

Reporting Verbs in Academic Writing: A Case Study of MPhil Theses at the Kwame Nkrumah University of Science and Technology, Kumasi Ghana



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ABSTRACT

This study analyzes the types of reporting verbs employed in the literature review chapters of Master of Philosophy theses from the Agriculture, English and Mathematics departments at the Kwame Nkrumah University of Science and Technology (KNUST), Ghana. The mixed method technique was employed for data collection. Using both purposive and simple random sampling, forty-five (45) Master of Philosophy (MPhil) theses constituted the study's dataset. Employing a descriptive, content, and inductive analysis, the study found that discourse act verbs, research act verbs, and cognitive acts verbs were all used in the literature review chapters of MPhil theses in Mathematics, English and Agriculture. Overall, it was observed that the verbs were employed in varying degrees and that reporting verb usage is a discourse-defined attribute, influenced by the idiosyncrasies of the discipline in question. The contribution of this study lies in the light it throws on the usefulness of reporting verbs in research works and how reporting verbs ought to be selected carefully. The study also contributes to the body of knowledge on academic discourse in general, and particularly on citation and reporting verbs in Africa. Finally, the study also has pedagogic implications since it highlights the need for more emphasis on the nuances of reporting verbs in teaching Research Methods to (post-graduate) students.

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INTRODUCTION

Academic writings and research reports usually follow specific rhetoric structures or genre structures, typically comprising sections of *Abstract*, *Introduction*, *Literature Review*, *Methodology*, *Results*, *Discussions of Results*, and *Conclusion*.¹ The *Introduction* and *Literature Review* sections are key aspects that require the researcher to refer to and engage previous works that are related to the current study. The literature review and introduction sections provide a concise synopsis of the study and explain definitions and terms parallel within the study's context.²

¹ John Bitchener, *Writing an Applied Linguistics Thesis or Dissertation: A Guide to Presenting Empirical Research* (Bloomsbury Publishing, 2009).

² Diana Ridley, "The Literature Review: A Step-by-Step Guide for Students," 2012.

Citations are typically used to serve as the foundation on which the researches are conducted, especially when it becomes necessary for writers to support their claims with existing statements of facts and findings. As Yeganeh and Boghayeri have noted, citation helps researchers to make reference to the disciplinary community to which they belong and also to show how they understand the previous works.³ Researchers are required to cite previous works to avoid plagiarism which is an unpardonable crime in academic writing. To avoid the snare of plagiarism, researchers carefully select particular types of verbs to report or make reference to previous works. Reporting verbs, therefore, are utilized to ensure proper citation and prevent plagiarism in research writing. As Charles argues, reporting verbs help writers of research reports to indicate their responsibility towards the assertion made.⁴ Reporting verbs help writers to make reference to existing literature to support their claims.

Despite the crucial role reporting verbs play in academic writings, scholarship on the subject of its usage in academic discourse have largely not focused on the African perspective. Indeed, Agbaglo's work on the form and function of reporting verbs in research publications (of professors at the University of Cape Coast, Ghana) is among the few in sub-Saharan Africa.⁵ Moreover, very few works on reporting verbs investigated the question of how the use of reporting verbs varies from discipline to discipline. To address this research gap, the present study examines the use of reporting verbs, focusing on the *Literature Review* sections of postgraduate theses from the English, Mathematics and Agriculture Departments of the Kwame Nkrumah University of Science and Technology (KNUST).

The study seeks to address two questions:

- Which reporting verbs are employed in research works by Postgraduates in the Departments of English, Mathematics and Agriculture in the KNUST?
- What is the distribution of different types of reporting verbs in postgraduate research papers from the Departments of English, Mathematics and Agriculture in KNUST?

The rest of the paper is organized as follows: a background to the study is provided to set the tone for the discussion, after which the theoretical framework in which the study is cast is presented. The methodology for the study is then laid out and is followed by a presentation of the findings of the present study, and then the recommendations and conclusion.

LITERATURE REVIEW

Reporting verbs have been classified into different types by different scholars. Thompson and Ye and Hyland, for instance, have all classified reporting verbs into different types.⁶ Thompson and Ye used a corpus-based method to study more than a hundred *introduction* sections of journals in different fields and used that to classify reporting verbs in relation to their semantic distinctions. They grouped reporting verbs into *denotation* and *evaluation* types. Under the denotation type, there are *author acts* and *writer acts*. Under the evaluation type also, there are the writer's stance, the author's position, and the writer's meaning.⁷ In an effort to identify cross-disciplinary disparities in citation, Hyland, on the other hand, examined eighty (80) research papers from various disciplines. He proposed denotation and evaluation types of reporting verbs. Under denotation, he proposed research acts, cognition acts, and discourse acts. Under evaluation categories also, he proposes factive, non-factive and counter-factive types.⁸

One fact that stands out as far as the literature on reporting verbs is concerned is the fact that the selection of specific reporting verbs in context poses a difficult challenge for both students and lecturers. Jaroongkhongdach, for instance, argues that employing reporting verbs in academic discourse poses a

³ Maryam Tafaraji Yeganeh and Mahnaz Boghayeri, "The Frequency and Function of Reporting Verbs in Research Articles Written by Native Persian and English Speakers," *Procedia-Social and Behavioral Sciences* 192 (2015): 582–86.

⁴ Maggie Charles, "Phraseological Patterns in Reporting Clauses Used in Citation: A Corpus-Based Study of Theses in Two Disciplines," *English for Specific Purposes* 25, no. 3 (2006): 310–31.

⁵ Ebenezer Agbaglo, "The Types and the Frequencies of Reporting Verbs in Research Articles Written by Lecturers in a Ghanaian University," *Journal of Literature, Languages and Linguistics* 34 (2017): 51–57.

⁶ Geoff Thompson and Ye Yiyun, "Evaluation in the Reporting Verbs Used in Academic Papers," *Applied Linguistics* 12, no. 4 (1991): 365–82; Ken Hyland, "Academic Attribution: Citation and the Construction of Disciplinary Knowledge," *Applied Linguistics* 20, no. 3 (1999): 341–67.

⁷ Thompson and Yiyun, "Evaluation in the Reporting Verbs Used in Academic Papers."

⁸ Hyland, "Academic Attribution: Citation and the Construction of Disciplinary Knowledge."

huge difficulty for both undergraduate and postgraduate researchers.⁹ Bloch and Pecorari also observe that students have some sort of difficulty deciding or determining what reporting verbs are appropriate at what time, which almost always results in distortion of meanings in their assignments.¹⁰ This situation calls for a careful and detailed study of the use of reporting verbs.

Many scholars have explored reporting verb usage in academic discourse from different angles.¹¹ Manan and Noor, for instance, examined how students from Malaysia employed reporting verbs in their master's research reports, in the lenses of Hyland's model. The study sampled six (6) dissertations by Malaysian students in the English Language studies department at a Malaysian university. The study found that Research Acts were the highest with 44.8% of usage, Cognition Acts reporting verbs recorded 30.2% of usage, and Discourse Acts reporting verbs recorded 25.0%. The Research Acts verb *found* occurred most, *suggest* also recorded the highest frequency as far as Cognition Acts is concerned, and *state* recorded the highest with regards to verbs in the Discourse Acts. It was concluded that Malaysian students are more accustomed to reporting verbs from the Research Acts group than other types.¹²

Loan and Pramoolsook also investigated how reporting verbs were used in the analysis sections of research reports produced by Vietnamese students.¹³ They relied on Hyland's approach of identifying reporting verbs to examine analysis sections of twenty-four (24) research reports. The findings revealed that Vietnamese students utilized reporting verbs at random, without regard for their respective roles. The researchers proposed that students be given seminars to help them employ reporting verbs effectively in writing their Master's theses.

The nuances of the usage of reporting verbs from the perspective of different cultures was also investigated by Jafarigohar and Mohammadkhani.¹⁴ The research looked at how native and non-native English speakers employed reporting verbs. The corpus for the study constituted sixty-three (63) articles by English language native and non-native writers. Thompson and Ye's reporting verb categorization system served as the theoretical framework. The theoretical approach was built upon Thompson and Ye's taxonomy of reporting verbs. Textual verbs, mental verbs, and research verbs are the three types of reporting verbs recommended by Thompson and Ye.¹⁵ In comparison to non-native writers, native writers employed a lot more direct quotations, according to the study. A collection of sixty (60) academic papers from the context of foreign language learning was used by Yeganeh and Boghayeri in a similar research.¹⁶ Thirty (30) are written by natural English speakers, and thirty (30) are authored by Persian speakers. The study looked at how Persian and English speakers used reporting verbs in the introductory and article overview portions of research papers. The theoretical underpinning for their research was Francis, Hunston and Mannings's taxonomy of reporting verbs. Persian and English language users preferred the usage of the Argue class of reporting verbs, according to the data. The results also indicated that English writers typically used *think* verbs as their second most used verbs while native Persian writers used *find* verbs as their second most used verbs.¹⁷

⁹ Woravut Jaroongkhongdach, "Idea Sharing: Reporting Verbs in Research Writing: Lessons from Experts," *PASAA* 50, no. 1 (2015): 143–54.

¹⁰ Joel Bloch, "A Concordance-Based Study of the Use of Reporting Verbs as Rhetorical Devices in Academic Papers," *Journal of Writing Research* 2, no. 2 (2010): 219–44; Diane Pecorari, "Academic Writing and Plagiarism," 2008.

¹¹ Nor Azma Manan and Noorizah Mohd Noor, "Analysis of Reporting Verbs in Master's Theses," *Procedia-Social and Behavioral Sciences* 134 (2014): 140–45; J. Wu, "The Use of Reporting Verbs as Rhetoric in Academic Writing across Disciplines," 2017; Agbaglo, "The Types and the Frequencies of Reporting Verbs in Research Articles Written by Lecturers in a Ghanaian University"; Jaroongkhongdach, "Idea Sharing: Reporting Verbs in Research Writing: Lessons from Experts"; Yeganeh and Boghayeri, "The Frequency and Function of Reporting Verbs in Research Articles Written by Native Persian and English Speakers."

¹² Manan and Noor, "Analysis of Reporting Verbs in Master's Theses."

¹³ Nguyen Thi Thuy Loan and Issra Pramoolsook, "Reporting Verbs in Literature Review Chapters of TESOL Master's Theses Written by Vietnamese Postgraduates," *ESP Today* 3, no. 2 (2015): 196–215.

¹⁴ Manoochehr Jafarigohar and Amirali Mohammadkhani, "Reporting Verbs in Applied Linguistics Research Articles by Native and Non-Native Writers," *Theory and Practice in Language Studies* 5, no. 12 (2015): 2490.

¹⁵ Thompson and Yiyun, "Evaluation in the Reporting Verbs Used in Academic Papers."

¹⁶ Yeganeh and Boghayeri, "The Frequency and Function of Reporting Verbs in Research Articles Written by Native Persian and English Speakers."

¹⁷ Susan Hunston, Gill Francis, and Elizabeth Manning, *Collins COBUILD Grammar Patterns 1: Verbs* (HarperCollins, 1996).

THEORETICAL FRAMEWORK

This study employs Thompson and Ye’s categorization of verbs for reporting as well as Hyland’s categorization system of verbs for reporting as its theoretical underpinning. The choice of these two theories lies in their cross-disciplinary applicability. The two theories are merged to serve as the conceptual framework.

Thompson and Ye’s Categorization of Reporting Verbs

Thompson and Ye’s categorization of reporting was adopted for this study.¹⁸ Thompson and Ye classified reporting verbs based on their semantic variance. They classified reporting verbs into two major groups or categories and they are *denotation* and *evaluation*. These scholars assert that writing professionals utilize reporting verbs to present their own thoughts or arguments as well as to show how they feel about others’ assertions. They proposed two major classes of reporting verbs. They established the *writer’s act* and the *author’s acts* under the denotation category. This is also known as the one quoting the person who developed the proposition, that is, the *writer* and the cited source who is referenced, that is, the *author*. The *author’s act* according to Thompson and Ye has three subcategories i.e. *textual*, *mental* and *research verbs*.

Textual verbs are reporting verbs that help the writer’s linguistic impression to be displayed. Examples are *point out*, *state*, *mention*, etc. The mental class verbs are verbs that typically imply cognitive operations. Examples are *believe*, *think*, etc. The research verbs describe cognitive and emotional actions throughout the study procedures. Examples are *measure*, *find*, etc.

The *writer’s acts* also reveal the author’s viewpoint towards the under-questioned by using a quotation from other scholars. These verbs are also subdivided into ‘comparison’ verbs and ‘theory’ verbs. The comparison verbs ascribe the writer’s research to a certain point of view Examples are ‘correspond to’, ‘contrast with’ etc. Theorizing verbs are verbs that benefit writers by providing them with the support of authors by giving them access to the writer’s study to help them improve their argument. Examples are *explain*, *support*, *agree* etc. Thompson and Ye’s categorization of reporting has been summarized in Figure 1 below.

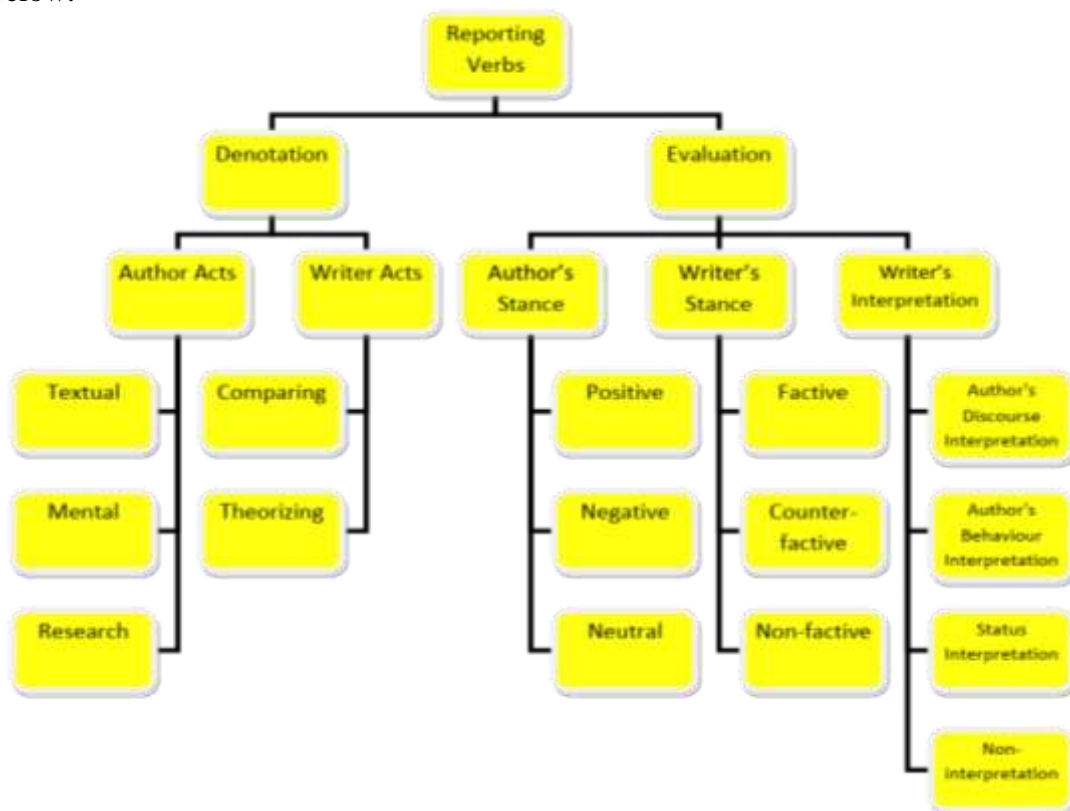


Figure 1. Thompson and Ye’s categorization of reporting verbs¹⁹

¹⁸ Thompson and Yiyun, “Evaluation in the Reporting Verbs Used in Academic Papers.”

¹⁹ Thompson and Yiyun, “Evaluation in the Reporting Verbs Used in Academic Papers,” 371.

Hyland's Categorization of Reporting Verbs

This study was also guided by Hyland's categorization of reporting verbs, this research was underpinned by a model. Hyland classifies reporting verbs based on the activity they refer to. Hyland categorizes reporting verbs into three main types. These are *Research Acts*, *Cognition Acts*, and *Discourse Acts*. These classifications were first done by Hyland in 1999 and were later developed by Hyland in 2002.

Research Act Verbs according to Hyland refer to reporting verbs that represent or show experimental activities that occur in the actual world. These types of verbs appear typically either in assertions or results (e.g. *observe, discover, notice, and show*). Research Act Verbs include finding and procedure. The procedure verbs are used to indicate approaches or processes utilized in the referenced works examples of these verbs are *analyze, calculate, assay, explore plot, and recover*. With respect to the finding act verbs, the writers utilize factive verbs (e.g. *demonstrate, establish, show, solve, confirm*) to acknowledge the acceptance of the author's results or conclusions, counter factive acts (e.g. *fail, misunderstand, ignore, overlook*) are also used to show the writer's judgment as not true, unacceptable or wrong, and the last one which is non-factive verbs (e.g. *find, identify, observe, obtain*) to indicate neutral attitudinal signal as to their reliability.

Cognitive Act Verbs according to Hyland are concerned with the investigator's cognitive process (e.g. *believe, conceptualize, suspect, assume, and view*). Cognitive Act verbs, representing the cited source as a mental activity, manage evaluation in a different way and the writer here attributes certain perspectives to the quoted writer. The four sub-classes are positive attitude (e.g. *agree, concur, hold, know, think, and understand*) are selected when writers hold a provisional opinion about the reported subject that they consider as accurate and appropriate (e.g. *believe, doubt, speculate, suppose, suspect*), critical stance (e.g. *disagree, dispute, not think*) and neutral attitude (e.g. *picture, conceive, anticipate, reflect*). These verbs help the reader to know what writers think about what they are reporting.

Hyland indicates that Discourse Acts Verbs deal with language actions and focus on the verbal articulations of cognitive or research actions. Discourse Acts Verbs express an assessment of the referenced work or content. The writers take responsibility for their analysis, conveying their uncertainty or confidence in its accuracy, or assigning a characteristic to the writer. In a detailed explanation, the verbs that convey the author's perspective vividly are grouped into *doubt* and *assurance* groups. The doubt category can be subdivided into tentative verbs (e.g., *postulate, hypothesize, indicate, intimate, suggest*) and critical verbs (e.g. *evade, exaggerate, not count, not make a point*). The assurance category introduces referenced works in more affirmative and definitive expressions, either to impartially introduce readers to the author's perspective (non-factive verbs like *state, describe, discuss, report, answer, define, summarize*) or to leverage that stance to bolster the writer's own viewpoint (factive verbs like *argue, affirm, explain, note, point out, and claim*). In the counter type too, the verbs (e.g., *deny, critique, challenge, attack, question, warn, rule out*) are considered as the quoted writer's own concerns or denials of the claimed statement's accuracy. Hyland's framework is summarized in Figure 2 below.

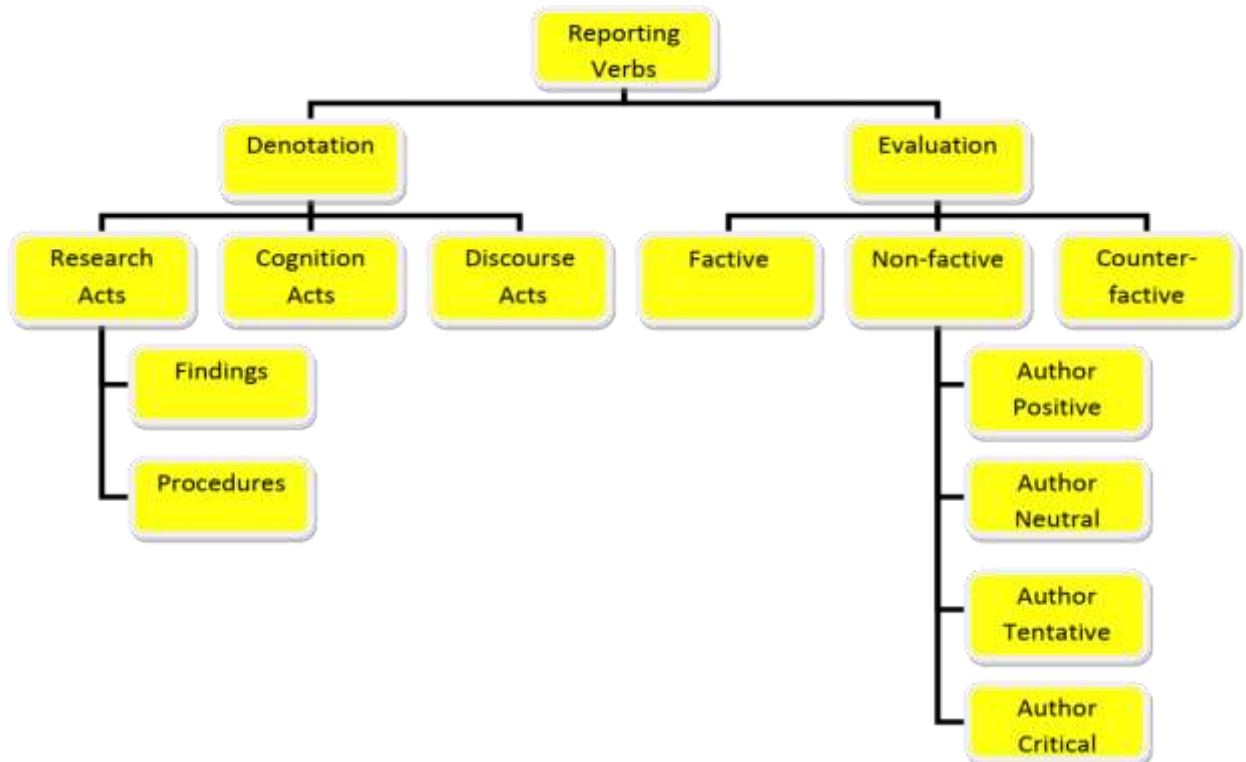


Figure 2. Categories of Reporting Verbs²⁰

Both Hyland and Thompson and Ye’s classification of reporting verbs were merged to get a conceptual framework for the study. Part of Hyland’s model was used to identify the reporting verbs in the data sets. Part of Thompson and Ye’s categorization of reporting verbs was also employed to identify the functions of the reporting verbs. Parts of both theories were conceptualized to obtain a framework that helped in the analysis of the data. This has been summarized in Figure (3) below.

²⁰ Ken Hyland, “Activity and Evaluation: Reporting Practices in Academic Writing,” in *Academic Discourse* (Routledge, 2002), 115–30, 119.

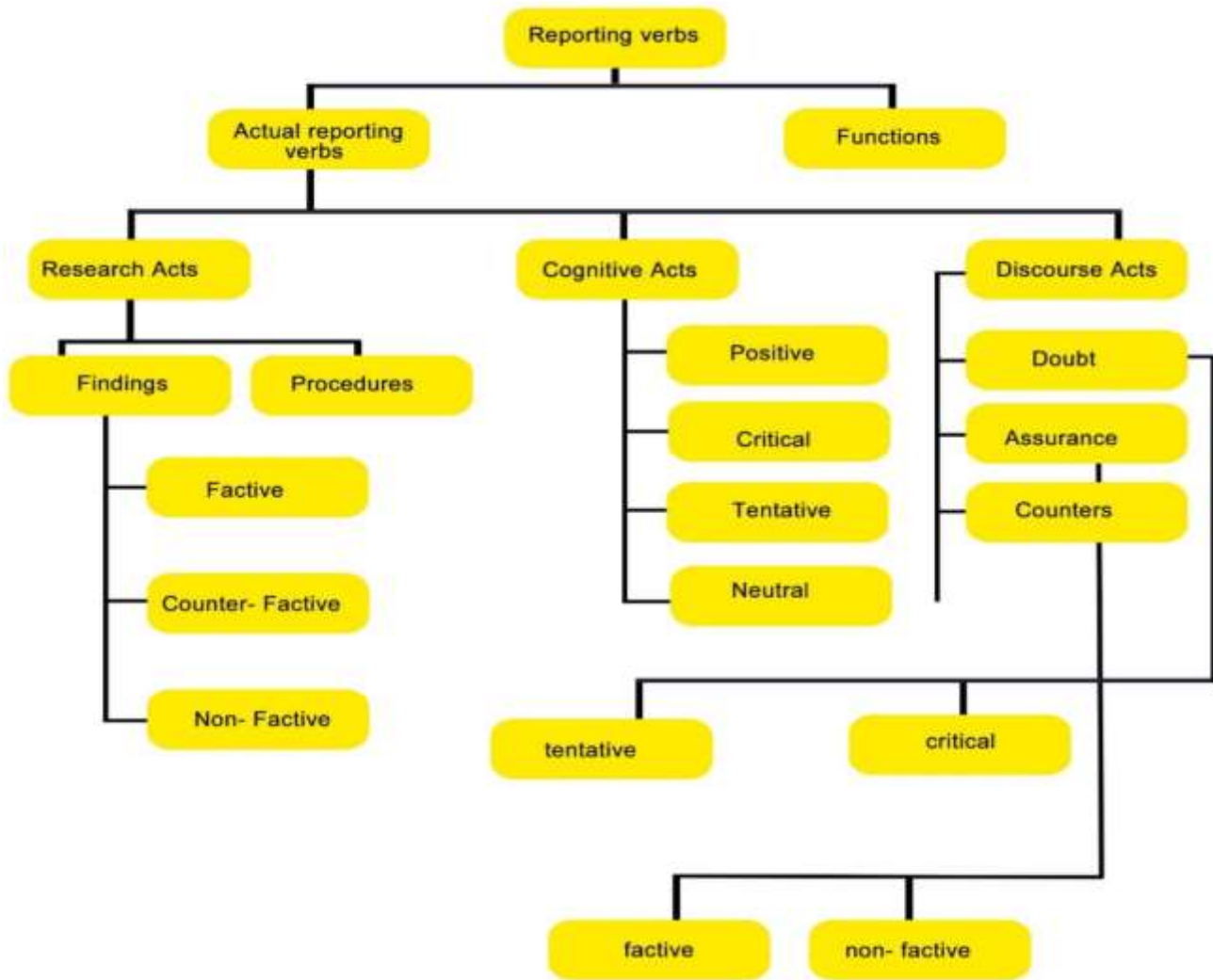


Figure 3. Conceptual framework

METHODOLOGY

This study adopted a mixed-method research design in investigating the form and function of reporting verbs in MPhil theses at KNUST. Two primary sampling techniques were adopted: purposive and simple random sampling. Walliman indicates that purposive sampling is a very suitable sampling method that enables researchers to gather data from a representative sample of the community that one believes is knowledgeable about the topic and can assist researchers in gathering the right type of data.²¹ With respect to purposive sampling, the researcher solicits specific elements which satisfy some predetermined criteria.

In research works like that of this current study, the researcher selects data based on his/her own judgments. Due to this, the researchers used this assessment of what they believe to be a true representation that can help answer the research questions. The researchers selected data for the study based on what can help answer the research questions and can be a representation of the entire population. Due to this, purposive sampling was adopted to choose solely master of philosophy theses from all the other fields of study in the KNUST. The purposive samples typically may not contain a probabilistic sampling process since it is frequently not possible to analyze the full population in one research. The purposive sampling technique was employed to choose Literature Review chapters of the master of philosophy dissertations across the fields of study. The literature review sections were selected if they meet these specified requirements: First, the literature review should be a distinct chapter and not attached to any other chapter of the thesis. Also, the thesis also needs to be a master of philosophy thesis and be available online in the university's electronic database. The purposive sampling method assisted in choosing data that gave

²¹ N. Walliman, *Your Research Project: A Step by Step Guide for First Time Research* (California: Sage, 2004).

credible answers to the study questions.²² Again, the purposive sampling technique was adopted to choose only master of philosophy theses in English, Mathematics and Agriculture and not another field of study because of the objective and research questions for the current research. The researcher selected these three disciplines because he wanted to have a representation of soft, hard-life and hard-non-life disciplines and so did that with English, Agriculture, and Mathematics respectively. Walliman indicates that purposeful sampling is comparatively less expensive and simpler, and typically makes sure that only relevant samples are chosen and used for the investigation.²³

The data constituted theses written between the 2000/2001 and 2019/2020 academic years. In selecting these samples, the convenience sampling technique was used. Theses that constituted the sample were those that were available on the university's repository where theses are kept online. This method was used to help the researcher identify master of philosophy theses that were accessible online in the era the study was conducted. This is because getting data of this nature is typically sometimes very difficult.

Hyland indicates that a substantial corpus may not most often describe research more effectively than a smaller one.²⁴ Due to this, the convenience sampling technique was adopted to select data. A convenience sampling technique simply means selecting the needed theses from the entire accessible theses. Since a smaller corpus represents the study better, it was appropriate to select a sample from the total population.

Forty-five (45) theses were selected: fifteen (15) from the English department, fifteen (15) from the Mathematics department, and fifteen (15) from the Agriculture department. The simple random sampling method was adopted to help obtain data. The sample size was determined using the probability sampling method known as simple random sampling.

Study Area

In selecting the research site for the present study, four parameters were considered. These parameters are proximity, institutional context, language use, and social units. In general, the three fields of study (English, Agriculture, and Mathematics) were chosen due to the scarcity of interdisciplinary research works featuring the three disciplines, particularly in the usage of reporting verbs. Researching these three disciplines would thus help to better understand the use of reporting verbs among students from these disciplines. The reason for selecting the KNUST as a research site is that, no research of this nature has been carried out in this university as far as the present study is concerned. It was therefore prudent and necessary to choose this institutional context to fill the lacuna.

Data Collection

The data for the research were selected from the university archive site and this was done due to a number of reasons. First, scholars like Akbas, Soler-Monreal and Gil-Salmon and Afful have all conducted research and used data from these sites.²⁵ Also, Bhardwaj indicates that institutional repositories perform advertising functions and help market institutions and promote the reputation of an organization.²⁶

Due to this, universities upload rich and scholarly achievements made by associates of the scholastic team and society onto the site and show them to the world. Due to this too, it is clear that the university will upload only theses that meet standard practices, the rules and conventions of an individual field of study's philosophy onto such a site. Therefore, selecting data from such a platform was in the right direction. Again, the institutional repository was selected because we needed only soft copies to carry out the research. It was unfortunate theses from the English department were not available on the institutional repository so we had to make photocopies from the English Department library and then type them again

²² J.W. Creswell, *Research Design Qualitative, Quantitative & Mixed Methods Approach*, 4th ed. (Thousand Oaks, CA: Sage Publications Ltd, 2014).

²³ Walliman, *Your Research Project: A Step by Step Guide for First Time Research*.

²⁴ Ken Hyland, *Metadiscourse: Exploring Interaction in Writing* (New York: Continuum, 2005).

²⁵ Erdem Akbas, "Exploring Metadiscourse in Master's Dissertation Abstracts: Cultural and Linguistic Variations across Postgraduate Writers," *International Journal of Applied Linguistics & English Literature* 1, no. 1 (2012): 12–26; C. Soler-Monreal and L. Gil-Salmon, "A Cross-Language Study on Citation Practice in Ph. D" (IJES, 2011); Isaac Afful, "Dialogic Positioning in Literature Reviews of Masters' Theses in a Ghanaian University" (University of Cape Coast, 2016).

²⁶ Raj Kumar Bhardwaj, "Institutional Repository Literature: A Bibliometric Analysis," *Science & Technology Libraries* 33, no. 2 (2014): 185–202.

to be able to get access to the soft copies. Regarding ethical clearance, approval was sought for the access and use of theses from the English department, however, since the Mathematics and

Agriculture theses were already publicly available, no further approval was sought. With regards to data size, forty-five (45) master of philosophy theses by students from the departments of English, Mathematics, and Agriculture were selected purposefully. The selection of forty-five (45) theses is also supported by past research works like Afful who used forty-five (45) theses,²⁷ Musa who also used thirty (30) theses,²⁸ and Akoto who also used forty (40) masters theses.²⁹ This study embraced the fact that the literature review sections are very bulky and lengthy which is why only 45 theses were selected. Each Literature Review section had an average length of 5900 words. Table 1 indicates an overview and allocation of the data among the three fields.

Table 1. Page and word count breakdown for the chosen field of study

Field of Study	Category	Sum of thesis	Volume of words
Agriculture	M. Phil. LRs	15	77576
English	M. Phil. LRs	15	84868
Mathematics	M. Phil. LRs	15	66327
Total		45	228771

Source: Fieldwork, Owusu (2022)

Table 1 above presents statistical information relating to the total number of the theses and their corresponding literature review chapters.

Analytic Foundation and Analysis Techniques

The current study's analytical framework is textual, and not dualist, as proposed by Flowerdew.³⁰ In analyzing the textual data, the researchers used the categorization of reporting verbs by Hyland and Thompson and Ye, which was backed up by a comprehensive study. This allowed them to organize the analysis based on concepts that appeared from the analysis and to comprehend the ways in which the students from these disciplines use reporting verbs and the functions of these reporting verbs. The fact that content analysis is unobtrusive is a significant advantage.³¹

They first coded the data gathered to be able to respond to the study issues, these were to discover the type of reporting verbs employed by Mathematics, English and Agriculture fields of study as well as the functions of these reporting verbs in M. Phil theses from these three disciplines. They categorized the theses and labelled them as 'ENG' and 'MAT' and 'AGR' for English and Mathematics and Agriculture respectively. The codes were simply abbreviated versions of the three fields. To code the data, each of the fifteen (15) dissertations from each discipline was numbered from 1 to 15, and the various reporting verbs used to write the literature review chapters of their various M.Phil. theses were highlighted. As a result, codes like ENG 10, MAT 10 and AGR 10 were used to denote data 10 from English, Mathematics and Agriculture respectively. Coding data allowed for quick recognition and analysis of the different forms of reporting verbs used by the various researchers in the data.

Again, the texts were then converted into analyzable formats and input into the AntConc Corpus Analytical software. The literature review sections were extracted from all the theses and converted to plain text formats (.txt). The figure below shows an excerpt from the AntConc Concordance analysis.

²⁷ Afful, "Dialogic Positioning in Literature Reviews of Masters' Theses in a Ghanaian University."

²⁸ Adamu Musa, "Hedging in Academic Writing: A Pragmatic Analysis of English and Chemistry Masters' Theses in a Ghanaian University," *English for Specific Purposes* 42, no. 15 (2014): 1–26.

²⁹ O. Y. Akoto, "Metadiscourse Use of English Language and Sociology Master's Theses in a Ghanaian University" (University of Cape Coast, 2011).

³⁰ John Flowerdew, "Discourse Community, Legitimate Peripheral Participation, and the Nonnative-English-speaking Scholar," *TESOL Quarterly* 34, no. 1 (2000): 127–50.

³¹ Musa, "Hedging in Academic Writing: A Pragmatic Analysis of English and Chemistry Masters' Theses in a Ghanaian University."

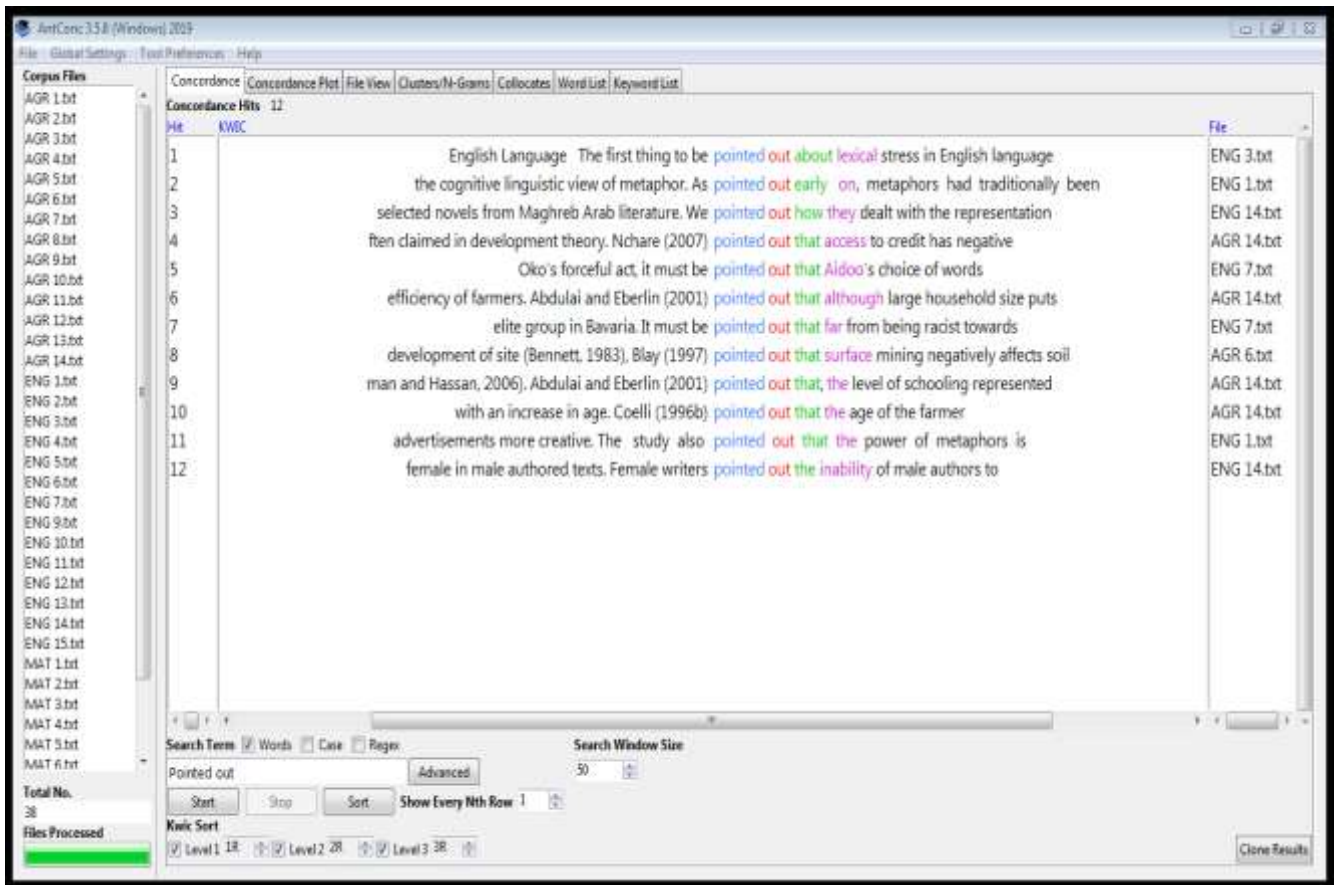


Figure 4: A picture of the AntConc Concordance Analysis.
AntConc (3.5.8) windows 2019

The researchers searched for the reporting verbs used in the literature review sections of the theses with the help of Hyland's model of reporting verb classification and Thomson and Ye's. It is key to mention that, while this study was guided by Hyland's classification of reporting verbs and Thompson and Ye's, the researchers looked through all the text to analyze other reporting verbs that did not appear in both models of reporting verb classifications. Each example was then analyzed and assessed on its own concordance line to make sure it acted or worked as a reporting verb and deleted from the study if it was not performing that function. The clauses were the units of analysis, and the researchers checked the frequency of appearance of the reporting verbs by going through all sentences of the data.

PRESENTATION OF FINDINGS

Reporting Verbs Employed in MPhil Theses

The first research question to be discussed is which reporting verbs are utilized in research works by Postgraduates in the Departments of English, Mathematics, and Agriculture at the Kwame Nkrumah University of Science and Technology. The data was analyzed based on the conceptual framework for this study. In the analysis, it was realized that postgraduate students employed all three types of reporting verbs to different degrees. The postgraduate students of KNUST employed reporting verbs from the Research Acts, the Cognitive Acts, and the Discourse Acts types to portray the perspectives of other researchers, as evidenced by the outcomes. It was identified that although the postgraduates from the Mathematics, English, and Agriculture departments used Research Act, Cognitive Act, and Discourse Act Verbs, they used them in varying degrees. This section will analyze the types of reporting verbs one after the other.

The first one to be discussed is the Research Acts Verbs. Hyland indicates that Research Act verbs mostly appear in the statements of findings (e.g., *observe*, *discover*, *notice*, *show*) or procedures (e.g., *analyze*, *calculate*, *assay*, *explore*, *plot*, and *recover*). The Research Acts verbs which are employed to highlight findings are again sub-grouped into factive verbs, counter-factive verbs, and non-factive verbs.

This grouping is founded on their evaluative roles. Writers typically use the *factive verbs* (e.g. *demonstrate, establish, show, solve*) to show that they accept an author's result. Writers again use the counter-factive verbs (e.g. *fail, misunderstand, ignore, and overlook*) to show that they consider the author's judgments as false. The last category is the non-factive verbs like *find, identify, observe, and obtain*. Writers use this type to discuss research results 'without an explicit indication of their reliability'. Some examples each from the English, Mathematics, and Agriculture departments have been presented for illustration purposes. The examples below indicate how Research verbs were employed in the data. The first to be discussed is the Agriculture theses. This was coded AGR and the fifteen theses were numbered AGR 1 to AGR 15.

1. In fact, Yanan, Diner and Voet **show** that its influence can counter balance... (AGR 1).³²
2. McNamara et al. **demonstrate** the non-significance of the utilized agricultural... (AGR 1).³³
3. Cranfield and Magnusson **establish** that consumers are more likely to pay (AGR 5).³⁴
4. Rosen et al. **analyzed** food risk perceptions of German consumers (AGR 5).³⁵
5. Mainville and Peterson **explore** the potential to develop a cherry-apple... (AGR 5).³⁶

The examples 1 to 5 above show how Research Acts verbs were employed to document the works of other scholars in the agriculture data examined. As it is evident vividly from the examples above, *show* in example 1 is utilized to state facts factively, *demonstrate* in example 2 is used to document the discoveries of other scholars factively. Example 3 above has the research act verb *establish* which reports the findings of Cranfield and Magnusson factively.³⁷ This typically means that the writer accepts the findings being reported. In example 4 above, the reporting verb *analyzed* was used in the procedure form, this is similar to example 5, in which *explore* was used to report the procedure Mainville and Peterson adopted for their study.³⁸ Other Research Act Verbs identified in the agriculture thesis include *reveal, illustrate, demonstrate, confirmed, investigated, researched, etc.*

Research Acts verbs were also seen in English thesis and examples have been reported below. This was also coded ENG. So, there were ENG 1 to ENG 15 theses.

6. Bergh **explored** the use of war-inspired terminology... (ENG 5).³⁹
7. The finding **established** that the advertisement employed metaphors... (ENG 1).
8. Her studies **show** there are some cultural differences (ENG 4).
9. With CMT, Lewandowski **found out** that football is also conceptualized in terms of non-violent domains (ENG 5).⁴⁰

According to Hyland, *explored, established, show, found out* and *conduct* are all examples of Research Acts verbs. In example 6, the writer uses *explored* to report findings of Bergh.⁴¹ In example 7 also, the writer uses *establish* to report findings factively. *Show* is also used to report findings in the factive way in example 8. Example 9 also has *found out* which is a finding verb and it is used to report the findings of Lewandowski (2012) in a non-factive manner. Other Research Acts verbs discovered in the English thesis are *created, observe, reveal, divides, found out, found, present, researched, analyze, studied, etc.*

³² Dan Yaron, Hillary Voet, and Ariel Dinar, "Innovations on Family Farms: The Nazareth Region in Israel," *American Journal of Agricultural Economics* 74, no. 2 (1992): 361–70.

³³ Kevin T McNamara, Michael E Wetzstein, and G Keith Douce, "Factors Affecting Peanut Producer Adoption of Integrated Pest Management," *Applied Economic Perspectives and Policy* 13, no. 1 (1991): 129–39.

³⁴ John A L Cranfield and Erik Magnusson. "Canadian consumer's willingness-to-pay for pesticide free food products: an ordered probit analysis." *International Food and Agribusiness Management Review* 6.4 (2003).

³⁵ Clark A. Rosen, et al. "Development and validation of the voice handicap index-10." *The Laryngoscope* 114.9 (2004): 1549-1556.

³⁶ Denise Y. Mainville and H. Christopher Peterson. "Coordination Strategy Decisions in Sao Paulo's Fresh Produce Markets: An Empirical Validation of the Peterson, Wysocki & Harsh Framework." *International Food and Agribusiness Management Review* 9.4 (2006): 1-25.

³⁷ Cranfield and Magnusson. "Canadian consumer's willingness-to-pay for pesticide free food products: an ordered probit analysis."

³⁸ Mainville and Peterson. "Coordination Strategy Decisions in Sao Paulo's Fresh Produce Markets."

³⁹ Andreas Bergh, "Why Quality in Education—and What Quality?—A Linguistic Analysis of the Concept of Quality in Swedish Government Texts," *Education Inquiry* 2, no. 4 (2011): 709–23.

⁴⁰ Marcin Lewandowski, "Football Is Not Only War. Non-Violence Conceptual Metaphors in English and Polish Soccer Language," *Sprache Und Fußball Im Blickpunkt Linguistischer Forschung, Verlag Dr. Kovač, Hamburg*, 2012, 79–95.

⁴¹ Bergh, "Why Quality in Education—and What Quality?—A Linguistic Analysis of the Concept of Quality in Swedish Government Texts."

The examples below indicate Research Act verbs in the mathematics thesis of M. Phil students in KNUST. The examples have been randomly selected from the mathematics thesis.

10. Luckinbill **demonstrated** that coexistence can be obtained where prey are ordered a refuge in which some portion of the prey population is exempt from predation. (MAT 12).⁴²
11. Yang **showed** how the basic reproductive number of malaria (MAT 7).⁴³
12. Smith et al. **showed** convincingly that landscape heterogeneity could help explain the irregular spread of the recon rabies virus across Connecticut, something which the reaction-diffusion framework had difficulty achieving. (MAT 5).⁴⁴
13. Rosen et al. **analyzed** the food risk perception of German consumers over the eleven-year period from 1992 to 2002. (MAT 13).⁴⁵
14. Kha, et.al. **analyzed** local pharmacokinetics and pharmacodynamics of angiogenic growth factors in myocardial tissue. (MAT 14).⁴⁶

The examples above show evidence of Research Acts verbs used in mathematics master of philosophy thesis in KNUST. In example 10, the writer used *demonstrated* to report the findings of Luckinbill in a factive manner.⁴⁷ Example 11 also has the research act verb *showed* and this also reports the findings of Yang in a factive way.⁴⁸ This is also seen in example 12. Example 13 also has the research act verb *analyzed* and this reports the findings of Rosen et al.⁴⁹ This reporting verb falls under the procedure type of research acts reporting verbs. This verb is also seen in example 14, the verb is also used to report the findings of Kha et.al.⁵⁰ Other examples of research acts verbs identified in the mathematics thesis include *considered, explored, formulated, tested, discover, presented, found, observed, came out, obtained, made, derived, investigated, extracted, etc.*

Other research works have also identified examples of research acts verbs in their studies and examples of such works include Agbaglo, Iqbal and Anwar, Un-udom and Un-udom, and Jafarigohar and Mohammadkhani.⁵¹ All these scholars identified research act verbs in their studies. Jafarigohar and Mohammadkhani for example identified 473 research act verbs in their studies when they studied the use of reporting verbs in applied linguistics research articles by native and non-native speakers of English.⁵² Un-udom and Un-udom also recorded examples of reporting verbs in their studies. They recorded 58.4% of the total reporting verbs in the study. The study also identified some examples of finding and procedure research act verbs. It was only counteractive research act verbs that were not recorded.⁵³ Agbaglo also recorded examples of research act verbs in his study. *Identified, examined, investigated, observed, and established* were some of the research act verbs that were recorded in the study.⁵⁴ Iqbal and Anwar also identified some examples of research act verbs in their study and examples of such research act verbs include *find, interprets, concluded, and admits*.⁵⁵ These are not the only studies that have identified research act verbs in their studies, these are only a few.

⁴² Leo S. Luckinbill, "Coexistence in laboratory populations of Paramecium aurelia and its predator Didinium nasutum." *Ecology* 54.6 (1973): 1320-1327.

⁴³ H. M. Yang, "Malaria transmission model for different levels of acquired immunity and temperature-dependent parameters (vector)." *Revista de Saude Publica* 34, (2000); 223-231.

⁴⁴ J. Allyn Smith, et al. "The ugriz standard-star system." *The Astronomical Journal* 123 (4), (2002): 2121.

⁴⁵ Rosen, et al. "Development and validation of the voice handicap index-10."

⁴⁶ Hoa Ton Kha, et al. "Oxysterols regulate differentiation of mesenchymal stem cells: Pro-bone and anti-fat." *Journal of Bone and Mineral Research* 19.5 (2004): 830-840.

⁴⁷ Luckinbill, "Coexistence in laboratory populations of Paramecium aurelia and its predator Didinium nasutum."

⁴⁸ Yang, "Malaria transmission model for different levels of acquired immunity and temperature-dependent parameters (vector)."

⁴⁹ Rosen, et al. "Development and validation of the voice handicap index-10."

⁵⁰ Kha, et al. "Oxysterols regulate differentiation of mesenchymal stem cells: Pro-bone and anti-fat."

⁵¹ Agbaglo, "The Types and the Frequencies of Reporting Verbs in Research Articles Written by Lecturers in a Ghanaian University"; T. Iqbal and B. Anwar, "Analysis of Reporting Verbs in Non-Native English Academic Discourse," *Orient Research Journal of Social Sciences* 6, no. 1 (2021): 141–50; Suwitchan Un-udom and Nathaya Un-udom, "A Corpus-Based Study on the Use of Reporting Verbs in Applied Linguistics Articles.," *English Language Teaching* 13, no. 4 (2020): 162–69; Jafarigohar and Mohammadkhani, "Reporting Verbs in Applied Linguistics Research Articles by Native and Non-Native Writers."

⁵² Jafarigohar and Mohammadkhani, "Reporting Verbs in Applied Linguistics Research Articles by Native and Non-Native Writers."

⁵³ Un-udom and Un-udom, "A Corpus-Based Study on the Use of Reporting Verbs in Applied Linguistics Articles."

⁵⁴ Agbaglo, "The Types and the Frequencies of Reporting Verbs in Research Articles Written by Lecturers in a Ghanaian University."

⁵⁵ Iqbal and Anwar, "Analysis of Reporting Verbs in Non-Native English Academic Discourse."

Aside from Research Acts verbs, Discourse Acts verbs were also identified in the study. These students of KNUST used Discourse Acts verbs in their thesis to highlight the findings of other scholars and writers. With respect to the evaluative types of discourse act verbs, it was identified that reporting verbs from the Doubt assurance classes were identified. As far as the doubt type is concerned, verbs were used tentatively (e.g., *postulate, hypothesize, indicate, intimate, suggest*). Also, Assurance verbs were identified from the Non-Factive category (e.g. *state, describe, discuss, report, answer, define, and summarize*) and Factive type (e.g. *argue, affirm, explain, note, point out, and claim*). Directly critical *Counters*, on the other hand, were not employed in the data examined. The following are excerpts from the data that indicate how Discourse Acts verbs were utilized. Five examples each have been adopted from the three departments. The first to discuss is the English thesis.

15. Further, Ofori et al. *indicate* that on grounds of legitimacy, the GhE is not recognized but that does not take away the fact that it qualifies for a variety. (ENG 3).⁵⁶
16. Gerot and Wignell *indicate* that clauses can be combined through one lexico-semantic relation: expansion and projection. (ENG 12).⁵⁷
17. Thus, Perry *suggests* that in the discussion, clarification of indexical terms may rest largely on a diversity of extra-linguistic features, like hand gestures and the common knowledge of the partakers. (ENG 11).⁵⁸
18. Adika *intimates* that English got rooted in the territory due to policies such as the ‘colonial and missionary language policy’ where English was the only language permitted for use in school and any infraction in this regard was not with punishment. (ENG 3).⁵⁹
19. As cognitivists Lakoff and Johnson *note* that the experiencing or understanding process of the target and source involves a conceptual mapping or parallelism of source unto target, a cross-domain mapping. (ENG 5).⁶⁰

In examples 15 and 16, *indicate* was employed from the doubt type to describe the works of other writers tentatively. Example 17 also has *suggests* which is employed from the doubt type to describe findings tentatively. In Example 18 also, *intimates* from the doubt type was used to describe the findings of other writers tentatively. *Note* from the factive assurance type of discourse act verbs was also used in Example 19 to show support for the reported information. Critical verbs from the doubt category of reporting verbs were not identified from the English data. Apart from that, tentative verbs from the doubt category were recorded and evidence is seen in examples 15 and 16. Factive verbs from the assurance category were also recorded, an example of such is seen in Example 19. Non-factive verbs were also seen in the English data examined and examples of such reporting verbs are *define, discuss, summarize, etc.*

The next to be discussed is the thesis from the master of philosophy students from the mathematics department. Five excerpts have been randomly selected from the mathematics data.

20. Kentucky Adult Education (KYAE) report on Managed Application Fiscal Year *defines* academic performance and retention as a ‘process where a student’s success in school is measured to determine how they stand up to others in the same areas. (MAT 4).⁶¹
21. The 2000 report of the WHO *suggests* that countries should be allowed to review their achievements in the area of maternal and neonatal health and compare their results with those obtained by other countries. (MAT 9).
22. Monaghan et al. *described* a turbulence model for the particle method, Smooth Particle Hydrodynamics (SPH). (MAT 10).⁶²

⁵⁶Daniel F. Ofori, Mildred D. S-Darko, and Richard B. Nyuur. "Corporate social responsibility and financial performance: Fact or fiction? A look at Ghanaian banks." *Acta Commercii* 14.1 (2014): 1-11.

⁵⁷ L. Gerot and P. Wignell, *Making Sense of functional Grammar*. (Australia: GerdStabler,1994), 89.

⁵⁸ John Perry, "Frege on demonstratives." *The philosophical review* 86.4 (1977): 474-497.

⁵⁹ Gordon Senanu Kwame Adika, "English in Ghana: Growth, tensions, and trends." *International Journal of Language, Translation and Intercultural Communication* 1 (2012): 151-166.

⁶⁰ George Lakoff and Mark Johnson. "The metaphorical structure of the human conceptual system." *Cognitive science* 4.2 (1980): 195-208.

⁶¹ Kentucky Adult Education (KYAE), National Center for Education Statistics, "Projections of Education Statistics to 2012," 101.

⁶² Daniel T. Monaghan, et al. "Two classes of N-methyl-D-aspartate recognition sites: differential distribution and differential regulation by glycine." *Proceedings of the National Academy of Sciences* 85.24 (1988): 9836-9840.

23. Sara et al. *reported* an increase in temperatures and changes in patterns of rainfall as a result of climate changes are widely recognized to entail serious consequences for human health, including the risk of diarrheal diseases. (MAT 12).⁶³
24. Padberg et al. also *stated* that consumer behavior is a complex, multidisciplinary approach with contributions from different social sciences: economics, psychology, sociology, anthropology, geography, nutritional sciences and medicinal sciences.⁶⁴

In example 20, *defines* from the assurance category is used to report findings in a non-factive way. Example 21 also has *suggests* and is an example of doubt tentative discourse act verb. In example 22, *described* from the non-factive assurance verbs were identified. Example 23 also has *reported* which is also an example of non-factive assurance verbs. Example 24 recorded *stated* which is also from the non-factive assurance verbs. This data set did not record examples of critical verbs.

Other Discourse Acts verbs identified in the mathematics thesis include *defined, generalized, estimated, originated, expounded*, etc. Agbaglo, Iqbal and Anwar, Un-udom and Un-udom, and Jafarigohar and Mohammadkhani also identified some examples of discourse act verbs in their studies. Examples of such discourse verbs include *intimate, discuss, claim, answer, summarize*, etc.⁶⁵

Aside from Research Acts verbs and Discourse Acts verbs, a few Cognitive Acts verbs were also identified in the data sets for the English, Mathematics, and Agriculture thesis. According to Hyland cognitive acts verb is a type of verb that is typically concerned with the researcher's mental processes. Writers mostly use cognitive act verbs to attribute a particular attitude to a cited author. Hyland further went on to give examples of cognitive acts verbs such as *concur, agree, hold, think, and understand*, writers use these types of verbs when they have a positive attitude to the material and they accept it as true or correct.⁶⁶ There is another category of cognitive act verbs and that is the tentative category. Writers use the tentative verbs when they consider other writers as potentially having an uncertain perspective toward the described issue and examples of such verbs include *believe, doubt, speculate, suppose, and suspect*. Writers may also hold a critical view and as such use verbs like *disagree, dispute, and not think*. The researcher may also depict the writer maintaining an impartial stance toward the motion. Such views are expressed by verbs like *picture, conceive, anticipate, and reflect*.

As far as mathematics data is concerned, interesting results were seen as only four (4) cognitive acts verbs were identified in the data set. Below are some examples of cognitive acts verbs that were identified in the data.

25. Thus, Rode et al. *reasoned* that individuals with emotional intelligence would perform better academically. (MAT 4)⁶⁷
26. Aron and May *added* various characteristics of malaria to the Ross-Macdonald model, such as the incubation period in the mosquito, a periodically functioning density of mosquitoes, superinfection, and a period of immunity in humans. (MAT 7).⁶⁸

In examples 25, cognitive act verb from the positive category of cognitive acts verbs was used. Reporting verbs from the tentative category of reporting acts verbs were also used. These are two examples of the cognitive acts verbs that were identified in the mathematics thesis under study. The example below also shows an instance of cognitive act verbs in the Agriculture theses. It was surprising that there was only one cognitive act verb in the agriculture data.

⁶³ L. M. T. Sara, A. O. Ramon and M. Anil, *The Health Impacts of Climate Change: A Study of Cholera in Tanzania*. Basque Centre for Climate (BC3) Working Paper Series. (2010), 1-27.

⁶⁴ Frank Padberg, et al. "Repetitive transcranial magnetic stimulation (rTMS) in major depression: relation between efficacy and stimulation intensity." *Neuropsychopharmacology* 27.4 (2002): 638-645.

⁶⁵ Agbaglo, "The Types and Frequencies of Reporting Verbs in Research Articles Written by Lecturers in a Ghanaian University"; Iqbal and Anwar, "Analysis of Reporting Verbs in Non-Native English Academic Discourse"; Un-udom and Un-udom, "A Corpus-Based Study on the Use of Reporting Verbs in Applied Linguistics Articles."; Jafarigohar and Mohammadkhani, "Reporting Verbs in Applied Linguistics Research Articles by Native and Non-Native Writers."

⁶⁶ Hyland, "Academic Attribution: Citation and the Construction of Disciplinary Knowledge."

⁶⁷ Line Rode, et al. "Association between maternal weight gain and birth weight." *Obstetrics & Gynecology* 109.6 (2007): 1309-1315.

⁶⁸ J. L. Aron and R. M. May, "The Population dynamics of malaria." In *Population Dynamics of Infectious Disease*. Edited by: Anderson R, M, London: Chapman and Hall; 1982: 139-179.

27. The results *agreed* with previous findings obtained on other vegetable crops.⁶⁹

The only cognitive act verb recorded in the agriculture data is *agreed* and this is an example of a positive cognitive act verb. No examples of critical, tentative, and neutral cognitive acts verbs were recorded.

The examples below also show instances of cognitive acts verbs that were recorded in the English language data set.

28. This theory which was advanced by Black *holds* that a metaphorical statement has two distinct subjects which are a primary subject and a secondary subject. (ENG 1).⁷⁰
29. Black *holds* that metaphors are resonant if they allow mappings from the secondary subject to the primary subject. (ENG 1).⁷¹
30. Similarly, Morley *agrees* that the organization of this semantic stratum is because all of them add up to the general sense of the text's morphology. (ENG 12).⁷²
31. Ofosuhene does *not agree* with Freeborn et al that the lack of qualified teachers is not a contributory factor to the inability of schools to turn out students with satisfactory standards in English. (ENG 3).⁷³
32. Ofori, Duah, and Mintah however *side* with Dolphyne in identifying people who belong to GhE with their pronunciation of English. (ENG 3).⁷⁴

In examples 28, 29, 30, and 31, the writers used positive reporting verbs to report their positions. In example 31, the writer used *does not agree* to report the findings of Ofosuhene.⁷⁵ No tentative and neutral verbs were recorded in the study. Another cognitive act verb used in the data is *reject*.

To summarize the findings of research question one, it could be said that writers in the three departments used Research Acts verbs, Discourse Acts verbs and Cognitive Acts verbs. This is in agreement with what scholars like Agbaglo, Muharromah and Syarif, Un-udom and Un-udom, and Igbal and Anwar found in their studies. They also found all these three types of reporting verbs in their studies.

The Frequency of Occurrence of the Various Types of Reporting Verbs

The quantitative approach was adopted to help analyze research question two to identify the frequency distribution of reporting verbs in the disciplines of English, Mathematics, and Agriculture in the literature review sections of the Masters theses. The reporting verbs were manually counted and checked using the AntConc software. The results yielded a total of 1424 reporting verbs in the data gathered for the study. The distribution of reporting verb types in the literature review section of the various theses revealed varied patterns of reporting verb usage in academic writing. They were classified using Hyland's classification of reporting verbs. The result is presented in the form of a table with the various categories of reporting verbs used in the various disciplines. The study paid attention to both the process functions and the evaluative categories of reporting verbs as explained by Hyland.

The table below shows the frequency of the various categories of the reporting verbs used in the three disciplines.

⁶⁹ H.M. Arisha and A. Bradisi, "Effect of mineral fertilizers and organic fertilizers on growth, yield and quality of potato under sandy soil conditions." *Zagazig J. Agric. Res.*, 26, (1999): 391-405; A.A. Al-Tarawneh, The effects of two types of organic manure and NPK on growth, yield and quality of lettuce and strawberry. M. Sc. Thesis, Mu'tah University, Jordan, 2005.

⁷⁰ Charles L. Black Jr, "The Proposed Amendment of Article V: A Threatened Disaster." *Yale LJ* 72 (1962): 957; Max Black, "More about metaphor." *Metaphor and thought* 2 (1979): 19-41.

⁷¹ Black, "More about metaphor," 27.

⁷² David G. Morley, *Syntax in functional grammar: An introduction to lexicogrammar in systemic linguistics*. (A&C Black, 2000), 16.

⁷³ K. Ofosuhene, "Consult Education Expert on Policies," *Daily Graphic*, July 11, 1994.

⁷⁴ Stephen Gyasi Ofori, Ishmael Duah, and Kingsley Cyril Mintah. "Exploring the feasibility of a proposed Ghanaian English pronunciation standard." *Journal of education and practice* 5.22 (2014): 49-53; Florence Dolphyne, "A note on the English Language in Ghana." In Bamgbose, Banjo and Thomas (Eds.) *New Englishes: A West African Perspective*. Ibadan, Mosuro. (1995) pp27-33

⁷⁵ Ofosuhene, "Consult Education Expert on Policies."

Table 5: Frequency of occurrence of the various categories of the reporting verbs		
TYPE/SUB-TYPE	FREQUENCY	PERCENTAGE
DISCOURSE ACT	781	54.8%
<i>DOUBT</i>	172	12.0%
Tentative	158	11.1%
Critical	0	0%
ASSURANCE	609	42.8%
Factive	236	16.6%
Non-factive	373	26.2%
<i>COUNTERS</i>	0	0%
RESEARCH ACT	615	43.2%
<i>FINDING</i>	342	24.1%
Factive	225	15.9%
Counter-factive	3	0.2%
Non-factive	114	8.0%
<i>PROCEDURES</i>	273	19.1%
COGNITIVE ACT	28	2.0%
Positive	23	1.7%
Critical	3	0.2%
Tentative	2	0.1%
Neutral	0	0%
TOTAL	1424	100%

The table above presents the various categories of the reporting verbs used in all the data analyzed. The table paid attention to both the process functions and the evaluative categories of reporting verbs identified by Hyland. As shown in Table 5, the reporting verbs from the Discourse Acts category had the highest frequency with seven hundred and eighty-one (781) occurrences, accounting for 54.8 percent of the reporting verbs found in the total data. The Research Acts category came in second with eighty-four (84) occurrences, accounting for 43.2 percent of the total number of reporting verbs in the data. The Cognitive Acts verbs had the fewest occurrences which were twenty-eight (28), accounting for only 2.0 percent out of the complete count of reporting verbs in the dataset.

The findings are consistent with those of Yaganeh and Boghayeri, Agbaglo, Jafarigohar and Mohammadkhani, Loan and Pramoolsook, and Igbal and Anwar, all of whom got similar results. The fact that they all focused on research works by specialists could explain the concordance between this finding and that of Agbaglo, Igbal and Anwar, Yaganeh and Boghayeri and Jafarigohar and Mohammadkhani. The finding, however, contradicts that of Manan and Noor and Un-udom and Un-udom, who found that verbs in the Research Acts category had the highest frequency of occurrence (44.8 percent) and (54.8 percent) respectively. The Research Acts verbs were followed by Cognitive Acts (30.2 percent) and Discourse Acts (35.12 percent) respectively. As far as Manan and Noor's work is concerned, Discourse Acts verbs recorded the lowest percentage of the total reporting verbs identified which was 25 percent. Un-udom and Un-udom also had Cognition Acts verbs recording the lowest percentage of reporting verbs in the total data which was 6.48 percent. The discrepancy can be explained by the two studies' distinct locations. The current study is sited in Africa whereas the previous studies were sited outside Africa.

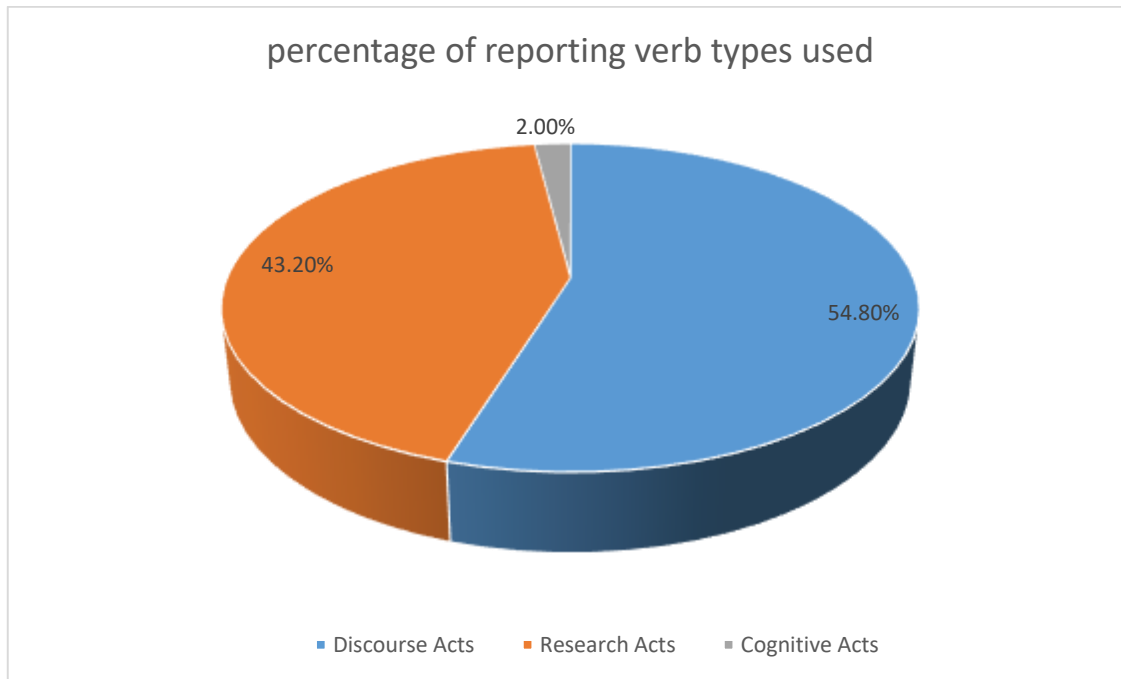


Figure 5: Percentage of types of reporting verbs

The most often occurring verbs in the above figure fall into the category of Discourse Acts, implying that postgraduate students of KNUST utilize Discourse Acts verbs more than any other category and this is consistent with Agbaglo and Hyland as they also found similar results. In Hyland's model, Discourse Acts verbs allow the writer to assess the referenced information by taking responsibility for his/her interpretation, expressing their perplexity or assurance that the claims recorded are correct, or attributing a qualification to the author. The chart above plainly shows that 54.8% of the reporting verbs fall under the Discourse Acts group. Research Acts verbs account for 43.2% of the total reporting verbs identified. The writer's perspective of a research activity is depicted using research act verbs. Two percent of the reporting verbs are cognitive act verbs. As a result, these verbs relate to the mentioned work in terms of mental process, and are discovered to handle evaluation somewhat differently. Instead of taking a personal viewpoint on the given material, writers use this class of verbs to express a certain attitude toward the mentioned work.

RECOMMENDATIONS

It is recommended that the study is extended to measure the extent to which the choice of reporting verb is discipline-conditioned. One would expect disciplines that are interrelated to have common preferences when it comes to the choice of reporting verbs and vice versa. Also, in future research, other sections of graduate theses apart from the Literature Review section can be investigated so as to provide a holistic picture of the situation.

CONCLUSION

The purpose of the study was to examine how reporting verbs are used in the literature review sections of some selected MPhil theses at KNUST. The study found that KNUST postgraduate students' M. Phil thesis writing frequently uses verbs from the Discourse Acts. Additionally, it was noted that although Discourse Act verbs are generally high in kind and frequency, there are some differences based on the discipline and the sections of the theses. In other cases, reporting verbs used were not a straightjacket but rather defined by alternation to accomplish various rhetorical goals. Secondly, the usage of the reporting verb is a socially limited attribute, as the peculiarities of the particular discipline in question can influence the choice of reporting verb selected, as demonstrated by the correlation between a particular discipline and a specific reporting verb as shown in this research. Given that reporting verb usage appears to be intricately related to the various disciplines' epistemic frameworks and ways of interpreting the world, patterns of use do not exist in isolation; rather, they are a part of and characterize academic fields' communicative routines.

Ultimately, in order to accomplish their rhetorical objectives, writers frequently adopt subjective choices that depart from accepted disciplinary conventions. Because reporting verbs have different subtleties, it is important to understand both their communication purposes and the main propositional settings in which they work best.

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