-** | **-** | **1** |
| **moreover** | **-** | **1** | **-** | **-** | **-** | **1** |
| **nor** | **-** | **1** | **1** | **-** | **-** | **2** |
| **or** | **2** | **1** | **3** | **5** | **-** | **11** |
| **hence** | **-** | **1** | **-** | **-** | **2** | **3** |
| **Further(more)** | **2** | **3** | **1** | **1** | **4** | **11** |
| **On the other hand** | **-** | **1** | **1** | **-** | **2** | **2** |
| **because** | **7** | **1** | **3** | **-** | **-** | **10** |
| **as well as** | **3** | **2** | **5** | **1** | **6** | **17** |
| **especially** | **9** | **-** | **-** | **-** | **-** | **9** |
| **On the contrary** | **1** | **-** | **1** | **-** | **-** | **2** |
| **In addition** | **1** | **-** | **1** | **-** | **1** | **3** |
| **Besides** | **1** | **-** | **1** | **-** | | **2** |
| **Consequently** | **2** | **-** | **1** | **-** | **1** | **4** |
| **even though** | **1** | **-** | **-** | **-** | **-** | **1** |
| **similarly** | **1** | **-** | **2** | **2** | **3** | **8** |
| **In contrast** | **1** | **-** | **-** | **-** | **2** | **3** |
| **Thus** | **3** | **-** | **1** | **1** | **3** | **8** |
| **First** | **1** | **-** | **-** | **-** | | **1** |
| **Second** | **1** | **-** | **-** | **-** | | **1** |
| **Third** | **1** | **-** | **-** | **-** | | **1** |
| **Such as** | **-** | **-** | **3** | **1** | | **4** |
| **yet** | **-** | **-** | **1** | **-** | **1** | **2** |
| **Nonetheless** | | | **1** | **-** | | **1** |
| **In spite of** | **-** | **-** | **1** | **-** | | **1** |
| **Particularly** | **-** | **-** | **1** | **-** | | **1** |
| **Conversely** | **-** | **-** | **-** | **-** | **1** | **1** |
| **Thereafter** | **-** | **-** | **-** | **-** | **1** | **1** |

The results in tables 1a and 1b summarized the categorization and occurrences of transitional markers in the five faculties.

Table 1 shows the occurrences of transitions across the five selected faculties. It is obvious that the Medical sciences predominantly deployed transitional markers in their abstracts, followed by the Pure and Applied sciences and then Arts, Social sciences, and Education, respectively. This signaled a significant function in the deployment of transitional markers in L2 Medical science theses abstracts. Apart from the general findings, the tables also showed that the markers are mostly used in the research finding section of the abstracts (paragraph 3 of the abstracts), followed by the methodology sections (paragraph 2 of the abstracts), and then, the introductory and concluding paragraphs (paragraphs 1 and 4), respectively.

Also, in table 1b, each of the transitions has a varied frequency of occurrences, that is, some with greater frequency and others with lesser frequency or null frequency. From the table, there is the significant and predominant use of 'and' as well as, 'while' in the science discipline. For instance, 'while' is mostly deployed in Medical, and Pure and applied sciences because, in most of the researches, there are scientific expectations, which served standards to which whatever results got from the research are compared. It indicated that at least two results and facts from scientific experiments are required to make a conclusion. These results can either be contrasting or complementary, thus reporting them in a single sentence called for the use of 'while', a transitional marker. On the other hand, 'and', coordinating conjunction was also deployed mostly by the science discipline, particularly in the methodology and the finding paragraphs of the abstracts. Its use in the methodology established the complementarity of processes involved in the research experiment, while its deployment in the findings showed similarity of results of the experiments which would be suitable to validate a viable conclusion.

Code glosses: These are markers that signal the restatement of ideational information. In empirical studies such as this, it helps writers to explain, rephrase, list, exemplify the arguments or ideas in the abstracts.

Let's consider the following excerpt:

a. Text 14(1) Medical science:
Stroke is a major cause of disability affecting human functioning and health attributes *such as* motor performance (MP), functional activity (FA) societal participation (SP)….

b. Text 11 (3) Arts:
*Examples* are 'unfailing', 'exceptional', and 'skilled'

c. Text 15 (3) Arts:
Enendu'swork is a search for local content initiatives, *including* waste material adaptation usage.

d. Text 12(1) Education
…prison inmates in the north-central states of Nigeria *namely*, Benue, Kogi, Kwara, Nassarawa, Niger, and Plateau.

e. Text 1(3) Social Science
Other factors that adversely affected implementation *included* the political culture of the target group, the near absence of notable shipping ….

f. Text 15 (1) Pure and Applied sciences
The initiative *comprised* production and marketing incentives ….

The examples above are instances of code glosses in the data. In the selected abstracts, the theses writers pay close attention to exemplifying and listing the ideational materials. Examples in 10,12,13,14 and 15 above, represented the items relating to the discourse; thus the need for markers, 'such as', 'including', 'including', 'namely', 'included' and 'comprised', respectively. Also, few instances of exemplification markers were found, for instance, example 11 above provided the word 'examples' as part of code glosses.

The results in tables 2a and 2b summarise categorization and occurrences of code glosses in the five faculties.

Table 2a:

| | **Arts** | **Education** | **Social Sciences** | **Medical sciences** | **Pure and Applied Sciences** | **Total** |
|---|---|---|---|---|---|---|
| Paragraph **1** | 4 | 9 | 7 | 5 | - | |
| Paragraph 2 | 3 | 6 | 10 | 6 | 7 | |
| Paragraph 3 | 16 | 3 | 7 | 4 | 1 | |
| Paragraph 4 | 1 | - | - | - | - | |
| Total | **24** | **18** | **24** | **15** | **8** | 89 |
| Percentage Total | 27.00% | 20.20% | 27.00% | 16.90% | 9.00% | 100% |

Table 2b: specific code glosses in the five faculties

| **Specific code glosses** | **Frequency** | | | | | **Total** |
|---|---|---|---|---|---|---|
| | **Arts** | **Educations** | **Social sciences** | **Medical sciences** | **Pure and applied science** | |
| **For instance** | **2** | **-** | **-** | **-** | **-** | **2** |
| **Such as** | **8** | **1** | **1** | **-** | **-** | **10** |
| **Examples** | **1** | **-** | **-** | **-** | **-** | **21** |
| **Included(ing)** | **8** | **3** | **9** | **2** | **1** | **23** |
| **Consisting/ consisted (of)** | **1** | **1** | **1** | **3** | **1** | **7** |
| **Like** | **2** | **1** | **-** | **-** | **-** | **3** |
| **Namely** | **1** | **2** | **1** | **-** | **2** | **6** |
| **Comprise (ing)** | **-** | **3** | **2** | **5** | **2** | **12** |
| **Among** | **-** | **1** | **-** | **-** | **-** | **1** |
| **As follows** | **-** | **1** | **-** | **-** | **-** | **1** |
| **Involving** | **-** | **-** | **2** | **2** | **-** | **4** |
| **Made-up** | **-** | **-** | **-** | **-** | **1** | **1** |

Table 2a presented the frequency of occurrences of code glosses across the five selected faculties. It is clear from the results, that there are more deployment of code glosses in Arts and Social sciences, followed by Education, Medical sciences as well as Pure and Applied Sciences, respectively. This means that humanistic faculties deployed ideational materials in the presentation of arguments than the science faculties, whose main materials rely on facts and figures. In addition, the results showed that code glosses were mostly used in paragraphs 3 of the abstracts, followed by paragraphs 2 and 1, respectively. There is a single instance of code glosses in paragraph 4, which means that the paragraph is meant for conclusions derived from the findings in the previous paragraphs, rather than showing exemplifications.

Table 2b highlighted and exemplified the empirical evidence of code glosses in theses abstracts. Hyniuk's (2018)'s study indicates the use of these and other kinds of interactive resources in academic writing.

Evidential: these markers indicate the source(s) of adjunct textual information other than the one in the text. Although these markers are found in the body of the dissertations and theses, their deployment in L2 abstracts is scanty. Some examples include:

a. Text 14(1) Arts
Existing *studies* on pilgrimage have focused more on the spiritual dimension.

b. Text 12(1) Social Science
While *studies* have been conducted on these wars and peace processes, there has been no systematic study on …peace processes.

c. Text 1(1) Arts

While past *scholarship* has mostly concentrated on production and marketing, the utilitarian value and effect…have been largely under-researched.

d. Text 1(1) Education
*Literature* has shown that if learners' learning outcome is to be enhanced, there is the need to complement… instructional media techniques.

e. Text 5 (1) Pure and Applied Science
*Studies* have been carried out on absorption isotherms …to shelf-life.

The samples above show the various realizations of evidential in the abstracts. The few instances point to the indirect sources of literature relevant to the present study. For instance, in a16-20 above, there is the use of 'studies', 'scholarship' and 'literature', respectively to refer to sources of textual information which are not readily available in the present texts. The following showed the distribution of the evidential in the abstracts.

Table 3a: Table of occurrence of evidential in the five faculties

| | **Arts** | **Education** | **Social Sciences** | **Medical sciences** | **Pure and Applied Sciences** | **Total** |
|---|---|---|---|---|---|---|
| Paragraph **1** | 7 | 11 | 6 | - | 2 | |
| Paragraph 2 | **-** | **-** | **-** | **-** | | |
| Paragraph 3 | **-** | **-** | **-** | **-** | | |
| Paragraph 4 | **-** | **-** | **-** | **-** | | |
| Total | **7** | **11** | **7** | **-** | **2** | 27 |
| Percentage Total | 36.8% | 57.9% | 36.8% | - | 10.5% | 100% |

Table 3b: Table of specific evidential in the five faculties

| **Specific Evidentials** | **Frequency** | | | | | **Total** |
|---|---|---|---|---|---|---|
| | **Arts** | **Educations** | **Social sciences** | **Medical sciences** | **Pure and applied science** | |
| Studies | 6 | 10 | 6 | - | 2 | 24 |
| Literature | 1 | 1 | - | - | - | 2 |
| According to | - | - | 1 | - | - | 1 |

The results in tables 3a and 3b revealed that the evidential markers are mostly used in Education, followed by Arts and social sciences. It is significantly interesting to note the pseudo occurrence of evidential in L2 Medical sciences' theses abstracts. The findings also suggested that humanistic disciplines in second language situations deploy evidential markers in theses abstracts than the science-based disciplines.

Frame Markers: these are references to text boundaries or elements of schematic text structure. Consider the following examples:

a. Text 15(4) social science
*Overall*, the organization was not able to clarify the place and role of the Igbo in politics….

b. *Finally*, males exhibited higher levels of organization….

The above samples show the discourse sequencing in the text. The first example 'overall' was used to label a stage in discourse, while the second example 'finally' signaled the sequence of discourse. Frame markers were rarely used in the sampled texts because there was a ready-made sequence of arrangements for theses abstracts in the selected university. The sequential sections are the introduction, methodology, findings/results, and conclusion. Tables 4a and b present the occurrences of frame markers in the data.

Table 4a: Table of occurrence of frame markers in the five faculties

| | **Arts** | **Education** | **Social Sciences** | **Medical sciences** | **Pure and Applied Sciences** | **Total** |
|---|---|---|---|---|---|---|
| Paragraph **1** | 1 | - | 1 | - | - | |
| Paragraph 2 | **-** | **-** | | **-** | **-** | |
| Paragraph 3 | **-** | **-** | **1** | **1** | **-** | |
| Paragraph 4 | **-** | **-** | **1** | **-** | **1** | |
| Total | **1** | **-** | **3** | **1** | **1** | 6 |
| Percentage Total | 16.7 | - | 50.0 | 16.7 | 16.7 | 100% |

Table 4b: specific frame markers in the data

| **Specific Frame markers** | **Frequency** | | | | | **Total** |
|---|---|---|---|---|---|---|
| | **Arts** | **Educations** | **Social sciences** | **Medical sciences** | **Pure and applied science** | |
| Finally | 1 | - | 01 | 01 | - | 3 |
| Overall | - | - | 01 | 1 | - | 2 |
| Concluded | - | - | 01 | - | - | 1 |

### *5.1.1 Summary of Interactive Resource in the Data*

Table 5: summary of interactive markers in the abstracts

| **Faculty** | **Transitional** | **%** | **Frame marker** | **%** | **Evidential** | **%** | **Code glosses** | **%** | **Endophoric marker** | **%** | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Arts** | **360** | **19.9** | **1** | **16.7** | **7** | **36.8** | **24** | **27.0** | **00** | **00** | **389** |
| **Education** | **300** | **16.6** | **00** | **00** | **11** | **57.9** | **18** | **20.2** | **00** | **00** | **325** |
| **Social science** | **348** | **19.3** | **3** | **50.0** | **7** | **36.8** | **24** | **27.0** | **00** | **00** | **381** |
| **Medical science** | **406** | **22.5** | **1** | **16.7** | **00** | **00** | **15** | **16.9** | **00** | **00** | **422** |
| **Pure and applied science** | **391** | **21.7** | **1** | **16.7** | **2** | **10.5** | **8** | **9.0** | **00** | **00** | **402** |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | **1805** | **94.1** | **6** | **0.3** | **19** | **0.99** | **89** | **4.6** | **00** | **00** | |

Table 5 summarized the results for the interactive markers in the five faculties. Within the results, the most frequently used markers were the transitional markers. They were 1805 (94.1%) out of the entire 1919 interactive markers in the data. The transitional markers included many additives, causatives, and contrastive relationships in the texts. This indicated that the theses writers have a strong command of their writing and thus, possess the skills that guide the readers through the texts. Next to transitional markers are the code glosses. They were used 89 times (4.6%)in the data. Their deployment in the text suggested the elaboration of the propositional meaning of what the writer has said through exemplification, itemizing, and re-phrasing. Evidential and frame markers were also represented with 19 (0.99%) and (0.3%) occurrences, respectively. The evidential provided scholarly–based sources for the arguments in the selected abstracts, while the frame markers signaled text sequence and boundaries of discourse stages. It is clear from the results that there was no instance of the endophoric marker in any of the texts. This is because there is no special call for adjunct referral to specific information mentioned earlier in the text.

***5.2 Interactional Metadiscourse Marker in the selected L2 Theses Abstracts***

Hedges: These markers perform interpersonal functions by making the writers avoid any exact or precise statements; thereby providing opportunities for readers to make inferences from the said statements. These markers guide the writers in passing judgments. Let's see some examples below:

a. Text 4(3) Arts
His use of binominal elements is *indicative* of both the negative and positive face acts….

b. Text 6(3) Arts
*About* 83.0% of the respondents had a favorable disposition to the English language.

c. Text 4 (3) Education
Only lesson objectives…*could predict* students' attitudes to mathematics.

d. Text 1 (4) social science

These results indicate that government expenditures on human capital development through the social services sector tended to enhance economic growth and reduce poverty.

e. Text 13 (3) Pure and applied sciences
Also, results of logit regression analysis revealed that the location of FRs… are factors that are *likely* to cause conflict.

f. Text 1 (3) Medical science
Kinetic analysis *suggests* that the biflavonoids exhibited a non-competitive mode of inhibition.

g. Text 13(4) Medical science
Chrysophyllumalbidum and its fractions possessed membrane … which *may* account for the antimalarial activity….

The examples above, showed the variations in the usage of Hedges, that is, *indicative, about, could predict, likely, suggests, and may*, respectively. Hedges are the most predominantly used interactional markers in the data. When used, they encode certain information and thus, provide an 'escape' when such assertions prove to be untrue. The hedges in the data comprised, the epistemic verb 'may', the probability adverb 'likely', and the expression 'suggests'. The following tables presented the distribution of hedges in the abstracts.

Table 6a: Table of occurrence of hedges in the five faculties

| | **Arts** | **Education** | **Social Sciences** | **Medical sciences** | **Pure and Applied Sciences** | **Total** |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Paragraph **1** | 3 | 9 | 1 | 8 | 3 | |
| Paragraph 2 | **-** | **1** | **-** | **3** | **-** | |
| Paragraph 3 | **3** | **11** | **7** | **13** | **8** | |
| Paragraph 4 | **10** | **20** | **12** | **12** | **10** | |
| Total | **16** | **41** | **20** | **36** | **21** | 134 |
| Percentage Total | 11.9 | 30.6 | 15.0 | 26.9 | 15.7 | 100% |

Table 6b: specific hedges in the abstracts

| **Specific Hedges** | **Frequency** | | | | | |
|---|---|---|---|---|---|---|
| | **Arts** | **Education** | **Social science** | **Medical science** | **Pure and applied science** | **Total** |
| **Implied** | **-** | **5** | **-** | **-** | **1** | **6** |
| **Assumed** | **-** | **-** | **-** | **-** | **1** | **1** |
| **Suggest (ed)** | **3** | **1** | **-** | **3** | **2** | **9** |
| **Indicate (ive)** | **3** | **1** | **-** | **8** | **6** | **18** |
| **Should** | **3** | **16** | **2** | **4** | **2** | **27** |
| **Would** | **2** | **-** | **-** | **-** | **3** | **5** |
| **Tend (ed)** | **-** | **-** | **1** | **-** | **1** | **2** |
| **About** | **1** | **-** | **-** | **1** | **2** | **4** |
| **May** | **-** | **2** | **-** | **9** | **2** | **13** |
| **Likely** | **-** | **-** | **1** | **3** | **1** | **5** |
| **Predicted** | **-** | **5** | **5** | **5** | **-** | **15** |
| **Could** | **5** | **7** | **2** | **2** | **-** | **16** |
| **Estimated** | **-** | **-** | **-** | **1** | **-** | **1** |
| **Can** | **1** | **-** | **1** | **-** | **-** | **2** |
| **Appeared** | **-** | **-** | **1** | **-** | **-** | **1** |
| **Perceived** | **-** | **-** | **3** | **-** | **-** | **3** |
| **Hardly** | **-** | **-** | **2** | **-** | **-** | **2** |

Tables 6a and b presented the specific markers used in the five faculties. The results showed that Hedges was mostly used in Education and Medical science theses abstracts. This is followed by Pure and applied sciences, arts, and social sciences. It further showed that its deployment is obvious in paragraph four of the abstracts; the paragraph where the conclusion of the abstract was made. It is expected that the last paragraph of each of the abstract must have the concluding statements which succinctly sums up the findings/the results done in paragraph three, but, some writers in the process of making these conclusions, decide to avoid an absolute statement of conclusion but allow the readers to make inferences from the statements. Also with reference to the result on the table, Hedges were also used in the findings paragraphs, as well as the introductory paragraph of the abstracts. It is also evident that there is a scant occurrence in the introductory paragraph because the section has the objective of providing previous studies and presenting the gap in knowledge in the course of introducing the topic to the readers. The specific markers in table 6b showed that the epistemic verb 'should' is the most deployed hedge in the data.

Boosters: These are markers that increase the illocutionary force of an utterance. They are devices that express conviction and assert a proposition with confidence, representing a strong claim about a state of affairs (Hyland, 1998:350). They are markers that strengthen the claim or the argument of the writer in a direct way. The following are curled from the data:

a. Text 9(3) Pure and applied science
The PTA *showed* that stigmatization, gender inequality… were major constraints to … information utilization.

b. Text 13(3) Pure and applied science
Furthermore, descriptive analysis of timber... *revealed* that; 72.6% identified destruction… between them and farmers.

c. Text 13(3) Medical science

No significant histological changes were *observed* in the organs examined.

d. Text 12(4) Arts
If an Afrocentric theory of reading literature must be formulated, African scholars *must* be much more grounded in African epistemology.

e. Text 12(1) Education
Previous studies *confirmed* that exercise has proved to be effective….

f. Text 5(1) Social science
OCB research has *shown* to be a vital component of individual and organizational performances.

The examples above presented boosters as 'upgraders' in the arguments (Hense and Kasper, 1981). They are used above as strengtheners to the writers' commitment to the arguments in the theses.

Table 7a: Table of occurrence of boosters in the five faculties

| | **Arts** | **Education** | **Social Sciences** | **Medical sciences** | **Pure and Applied Sciences** | **Total** |
|---|---|---|---|---|---|---|
| Paragraph **1** | 2 | 3 | 3 | 1 | - | |
| Paragraph 2 | **1** | **-** | **1** | **-** | **-** | |
| Paragraph 3 | **13** | **13** | **9** | **19** | **11** | |
| Paragraph 4 | **6** | **5** | **3** | **-** | **2** | |
| Total | **22** | **21** | **16** | **20** | **14** | 93 |
| Percentage Total | 23.7% | 22.6% | 17.2% | 21.5% | 15.1% | 100% |

Table 7b: specific boosters in the data

| **Specific marker** | **Arts** | **Education** | **Social sciences** | **Medical sciences** | **Pure and applied sciences** | **Total** |
|---|---|---|---|---|---|---|
| **Found** | **-** | **-** | **1** | **-** | **-** | **1** |
| **Confirmed** | **3** | **2** | **1** | **-** | **-** | **7** |
| **Observed** | **-** | **-** | **1** | **4** | **4** | **9** |
| **Exhibited** | **-** | **-** | **-** | **-** | **1** | **1** |
| **Showed** | **4** | **8** | **3** | **13** | **4** | **32** |
| **Revealed** | **2** | **3** | **1** | **1** | **3** | **10** |
| **Demonstrate** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Significantly** | **1** | **1** | **2** | **-** | **-** | **4** |
| **Convincingly** | **1** | **1** | **-** | **-** | **-** | **2** |
| **Particularly** | **4** | **-** | **-** | **-** | **-** | **4** |
| **Supported** | **-** | **1** | **-** | **-** | **-** | **1** |
| **Obvious** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Must** | **3** | **3** | **-** | **-** | **-** | **6** |
| **Will** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Enhanced** | **-** | **2** | **-** | **-** | **-** | **2** |
| **Specifically** | **-** | **-** | **2** | **-** | **-** | **2** |
| **Independently** | **-** | **-** | **-** | **-** | **1** | **1** |
| **Principally** | **-** | **-** | **1** | **-** | **-** | **1** |
| **Invariably** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Dramatically** | **1** | **-** | **-** | **-** | **-** | **1** |

Tables 7a and b showed specific devices and the distribution of boosters across the faculties.

The presentations in the tables revealed that boosters are essential markers in academic writings. Although past researches have shown that boosters have higher occurrences in research papers, particularly in the native speakers' context (Peacock, 2006; Farrokhi and Emami, 2008; Takimoto, 2015), findings from this study have revealed that boosting skills L2 context is still limited. Some experts have shown that boosters are not easily used by second language learners (Holmes, 1982,1988, Hyland and Tse,2004). Though boosting is an important device in an academic text, it is obvious from the result that the L2 theses abstract writers 'hedge' more than 'boost' in their writings.

Hyland (1996a:278), argues that L2 speakers find it "extremely troublesome" in using boosters, thus, hindering some of their involvement in the research world dominated by the English language. However, this study is of the opinion that the L2 theses abstract writers, though non-native speakers of the English language have at least used a considerable number of boosters in their writings, which consequently help to improve the overall quality of the abstract. The specific devices deployed in Table 7b, revealed that the markers 'showed' is the most deployed booster used in all the faculties, and interestingly, it was predominantly used in the Medical Sciences, followed by Education, Pure, and applied sciences, Arts and Social sciences, respectively.

Attitude markers: These markers increase the interpersonal resources of the texts. It conveys the personal feelings of the writers. Attitude markers were the least-used interactional resources in the data. This indicates that L2 theses abstract writers do not display their feelings towards the arguments. Let's consider some of the following examples:

a. Text 3(4) Pure and applied science

…since parents' education influence students' academic achievements in Mathematics, the government and all stakeholders…would be educated…*especially* in their attitude.

b. Text 9(1) Education
This has been attributed *partially* to the pressure of work…which is posing serious challenges to their job performance.

c. Text 15(3) Social science
*Originally* non-political and non-partisan, it enjoyed the support of the broad…elite.

d. Text 9(1) Arts
*Unfortunately*, no serious effort has been made to examine the relationship between motivational teachings….

Table 8a: Table of occurrence of attitude markers in the five faculties

| | **Arts** | **Education** | **Social Sciences** | **Medical sciences** | **Pure and Applied Sciences** | **Total** |
|---|---|---|---|---|---|---|
| Paragraph **1** | 6 | 1 | 2 | - | 1 | |
| Paragraph 2 | **1** | **-** | **-** | **-** | **-** | |
| Paragraph 3 | **8** | **-** | **9** | **-** | **1** | |
| Paragraph 4 | **3** | **-** | **2** | **-** | **4** | |
| Total | **18** | **1** | **13** | **-** | **6** | 38 |
| Percentage Total | 47.4% | 2.6% | 34.2% | - | 5.8% | 100% |

Table 8b: specific attitudes markers in the abstracts

| **Specific markers** | **Arts** | **Education** | **Social science** | **Medical sciences** | **Pure and applied sciences** | **Total** |
|---|---|---|---|---|---|---|
| **Hardly** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Largely** | **2** | **-** | **2** | **-** | **1** | **5** |
| **Extensively** | **2** | **-** | **-** | **-** | **-** | **2** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Frustratingly** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Unfortunately** | **1** | **-** | **-** | **-** | **1** | **2** |
| **Usually** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Generally** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Originally** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Consistently** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Paradoxically** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Theoretically** | **1** | **-** | **-** | **-** | **-** | **1** |
| **Partially** | **-** | **1** | **-** | **-** | **-** | **1** |
| **Relatively** | **-** | **1** | **-** | **-** | **-** | **1** |
| **Especially** | **-** | **-** | **-** | **-** | **1** | **1** |
| **Additionally** | **-** | **-** | **-** | **-** | **1** | **1** |
| **Potentially** | **-** | **-** | **-** | **-** | **1** | **1** |

The few samples of attitude markers above are devices used by theses abstract writers to engage their readers in the writings. Tables 8a and b showed the specific markers deployed and the distribution of occurrences across the five faculties. The result in the table revealed that Education and Medical sciences theses abstract writers do not create an attitudinal relationship in their abstracts. On the other hand, Arts, Social sciences, and Pure, and applied sciences deployed few instances in the data.

**6. Summary of Findings**

Table 9: summary of metadiscourse markers in the disciplines

| **Metadiscourse markers** | **Arts** | **Education** | **Social sciences** | **Medical sciences** | **Pure and applied sciences** | **Total** | **Percentage** |
|---|---|---|---|---|---|---|---|
| **Interactive resources** | **389** | **325** | **381** | **422** | **402** | **1919** | **87.9%** |
| **Interactional resources** | **56** | **63** | **49** | **56** | **41** | **265** | **12.1** |

In all, Table 9 presented the summary of the interactive resources which constitute 87.9% of the data, with the significant deployment of transitional markers, and in particular, the conjunction 'and'. This is followed by code glosses, evidential and frame markers, respectively. However, there was no use of endophoric markers in the data. The interactive markers used are concerned with the internal organization and the overall coherence of the abstract. It is the opinion of this paper that interactive resources are very important in academic writings, and thus, very impossible to remove from any academic texts.

The interactional resources, on the other hand, were also deployed in the data, but they constituted only 12.1%. This implies that the interactive markers deployed in the data might defeat their purpose if no device(s) displayed an interaction between the writers and the readers. The highest interactional markers are Hedges, with particular usage of the epistemic modal 'should'; followed by the boosters and then, attitude markers. It is worthy of note, that engagement marker, as well as, self-mention were both absent from the data. This is in line with Granqvist (2013)'s argument that academic writers cannot use every conceivable linguistic device in academic writing.

The overall presence of these interactional markers in the data suggests the author's intention in involving the readers in the texts. Holmes (1990) points out that engaging readers in the work are one important feature in academic writing.

**7. Conclusion**

Based on Hyland's (2005) model of metadiscourse, this study has examined the use of interactive and interactional metadiscourse in 75-second language theses abstracts written in five faculties in Nigeria Premiere University. The analyses above have revealed that the interactive resources were predominantly deployed by the $L_2$ writers in achieving cohesion in the texts. This is immediately followed by the significant use of hedges. Apart from the two above, boosters, code glosses, attitude markers, evidential and frame markers were also deployed in varying frequencies by the writers. However, endophoric markers, engagement markers, and self mention were not represented in the data.

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