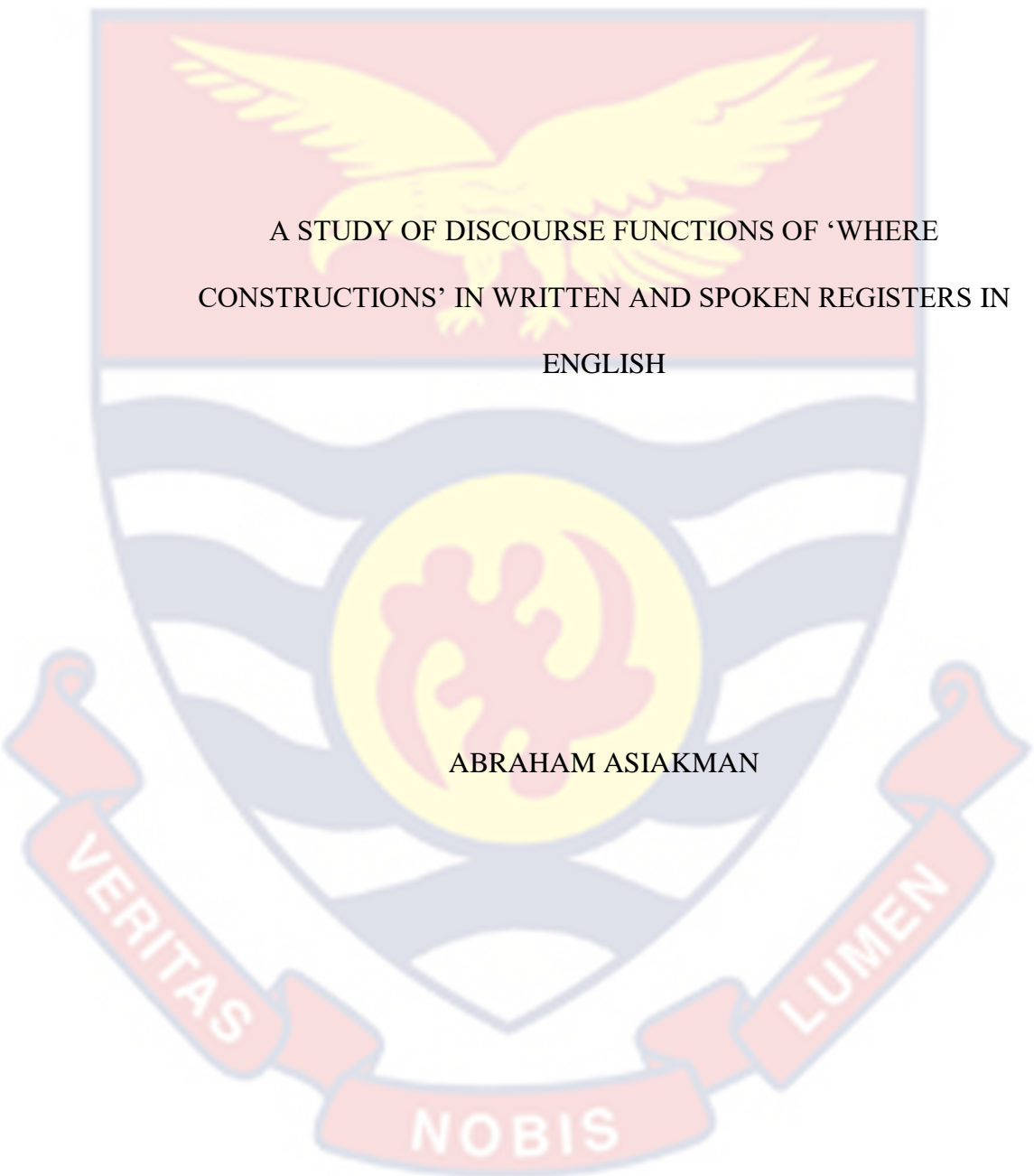


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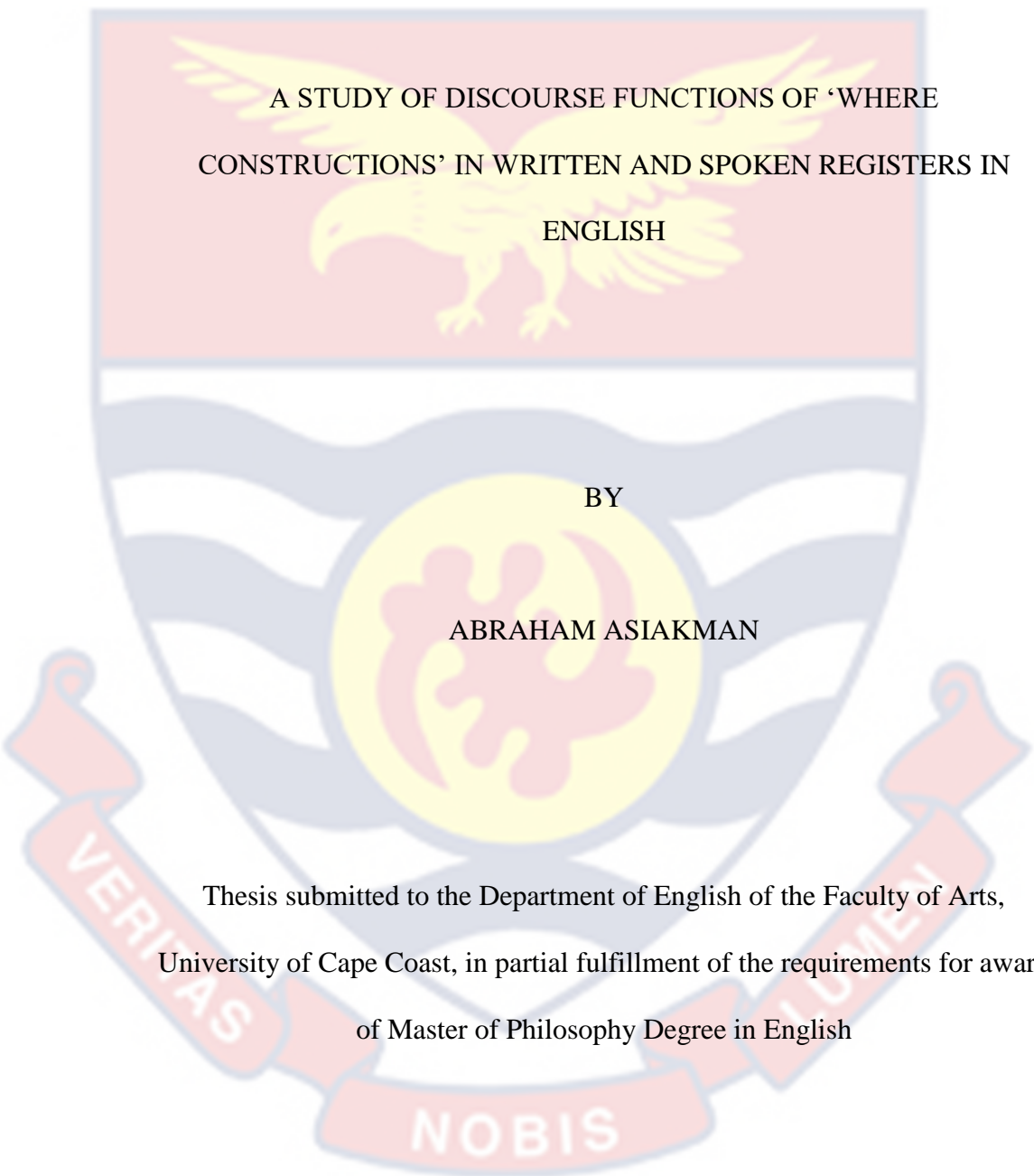


A STUDY OF DISCOURSE FUNCTIONS OF 'WHERE
CONSTRUCTIONS' IN WRITTEN AND SPOKEN REGISTERS IN
ENGLISH

ABRAHAM ASIAKMAN

2023

UNIVERSITY OF CAPE COAST



A STUDY OF DISCOURSE FUNCTIONS OF 'WHERE
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ENGLISH

BY

ABRAHAM ASIAKMAN

Thesis submitted to the Department of English of the Faculty of Arts,
University of Cape Coast, in partial fulfillment of the requirements for award
of Master of Philosophy Degree in English

OCTOBER, 2023

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature: Date:

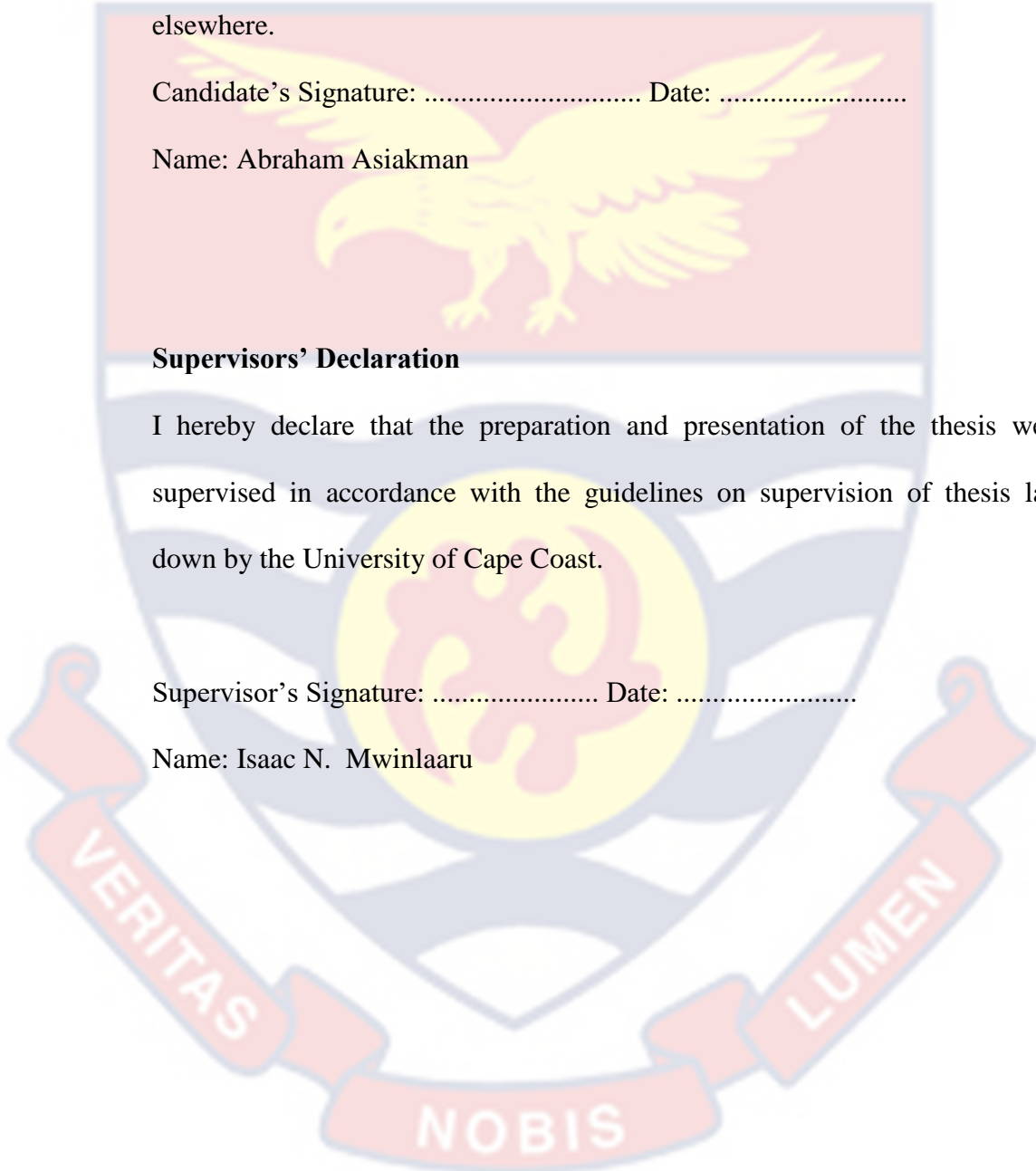
Name: Abraham Asiakman

Supervisors' Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Supervisor's Signature: Date:

Name: Isaac N. Mwinlaaru



ABSTRACT

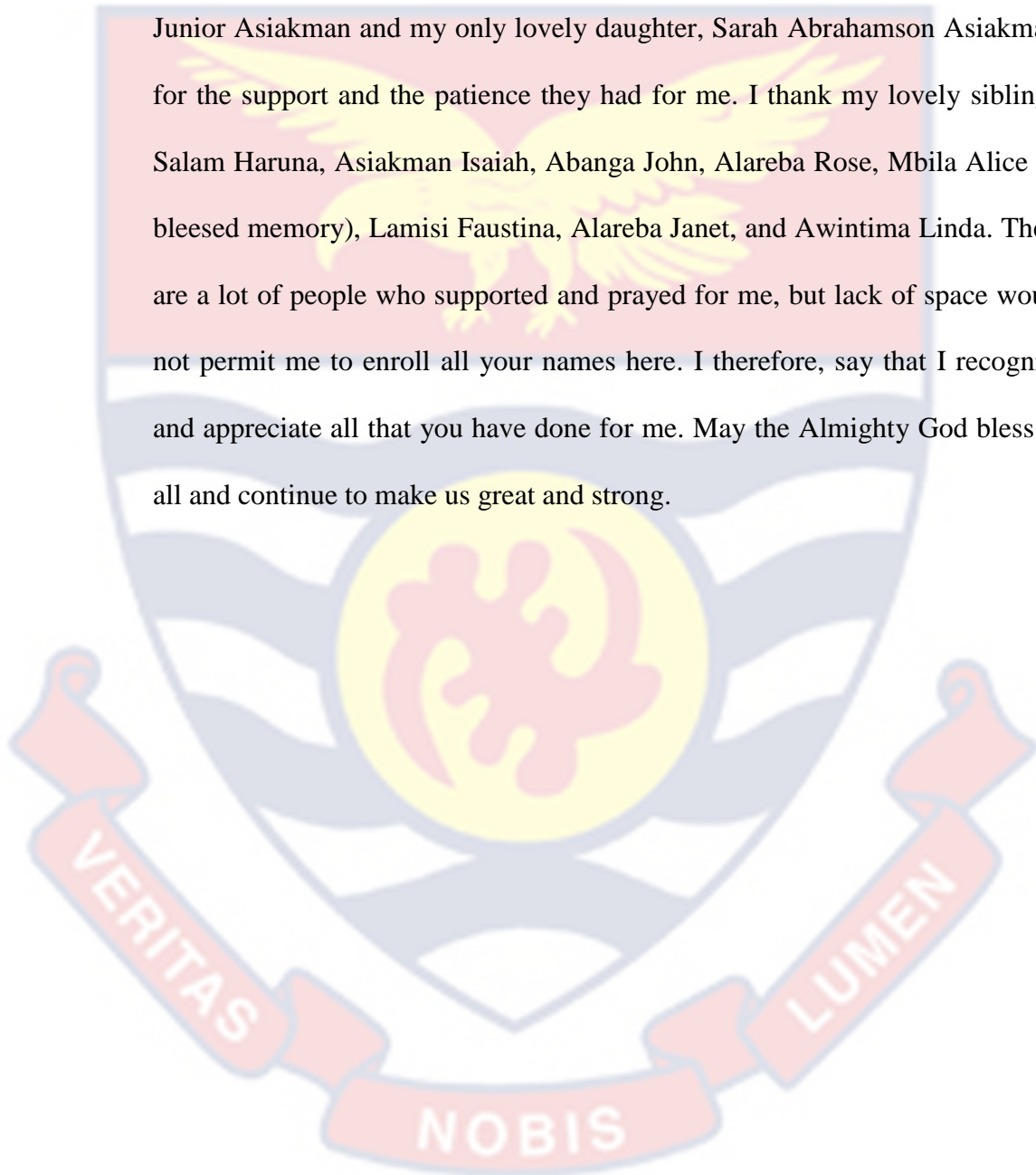
This work was explored with the assumptions that the wh-item *where* may have other functions apart from its primary function as an interrogative property or questioning. Most discussions on the use of the ‘*where*’ as a linguistic item focus on its basic use as an indicator of an interrogative. This work has explored the discourse functions of ‘*where*’ in order to reveal some added functions either than its basic functions as an interrogative marker. Three research questions were set as a guide: what are the discourse functions of *where-constructions* in English, what is the distribution of occurrences of the discourse functions of *where-constructions* across selected written and spoken registers, and what kinds of *where-compounds* are used across written and spoken registers and their functions? The study is situated within the theoretical perspective of constructionalisation, a theory which is grounded in constructional grammar. The study employed qualitative research design, specifically, the content analysis method. The study shows that *where* has other functions aside its primary function as a word with an interrogative property, as data used for the analysis was drawn from Corpus of Contemporary American English (COCA). The analysis revealed six discourse functions of ‘*where*’ compounds; *extending, reporting, informative, referring, rhetorical, and locative* function. The analysis revealed that the *Rhetorical function* is mostly used in spoken register while the analysis revealed that *Informative function* applied more in newspaper register. *Locative function*, on the other hand, is revealed to be appearing mostly in newspaper register meanwhile, the extending function is very frequent in Academic register but *the referring function* is used more in Spoken. Finally, *Reporting function* is used more in newspaper register. The study has revealed that out of the 17 ‘*where compounds*’ considered for the study, 5 of them occurred more frequently. These frequent ‘*where compounds*’ are: *whereas, whenever, whereby, whereabouts and wherein*. The study contributes to research on constructions in English.

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DEDICATION

To my lovely parents:

Mr. Paul Abanga and Mrs. Elizabeth Mbila



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CHAPTER ONE

INTRODUCTION

Background to the Study

Since the 1980s, construction grammar has increasingly gained the attention of scholars working on the description of languages. Construction grammar has evolved as part of a set of linguistic theories that are collectively called cognitive linguistics. Its objective is to study constructions in languages. A construction is defined as a form-meaning pairing.

Construction Grammar ("CxG") could be seen as class of ideas that are founded on the idea that linguistic form and linguistic meaning are not separate levels but are instead inextricably linked to one another. Construction Grammar holds that associative form-meaning pairs serve as both the foundation for words and the repository for all linguistic knowledge. This belief, is first supported by the observation that speakers employ resources that are stored as fixed units in the mental lexicon, rather than, having to be generated with each utterance. Langacker, (1991: 15) sees this kind of linguistic unit, is described as, "thoroughly mastered structure, i.e., one that a speaker can activate as a preassembled whole without attending to the specifics of its internal composition". Construction grammars, emphasize that "(i) even semantically opaque expressions (idioms) may share certain aspects of regular syntactic structure with fully productive syntactic expressions [...] and (ii) even seemingly transparent syntactic structures may involve all sorts of unpredictable constraints that cannot simply be derived from the syntax alone [...]," at the same time, Fried (2015: 2); see Langacker (1987: 59) as well. Although, construction is a fundamental idea in most theories of

grammar, it is only considered an exception to rule-based syntactic structures. Construction grammar, however, does not restrict the use of constructs to particular situations. Instead, it focuses on these components and makes the assumption that constructions are the only basis for the language system as a whole, (Stefanowitsch 2011: 20). All conventional levels of linguistic description are taken to have constructions.

Words, more or less, fixed idioms, collocations, argument structures peculiar to a verb class, partially filled words (morphemes), turns, and even texts, can be considered constructions. The linguistic explanation within the construction paradigm thus, grammar makes an effort, to unite all linguistic knowledge, under a single idea, highlighting the fact that both regular and irregular patterns, serve the purpose of communication. This suggests that there is no assumption of a rigid separation between grammar and lexicon. Instead, linguistic knowledge is viewed as a set of learnable symbolic connections, between form and meaning.

Construction Grammar, seeks to create a theory of language that encompasses all linguistic information, regardless of how regular it may be, and simultaneously portrays linguistic behavior as both inventive and repetitive [Goldberg 2013: 26]. The description also, focuses on language acquisition, storage, and processing in addition to the language system itself. This sets construction grammar apart, from other grammatical notions that frequently focus on strictly linguistic and occasionally, even simply "syntactic" issues. Construction Grammar's goal, is to create a psychologically accurate description of the nature of language, as one of many

cognitive and social systems, available to humans, not so much to create a kind that works well for the generation of linguistic structures (Fried 2015: 1).

One can say that Construction grammar, cannot be necessarily about “linguistic systems”, but can be about “linguistic information”, the processing of which is founded on broader “cognitive and communicative” strategies.

At least, as far back as the Latin grammar writers, there has been linguistic interest in constructions [Goldberg 2006]. The term "construction", was employed by American structuralism and early generative methodologies (Schönefeld 2006). However, the constructional approaches arose primarily in opposition to generative linguistics and place a strong emphasis on construction.

Construction Grammar makes the assumption that form-meaning pairs, or constructs, may encompass all language knowledge. All linguistic information is thought to be conventionalized, in constructions. It is important, to emphasize here again, that "construction" looks at all linguistic levels of description, including morphology, syntax, and description of texts. Constructions are said to be stored in the construction, which, like the lexicon for words, holds the total of all constructions because they are closed-class entities.

According to the assumption, the differences between the various constructions are not in their fundamental architecture, but rather in first, their complexity, or whether they include smaller symbolic components, and second, their schematicity, or the percentage of phonologically, or other formally specified elements. It could be noted, that constructions as talk of, can also create networks. These networks are a result of schematic structures,

being produced, through generalizing, over specific constructions, as well as, the connection of less complicated constructions, to more complex ones.

The most crucial thing, we must note about construction, is that whether or not, a construction is difficult, varies. This could be referred to us what we call, simplex and complex structures. The simplex structures are most often referred to as, lexical constructs. They can also, be known as, morphemes, or words. Complex constructs, include, additional components that may be symbolic, phonetic, or semantic. For instance, idiomatic coincidences often appear in complex constructions.

We may refer to de Saussure's work translated by Harris (1983), who opined, that constructions are linguistic signs: They are composed of an "image acoustique", on one side of the construction's form, and a meaning, on the other; both sides the signifier, and the signified, are connected by conventionalization. Although, occasionally driven by the history, of an existing linguistic system, the connection between the two is arbitrary, and the function of a construction, is frequently, influenced by its location, within a systematic network.

Here, we can say that constructions are a bit different from de Saussure's signs, in that they can be both complex, and schematic. In as much as, it could separate, the idea of the "sign", from the lexicon, and posits it, as the common ordering principle of language. Notwithstanding, we cannot entirely say that construction is far more different from the perspective of de Saussure, but, we can however, say that construction Grammar is a continuation of Saussure's work. The sign's meanings, as well as its form side,

are both expanded. According to construction grammar, signs, and constructions, are where, all grammatical and linguistic knowledge, is kept.

In other words, all linguistic knowledge is made up of the same type of data: fixed pairs of form and meaning. In contrast, to other grammatical notions, constructionist approaches, do not prioritize, the form, or meaning sides, over one another (Croft 2001: 170). Instead, the symbolic connection, between the two sides, is where linguistic knowledge, can be found. The two sides of a construction cannot be isolated from one another, much as the "image acoustique" and the message cannot be separated from one another.

Construction grammarians, in contrast, to many other grammatical concepts, believe that the description of a construction, must be very extensive, both formal, and especially, semantically, because "[...] constructions reflect the interplay of myriad conceptual and functional factors" (Langacker 2009: 174). A construction is thus, more than "simply" the pairing of a form, with an easily specified meaning; it incorporates, all of the information required to employ this structure in communication. This can include phonological constraints for affix selection, phonological specifications, prosodic qualities, semantic characteristics, pragmatic limitations or structural information, or information concerning frequency of usage (Steels et al. 2012: 208). Sometimes, constructions are also expressed by their relationships to other structures.

Schematic constructs, are linked to the components or other constructions that appear in their slots (called collocations by Stefanowitsch and Gries 2003) and to other constructions, with which, they are used in conjunction (collocations). Phrases are linked to more schematic structures,

with which, they form a hierarchical structure. In this sense, constructs, are comparable to how we perceive words. The connection of form and meaning, which Croft [2001: 59] refers to as symbolic links, also plays a significant role. Constructions can be distinguished based on whether a speaker recognizes a pairing of form and meaning, i.e. whether he or she perceives it as a known unit. If this is the case, the symbolic links are cognitively embedded Langacker (2005: 107-108); Schmid (2017). Both the symbolic connection and the forms and meanings themselves must go through the cognitive entrenchment process.

At this point, in my aforementioned remarks, it is worthwhile to take into account where-constructions as also falling under the purview of construction grammar, hence the study. This is due to the fact that construction allows for the study of word and phrase or investigation up to a whole text level. Now that I've gone into great length about the idea of construction grammar, allow me to present a few examples of works that have focused on constructions. That makes way for additional investigation into constructions. That gives way for further research into constructions. Construction Morphology and the Lexicon was conducted by (Booij, 2007). Construction Grammar: The Oxford handbook of cognitive linguistics was studied by (Croft, 2007). Constructions: A construction grammar approach to argument structure was done by (Goldberg, 1995). Constructions at work: The nature of generalization in language by (Goldberg, 2006). To show further, Construction Grammars: cognitive, radical, and less so was conducted by (Langacker, 2005).

We can also refer to Issues in constructional approaches to grammaticalization by (Trousdale, 2010). Another work is Type shifting in Construction Grammar: an integrated approach to aspectual coercion which was conducted by (Michaelis, 2004). Further works can be traced from; Fillmore (1988: 36), for example in George Lakoff's worked on English constructions with here and there (Lakoff 1987). Analysis of colloquial French constructions, was done by (Lambrecht 1986) or in the article by Charles Fillmore, Paul Kay and Catherine O'Connor on let alone-construction [Fillmore et al. 1988].

Aside the scholars who have investigated constructions in general, there are some scholars whose interest lie in researching into wh-items. These various scholars have developed particular interest in specific areas of the wh-items. Some have interest in exploring wh-items across languages (see Caratens 2005; De Vincenzi, Arduino Ciccarelli, & Job 1999; Diercks, 2010; Friedmann, 2011; Gasti, 1996; Jakubowicz, & Gitierrez 2007; Muriungi, 2003; Sabel, 2000; Sabel & Zeller, 2006; Schnider- Zioga, 2007).

Some scholars investigated the realization of the wh-items of the English language by learners (see Addaibani, 2017, Marshall, 2011; Slavkov, 2009; Van der Lety, Jones & Xhang, 2016). Some researchers on the other hand, have also developed interest in exploring the acquisition of the wh-items by young children or toddlers and the use of *wh-words* by adults (e.g., Coveney, 1995, Erreich 1984; Hoff-Ginsberg, 1985; Klee, 1985; Klima & Bellugi, 1996; Labov & Labove, 1978; 2002; Shby, 1977).

By taking a different approach, from the past studies on the wh-items and focusing on just one type of the wh-items, where-constructions, the

current study aims to contribute to the increasing body of research on wh-constructions. By concentrating on its discourse functions, the current study aims to move beyond the investigation of the wh-item where at the question level.

Statement of the Problem

Wh-constructions have been the centre of attraction to many scholars for some time now. Most of the research on wh-constructions have however, focused on wh-questions. Some scholars have explored the wh- questions across languages.

Studies have examined languages such as Italian (De Vincenzi, Arduino Ciccarelli and Job (1999); Keliga (Caratens 2005); Lubukusu (Diercks, 2010); French (Jakubowicz, and Gitierrez 2007); Kinande (Schnider- Zioga, 2007); Hebrew (Friedmann, Belleli and Rizzi 2009); modern Standard Arabic wh-questions (Alotaibi 2012); and formation of wh-questions in Shona (Zentz 2016), as well as studies of Gasti (1996), Cole and Hermon (1998).

Other scholars, have shown interest in investigating how second language learners acquire the wh-items. Slaukov (2009) explored the acquisition of complex wh-questions in the L2 English of Canadian French and Bulgarian speaker's medial wh-constructions, inversion phenomena, and avoidance strategies. Xhang (2006) studied the acquisition of English wh-questions by Chinese beginning learners. Addaibani (2017) studied how Saudi English majors in Najran University acquire wh-questions in English.

To this extend, few works have made an attempt to investigate wh-constructions in English. Some researchers of the wh-constructions, also investigated the acquisition of the wh-items by young children and toddlers

(e.g., Seidle, Hollich & Jusczyk, 2003; Rowe, Leech, & Cabrera, 2017; Valian & Casey, 2003). From the above, it is seen that the various works did not give much attention to the discourse functions of wh-items/words.

Few works have been attempted to explore discourse functions of questions or question words. Athanasiadou (1991), for example, examined the discourse functions of questions in general. Mycock (2013) conducted a study on “discourse functions of question words” in general. The two studies, however, investigated the discourse functions of questions and did pay a little attention to the functions of wh-items such as *where*. As it stands now, there has not been any work devoted to the discourse functions of *where* which belongs to the wh-items/questions category.

This means that the question of the discourse functions of *where-constructions* involving wh-items, such as the study on *where*, remains unanswered. The goal of the present study is to examine only one aspect of the wh-items (*where*) by focusing on the constructions and not the wh-words. The need for an investigation of this nature is grounded on the claim that the function of *where* is used to ask questions, as established by Zentz (2016) and Addaibani (2017). This proposition by the researchers is anyway laudable. However, this study argues that in addition to its role, as an interrogative item, it also, has other functions, apart from serving as an interrogative property.

Objective of the Research

The present study investigates *where-constructions*. The purpose of this study is in three-fold. The first objective of the study is to investigate the discourse functions of *where-constructions*. The second objective seeks to examine the distribution of occurrences of the discourse functions of *where*

across selected registers. The final objective is to address the kinds of *where-compounds* in the corpus and the most frequent *where compounds* in the corpus.

Research Questions

The study is guided by the following research questions

1. What are the discourse functions of where- constructions in English?
2. What is the distribution of occurrences of the discourse functions of where- constructions across selected written and spoken registers?
3. What kinds of where-compounds are used across written and spoken registers and what are the functions of these compounds?

Significance of the Study

The study is important for various reasons. The fundamental value of this study is that it adds to the increasing body of works, on the wh-item/question phenomena, by examining the discourse roles of where-constructions, using corpus data. The second significance is the contribution to studies of English constructions, where most studies focus on idioms, metaphors, and formulaic expressions. It is also hoped that the results of this investigation will have some instructional outcomes. It will educate curriculum developers, textbook writers, and Teachers of English as a Second Language (TESOL) about the various forms and uses/meanings, of where-constructions. Again, this indicates that curriculum developers, in particular, should consider incorporating where-constructions into the curriculum for learners to go through.

The Scope of the Study

The English language as a field of study (and of research) is made up of many branches. The focus of this piece of work is within the confines of where-constructions.

In terms of data, the study limits itself to only American English, therefore, the data source for the study is: the Corpus of Contemporary American English (COCA). This means, all other English corpora, would not be considered, for the objectives of this study. In the corpus, the study uses only three registers namely: academic registers, spoken registers and lastly, newspaper registers, though, there are several other registers in COCA. Only the three mentioned above, are considered for the study.

Overview of the Thesis

This piece of work is divided into five chapters. The opening chapter (i.e., chapter one) introduces the investigation; this includes: the foundation towards the study, problematizing the study, objectives of the study, significance of the study, delimitation and overview of chapters. Chapter two is devoted to review of the related works. Chapter three consists of the design of the research, data used, and the data analysis procedure. Chapter four deals with result and discussion of the data employed for the study. Chapter five, which is the last chapter, constitute the summary, conclusion and recommendations.

Chapter Summary

The chapter discussed so far is the opening chapter of this research work. In this chapter, some issues were covered. Some of these areas covered are as follows: introduction of the work, it directs readers on what the work is

all about. The next section was the background to the study. The present study traced what others have done and the part that needed an extension or a gap to be filled. The objectives of the study were discussed. Here, the need for this search was adequately addressed. The chapter further discussed the statement of the problem. The research questions underpinning the work were highlighted. On the significance of the study, the relevance of the outcome of the research has been treated. The scope of the study was outlined.



CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

The chapter examines related works. The chapter presents the theoretical framework, a conceptual context and some empirical studies for the discussion of outcomes of the investigation.

Theoretical Framework

This present study considers constructionalisation framework by Traugott and Trousdale (2013) as its theoretical framework. This section will discuss Construction Grammar in general and proceed to discuss the specific notion of constructionalisation.

Constructionalisation

Constructionalisation refers to the process by which linguistic constructions emerge and evolve over time. It involves the creation and constructionalisation of new patterns of language use. According to Traugott and Trousdale (2013), in Constructionalisation theory, constructions, are seen as the basic units of grammar, and their emergence and development, are seen as central, to language change. The Constructionalisation theory is thus, a linguistic theory that focuses on how grammatical constructions emerge and change over time (Traugott and Trousdale, 2013).

It explores, how new constructions, are created, and how, existing ones evolve, through processes like, analogy and reanalysis. This theory enables the analyst to understand how patterns and structures emerge in textual data. By analyzing the usage and distribution constructions in a dataset, Trousdale (2010) observes that researcher gets insight into the underlying grammar and

meaning of the text. It helps, in identifying recurring patterns, linguistic phenomena, and changes over time. In simple terms, it helps in uncovering the hidden language patterns within the data.

Some of the proponents of the constructional theory include linguists like, Adele Goldberg, William Croft, and Michael Tomasello. They have made significant contributions, to the study of constructional theory, and its application in understanding language and evolution. Their research has shed light on how constructions emerge, develop, and shape our understanding of grammar. This theory is grounded in Construction Grammar. Let's look at what is in Construction Grammar.

Construction Grammar was first propounded by scholars such as Filmore (1985, 1988), Filmore, Kay, and O'Conner (1988), and Lakoff (1987). Other scholars have also contributed to this theory. Examples of such scholars include Traugott, and Trousdale (2013) and Diewald (2006). CxG is seen as a system to experiment linguistic composition. This approach has something in relation to traditional approaches to language studies such as Case Grammar which could be traced from Filmore (1968), and Generative Semantics (e.g., Lakoff 1976, Lakoff & Ross, 1976). The theory also, shares certain assumptions with both formal linguistic theories (e.g., Pollard & Sag 1994); and Cognitive Semantics, (Lakoff 1983, 1990) and with cognitively-oriented theories (e.g., Langacker, 1987, 1999a, 1999b, Talmy 1988, 1996).

CxG is a theory of language that sees a construction, as the basic principle of grammatical organization. In other words, one could make a conclusion that the fundamental entity of grammar is a construction. A construction is defined as, "pairings of form and meaning", (See Goldberg,

1995:4). Goldberg went ahead to say, “*Constructions are stored pairings of form and function, including morphemes, words, idioms, partially lexically filled and fully general linguistic patterns*” (See Goldberg, 2003).

Defining constructions, would thus, comprise or include a major variety of linguistic units. These could be (i) single morphemes, examples such as, “cut”, cause to move, or be a particular position’, “in” –, as in, “insight”, “inborn”, “influx”, etc., (ii) multi-morphemic words like put-on, “deception”, “hoax”, or “input”, (iii) fully filled idioms, like “Put yourself in my shoes”, “try to see things from my perspective”, (iv) partially filled idioms, like, “X put an end to Y” (v) fixed phrases with a compositional meaning, for example, “to put one’s hands in one’s pockets”.

Construction Grammar is considered as *non-modular*. This means that under this theory, there is no stringent classification between syntax, morphology, lexicon, the conceptual system, pragmatic principles, etc., as a construction is directly link *form* and *meaning/use*. In the present study, the where-constructions identified are considered constructions in the sense defined in CG. They constitute unified linguistic units of form-meaning pairing.

Conceptual Framework

The current study considers three primary basic concepts of constructionalisation, schematicity, productivity, and compositionality, to be important. These concepts will be addressed one by one and explained in relation to the current study.

Schematicity

Schematicity is a category of... that significantly, involves abstraction. A schema, whether linguistic or not, is a taxonomic generalization of categories. Schemas according to Kemmer, 'are fundamentally routinized, or cognitively entrenched patterns, of experience,' (Kemmer 2003: 78). Bardal (2008) also, opines that schemas can be seen largely, from a psycholinguistic perspective. Regardless of the different perspectives of the concepts of schemes in the literature, this study looks at the approach from the linguistic point of view.

Linguistic schemas, in this perspective, are abstract, semantically generic groupings of constructions, whether procedural, or contentful. They are abstractions across sets of constructions that language users, (unconsciously) perceive to be closely related to one another, in the constructional network. Degrees of schematicity, refer to levels of generality, or specificity, as well as the degree to which, constituents of the network, are detailed (Langacker 2009).

Starting with the generalization, the notion 'furniture' is more abstract and inclusive, than the concept 'chair,' and the concept 'chair,' in turn, is more abstract, than the concept, 'armchair'; 'noun', is more abstract, than 'count noun'. Starting with the particular, a dachshund, is a dog, and a dog is a mammal; an 'intransitive verb', is a verb, and so on, (see Tragott and Trausdale, 2013). Subschemas and, at a lower level, micro constructs, instantiate linguistic schemas: type members of more abstract schemas, for example, may, is a subschema of the schema, auxiliary; modal, is a subschema of the schema, auxiliary. Subschemas can emerge through time, for instance,

subsets of NP peripheral modifiers, (Van de Velde, 2011) or be lost, example, ditransitive subsets, (Colleman and De Clerck, 2011).

Constructional changes occur before and after constructionalisation, resulting in growth, and loss. In light of this, schemas and subschemas can be thought of, as subparts of the linguistic system that linguists select for debate and analysis. They are not intended to be mental representations, yet, nothing precludes them, from overlapping with linguists' categories. A linguistic construction's schematicity, is concerned with, how well, it preserves more general patterns, over a sequence of more specific constructions, (Tuggy 2007, Bardal 2008). Gaps and how symbolic structures are formed, within them, are frequently explored, in terms of schemas, (see Goldberg 2006, Langacker 2008).

A construction, for example, may be wholly composed of abstract schematic slots, such as, the form component of the ditransitive schema, [SUBJ V OBJ1 OBJ2], or, it may be somewhat schematic, such as, the way-construction, ([SUBJ_i [V POSS_i way] DIR]). Goldberg (2006) hypothesizes that speakers have both 'item-specific knowledge', and 'generalized or schematic knowledge', about certain expressions. As a result, it is reasonable to include, genuine token expressions, (constructs such as, "I gave John a cake," "I baked John a cake," and individual type constructions.

Prototypical instances of the construction (e.g., I gave John a bike) include a perfect match between the lexical semantics of the verb and the constructional semantics; in other words, there is semantic coherence and correspondence in the prototype ditransitive, (see Goldberg 1995: 35). Because constructional semantics is polysemous, there are other clusters of

constructions or subschemas that are linked in a network to the primary sense. For example, the lexical semantics of *bake X*, 'cook X in an oven', contribute part of the meaning in, I baked John a cake. The subschema with the meaning 'Agent intends to cause recipient to receive theme', contributes to another element of the meaning. Other verbs, such as *deny*, (as in, "He refused me the log book"), imply, a refusal to cause a person to accept something.

According to Boas (2013), one possible issue with such abstract argument structure creations, is their ability to overgeneralize and legitimize (or "license", "give access to") unattested notions. It might be claimed that speakers frequently overgeneralize and stretch the boundaries of a certain construction. Such developments may eventually result in language shift. In his examination of the resultative construction in English, individual verb senses, according to Boas (2005), may not correspond to the conventionalized pairing of form and meaning, associated with the larger abstract construction, they are meant to exemplify.

These pockets within the network of English resultatives, have their own quirks, and 'while very broad generalizations are captured, by Goldberg-type abstract meaningful constructions, more limited conventionalized patterns are captured by more concrete constructions at various midpoints of the hierarchical network' (Boas 2013: 239); see also Croft (2003), which provides a detailed account of ditransitives subclasses and a critique of some of Goldberg's 1995 assimilations).

In terms of schemas, the English resultative construction, cause-*receive*, [[SUBJ V OBJ1 OBJ2] \$ [cause to receive by means of V], is more schematic than [[SUBJ *bake* OBJ1 OBJ2] \$ [Intend to induce to receive via

baking], because, the first generalizes over verbs (V), whereas, the second specifies a specific verb (bake) with general slots conventionalized, entrenched schemas' sanction their subcases, that is, they constrain and specify their subcases' well-formedness, (Langacker 1987: 66).

There are two gradients in schematicity. One, it is a 'more or less', a factor in that well-formedness is a matter of convention, and approval, is frequently only partial. According to Langacker (1987: 69), "a significant amount of nonconventionality is tolerated (and frequently expected), as a normal feature of language use."

A second way of schematicity can be graded by the hierarchical distinctions that can be drawn. In his discussion of the evolution of different subtypes of the way-construction, Israel (1996), argued that a distinction should be made between specific verbs that can occur in the construction, clusters of types, and a higher order representation, schematizing, over prominent subsets of usages (p. 220). Having a hierarchically intermediate level (Israel's "clusters of types", "our subschemas") at least partially reflects the fact that language users appear to be attentive to both generalized patterns and specialized information (Bybee and McClelland 2005).

In order to maintain the emphasis on both form and meaning, as mentioned above. As a heuristic, for describing and analyzing where-constructions, I suggest the following minimal set of constructional levels: schemas, subschemas, and micro-constructions. In turn, 'constructs', instantiate micro structures in use. Constructs are empirically attested tokens, (for example, attested, I gave Sarah a book, She needed a lot of energy), instances of use on a specific occasion, said by a specific speaker (or written by a

specific writer), with a specific communicative goal. Constructs are extremely rich in pragmatic meaning, most of which may be unrecoverable outside of the specific speech occurrence.

Many unique phonetic aspects of spoken phrases are rarely duplicated; for example, when one says give or a lot of, for instance, the expression is likely to be pronounced slightly differently, depending on the context. Written constructs, are also empirically attested tokens, but, because of the medium, generalizations are made over phonetic detail. Crucially, for a usage-based model, constructs are what speakers/writers produce and what hearers/readers process. As usage events, they help to shape the mental representation of language, (Bybee 2010).

Here we may mention the consequence of production and processing. The highest level of any combination of schemas in the constructional hierarchy described by the linguist will always be a (partial) schema. Schemas are phonologically underspecified, because, they abstract over several micro-constructions. Only micro constructs have the ability to be substantively and phonologically described. In a nutshell, the *where-constructions* appear in the same or comparable manner wherever they occur.

Productivity

Productivity is a phrase that has been used in a variety of contexts. Bardal (2008) provides an excellent summary and examination of the term's various use. The productivity of a construction, in our opinion is gradient. It is concerned with (partial) schemas and i) their 'extensibility' (Bardal 2008), the extent to which they legitimize alternative less schematic structures, and ii) their constraint (Boas 2008). In terms of morphology, consider how much the

combination of an adjective + -th encourages the formation of new nouns. This is now deemed ineffective because the formula produces few new nouns [ADJ + th]. By contrast, [ADJ + ness] is much more productive, and this schema sanctions a wide range of less general forms, some more conventionalized than others (cf. truthiness, truthlikeness, unputdownableness, and sing-along-able-ness, all recently attested in on-line discourse). A similar situation holds for aspects of inflectional morphology. Past tense in English is productively marked by affixation (e.g. play – played), but it is sometimes marked by change in the stem vowel (e.g. drink – drank), a historical relic of ablaut. When new verbs are introduced into the language, their past tense is Schema (e.g. quantifier schema) Subschema1 (e.g. large quant) Subschema2 (e.g. small quant) Micro-Cxn1 Micro-Cxn2 Micro-Cxn3 Micro-Cxn4 (See Wasserscheidt 2019).

In contrast, [ADJ + ness] is far more prolific, and this schema sanctioned a wide range of less general forms some more conventionalized than others (cf. truthiness, truth, likeness, input, down, ability, and sing-along-ability, all newly attested in online discourse). A comparable issue exists for inflectional morphology. In English, the past tense is denoted productively by affixation (e.g., play - played), but it is also often signaled by a shift in the stem vowel (e.g., drink - drank), a historical residue of ablaut. When new verbs are added to the language, their past tense is changed. Schema (for example, quantifier schema) Subschema1 (for example, huge quant) Subschema2 (for example, tiny quant) Micro-Cxn1, Micro-Cxn2, Micro-Cxn3, and Micro-Cxn4. many a lot of little a little bit of

FIGURE 1.3
Hierarchical Relationship Gradient.

The Framework is usually formed by the more productive and ‘regular’ method of affixation rather than by the vowel change—the past tense of skype (“to make a video call via the internet”) is skyped, not, for example, *skope (based on write-wrote). Much work on productivity is concerned with frequency. Baayen (2001) and Bybee (2003 and elsewhere) have importantly distinguished type frequency, (the number of different expressions a particular pattern has), from token frequency, (the number of times the same unit occurs in text). We equate construction frequency with type frequency, and construct frequency, with token frequency. The definite article *the* in English has a construction type-frequency of one, but, it is the most token-frequent construct in the contemporary language. When new structures are created, they usually spread by gradually increasing their frequency of use over time, (Bybee and McClelland 2005: 387).

We interpret “increase in frequency of usage” to mean that speakers are using instances of the new structure more frequently. Routineization and automatization (Pawley and Syder 1983; Haiman 1994) as a result of frequent use and repetition are important elements here. By this stage, it could be noticed that the concepts of the where-constructions occur again and again in the corpus. They are considered as productive because we can predict their use. Again, they are more productive because, we can expect where they occur.

Compositionality

Compositionality means that the meaning of a linguistic sequence can be derived from the meanings of its constituents, (Goldberg 1995). Non-constitutiveness, therefore, means that the compositional meaning, exceeds the

sum of the meanings of its constituents, or at least, is unpredictable from their meanings. In syntactic grammar, the prevailing position is that syntax does not necessarily have to be non-constructive. However, other authors still assume that the structure need not always be compositional. “The contrast between outside and inside is related to another compositional feature of the structure, the non-constructive nature. A structure has its own function (or meaning) that cannot be predicted by simply adding the properties of its constituents.

Langacker, also, points out that it could well be argued that fixation and conventionalization, always lead to some degree of specificity from other structures. For example, the process of grammaticalization is defined by the increasing non-constructivity of patterns, [Fried 2013]. However, even grammatical structures can exhibit different degrees of composition. Revisiting the interpretation of Verhagen (2009) here, the highly non-constructive phraseological component meaning, no longer serves as a signifier of the constructive meaning.

To this extent, the where-constructions can be deduced to be compositional. This is evident in the context of where compounds. The where-constructions at this point are combined to form a unit. This means they are compositional because they cannot be considered individually. When we have “*whereupon*”, for example, the “*where*” and “*upon*”, are not separate entities but they come together as one manifestation. Again, the sentence, like rhetorical where-constructions, is a unit; the “*where*” has no distinct meaning from the remainder of the construction. They all contribute to the construction, the form-meaning connection.

Summary

By applying the notion of constructionalisation in C×G to the present study, the study assumes that the wh-item “*where*”, has given rise to several forms-meaning pairings which are characteristics in the study as, “*where-constructions*”. These “*where-constructions*” include; clausal units and multi-morphemic units involving “*where*”, (i.e., “*where compounds*”).

In addressing research question one, (what are the discourse functions of *where-constructions* in English?), the study shows that clausal *where-constructions* in English, rather than being uniform, constitute several constructional types and the discourse functions identified are evidence of these different form-meaning pairings.

Research question two, (what is the distribution of occurrences of the discourse functions of *where-constructions* across the selected written and spoken registers?), assumes that the different clausal *where-constructions* have different probabilities of occurrence in different registers.

Research question three, (what kind of *where-compounds* are used across written and spoken registers and what functions are these compounds?), examines bi-morphemic and multi-morphemic *where-constructions* showing pervasive constructionalisation paradigm of *where-constructions* in English.

Empirical Review

This part of the study looks at a review of related literature to situate the work into its appropriate context and perspective. This review will be organized under specific themes: the acquisition of interrogative structures, the discourse functions of wh-structures and the types and features of wh-questions.

Studies on the Acquisition of Wh-Interrogative Structures

Bloom et al. (1982) conducted a study on 'wh-questions: linguistics factors that contribute to the sequence of acquisition'. The study was foregrounded by a hypothesis. It was hypothesized that the wh-questions learnt later in the process of acquisition, are actually different, from the wh-questions that are later learnt in the sequence of one, their syntactic function, which approximate to rest of the questions; two, employ verbs that were more complex syntactically and finally, apply in diverse discourse environments.

By so doing, 7 respondents were chosen for the survey to ascertain language development in children. The respondents were monitored longitudinally, for the ages between 2 and 3. It was learnt that to examine the structures of wh-questions at the same time with verbs, such as these (*what, where and who*), actually, takes precedence before (*how, why and when*) which is within the circle that has been noticed in other studies of the acquisition of *first* and *second* language.

The researcher indicated that the sequence discussed earlier has been given many explanations about in most instances in relation with some restrictions on abstract thought within the context of mental maturity. The purpose of the study, therefore, was to discover and describe other circumstances, that enable the cognitive prerequisites for acquisition and to examine, the manner by which influences covary developmentally with the meaning of the diverse wh-forms.

It was reported that 3 categories of linguistic constrictions were perceived to confirm the distinction between the wh-forms and eases their progression of acquisition (1) the syntactic roles of unlike wh-questions, (2)

the choice of verbs in wh-questions and (3) the application of wh-questions in discourse. Bloom et al. (1982), went further, to demonstrate that the *wh-pronominals* such as *what*, *where* and *who* could function as constituents of the copula in the form of (be, i.e., is, are, etc.), to ask question of the identities of objects, places, and persons, as in such questions as, (*what's this? where's the girl? as well as who's that?*).

Similarly, Gao (2009) conducted a study on, L2 acquisition of Chinese wh-questions by English-speaking learners. The basis for the study was in two-fold. The first aspect, tried to deal with how second language of Chinese learners, would be able to acquire simple wh-questions from the perspective of, diverse grammatical functions longitudinally, over above their first-year learning, and the second part was to look at, how indirect questions, and wh-questions in complements, are acquired by the learners at the end of the first year. The first year English-speaking of Chinese learner's respondents, were considered by the researcher. Here in this study, both the grammaticality assessment, and verbal (oral) production assessments, was examined.

The initial survey discovered that wh-questions, are problematic to the respondents, as compared to object wh-questions, in verbal (oral) production assessment, at the beginning stage, and adverbial wh-questions, and object wh-questions, were not found to be entirely different to the respondents, as it appeared in some 'L1', and 'L2' investigations. The researcher associated this outcome, as a result of the differences that exist in some syntactic processes of those second language learners' movement languages, go through as well as the in-situ languages learners. The study showed that the improvement of the

“*wh-*” feature strength, did not manifest noticeably in the respondents’ grammar, but it was rather “u-shaped”.

The second segment of the investigation proved that the respondents, performed well at the end of the first year, in simple *wh*-questions, as compared to that of the indirect questions, as well as, the object complements. This meant that the respondents did not perform well in the latter. In the case of implied (indirect) questions, the initial stage of respondents’ second language grammar, revealed that a “must” L1 influence, the rooted +*wh* and with the case of *wh*-questions in complements, the results did not portray the influence of L1 with the matrix +*wh*, but “an embedded” +*wh* in Malay and Madurese. The results further showed that comparing the modelled minimal (simple) *wh*-questions, as well as those in that of the *matrix clauses* of *wh*-questions in complements, the respondents performed better than that of their achievement on rooted clauses, of the two types of multifaceted complex *wh*-questions.

The results finally indicated that a way or the other resort to the use of different techniques for acquiring structures (*wh*-questions and matrix clauses). The performance of the respondents showed that in clause initial positions, *wh*-words do not manifest. It was shown that there is no any strong connection on how the respondents performed on embedded clauses of the two categories of the complex *wh*-questions.

Slavkov (2009) also, studied ‘the acquisition of complex *wh*-questions in the L2 English of Canadian French and Bulgarian speakers: Medial *wh*-constructions, inversion phenomena, and avoidance strategies.’ The objective of the study was to explore techniques employed to develop, long-distance

wh-movement questions, in the L2 English of (Canadian) French, and Bulgarian speakers. The focus or the locus of the study was on Medial wh-constructions, (wh-scope marking and wh-copying). The idea behind this study was that the wh-constructions were not proven in the population of learners of the L1 and the L2 together, and for that matter, the wh-constructions could be seen as a challenge to L2 acquisition.

The basic questions asked were, by what means, could a learner be aware of something that is not supported, by either the native language, or, the target response, but, proven in other dialects? To achieve the said goal of the study, two experiments, the first was on a scripted “grammaticality” judgment multiple choice assignment, and the second was on an “oral” elicited production assignment were initiated.

In the case of the written experiments, it was revealed that the “Medial” wh-constructions exist together, and in this fashion, battle against the target “English Long-distance,” make-up by the side of the initial, as well as the immediate levels, or phases of acquisition. It was shown from the factions, proving that the evidence of medial wh-representations, enabled the successful elimination from the *interlanguage grammar*, and the data proved a convergence, of the L2 that of the indigenous speakers.

On the other hand, the oral elicitation experiments in both the French and the Bulgarian-speaking, the participants were engaged on medial wh-words, and a number of other strategies, targeted at avoiding *long-distance* wh-movement. This was argued by the researcher that such tactics, with all the derivational difficulties, as well as the great load of processing, is connected with the Long-distance wh-movement.

Villiers (2011) probed the Acquisition Path for Wh-questions. In the study, three most important sections of acquiring the wh-questions, connecting to the “movement rules in *simple sentences*”, “the logical properties of wh-items” as well as the obstructions that limit the progress, through clauses, were dealt with. The three most important domains talked about by the researcher were, summarizing in the form of, (*landing site, lexical specificity, principle of economy, and interpretation*).

In the first part, the landing site, a simple question was asked, “Is the landing site the same for adults, as it is for children, in *spec-CP*?” The argument the researcher raised concerning this aspect was that considering the make-up of cross-linguistic variations, in connections like the topic as well as the focus, the child at age of two, could possibly recognize the composition of the *left periphery*. The second was on the *lexical specificity*, here, it was made known that the data on English implies that a much more word wh as well as auxiliary difference is substantiated via adult language reservations.

The researcher objected that a cross-linguistic data, contradicts the *lexicalist position*, that the categories would be tended “piecemeal”, it is therefore, assumed that the changeability of words, impedes ‘acquisition’, rendering it problematic, towards the reorganization of the productive Universal Grammar’s *principle*. The third was on the principle of economy. Zelliers, debated in favour of one, a single module principle for acquisition, and justified it, two, *moreover move*, and the third was the length, and derivation, and lastly, overall reconstruction, as together, guiding and limiting acquisition.

The researcher observed that the superiority phenomena, however, are sometimes intriguingly trivial, across languages and lean itself for further investigation in a higher scope of languages to unearth the parameters to be set first. The fourth was *interpretation*. The researcher contested, that the advent of quantification, (reflected in “*exhaustivity*”, remains replicated within quantifiers, such as, each and every, as well as what wh-items require to go into detail, within the other areas of implicatures, together with *exhaustivity*, (cleft sentences).

Pozzan (2011) examined, asking questions in learner English: first and second language acquisition of main and embedded interrogative structures. The study centered on how both grown-ups and youngsters acquiring English generate, as well as evaluate English questioning constructions. The main objective of the study was in the direction of support in ascertaining of the depth, nature, and to find out, the basis of the learners’ inability, that enables the learners to acquire certain syntactic descriptions of the language.

The second language learners’ performance within a certain threshold of tasks (i.e., oral and written) production which was either timed or untimed grammaticality assessment, was put side by side, (compared). This was done to determine, if the production of word order inaccuracies of English interrogatives by the stern of the learners of second language is an outcome of lack of knowledge, or a basis of complexities is termed as an automatic implementation of second language procedures. Furthermore, L1 Chinese and L1 Spanish learners’ production forms were likewise, juxtaposed to establish, if the inaccuracies in the production of English interrogatives by L2 learners, could be attributed to the transfer of L1 features.

The final comparison was to find out, if the inaccuracies in the construction of L1 learners, could take place attached to features of contribution by the adult. Based on this part, the result of (elicited) construction study amongst 3-5 years of age was tested, in consonance with the rate of recurrence of distinctive word combinations, in the adult involvement.

The outcome of the study brought to bear that the difficulties with the English interrogative structures manifest due to the following reasons: (1) persistent phenomenon in the acquisition of both first and second language (2) may perhaps be as a result of within a relation with *non-target-like*, illustrations than the complexities associated to the L2 processes implementation. The third aspect was the fact, that learners do not follow an exact way from the properties of learner's L1, or, the features of the contribution.

The study continued to demonstrate that learners' errors are as a result of some particular syntactic compositions, such as "wh-vs. Yes/no structures", as well as wh-words "*why* and *when* vs. *who*, *what* and *where*", indicating that the youngster, and the grown-up learners, compromise parallel grammatical hypothesis and employ the same strategies aimed at acquiring a language.

Zhang (2016) investigated the acquisition of English wh-questions by Chinese novice learners. The study employed a qualitative research approach with participants of *30 pupils in 6th Grade primary school*. The data on the wh-questions were gathered from a spoken elicitation test. The respondents were taken to produce the wh-questions based on specifically designed pictures. The *audio files* collected for the study were changed over into a *text*

file in order to pave way for a satisfactory understanding of the grasping the simple English wh-questions by the Chinese English beginning learners.

The outcome of the study revealed the kind of errors that occur in the process of acquiring English wh-questions by Chinese English learners. It was realized that the cause of this problem was their native language negative transfer. Zhang (2016) postulated that the wh-questions could be divided into the following kinds, in relation to their grammatical roles, that wh-words play. These include: (*Subject-NP, Object-NP and Adverbial*). On the part, the wh-word playing the role as a *Subject (NP)*, an example given was: (1) *what will take away the basket? Object (NP)*; (2) *what will other candidates say?* On the part of the *Adverbial*, the researcher indicated that the wh-word functions as *time, place and manner*, for example, (3) *when have you fulfilled your task?* (4) *Where are you from?* It could be seen that both researchers demonstrate that the wh-word *where* plays a role as an adverb and plays the role of showing a place.

Addabaini (2017) conducted a study on acquisition of wh-questions in English by Saudi English majors in Njran University. The focus of the study was on ‘question formation errors in English made by EFL majors in Njran University-KSA’. The objective of the study was to investigate the types and causes that engineer the commitment of such inaccuracies. The researcher therefore prepared wh-question generating instruments. After the study, the researcher’s findings confirmed a previous investigation that posited that the most basic inaccuracy categories in formulating “wh-questions in English” are: (*auxiliary omission, wrong auxiliary and many others*). The study further revealed that some of the errors were caused as a result of grammar ineptitude,

desired for question construction. On the other hand, same errors could be committed due to “*structure dissimilarities*” of both languages.

Lastly, the mechanism of wh-saturation, and interpretation in multiple wh-movements was studied by Suranyi (2006). The study exhibited that, at least, three of the syntactic patterns in Hungarian are linked to a principled way to different focus structures. The result, however, was linked to the three multiple wh-constructions to three distinct sets of *answerhood* conditions, as they are shown to be matched with, which was argued that multiple (overt and covert) movement are the same way of projecting outcomes in pair list interpretation, while on the other hand, just a single pair reading is available. It was concluded that the account of *answerhood* could be generally sustained.

Studies on Discourse functions of Wh-Structures

Athanasiadou (1991) conducted a study into the discourse functions of questions. The paper aimed to survey four categories of questions of interrogative structure, and their functions at the semantic, and pragmatic levels, using three kinds of spoken corpus of English. It was found out that not only different types of questions are characterized by dissimilar functions; on the other hand, the applications of the distinct approaches of questioning, point out the relationship that exists between the questioner and the respondent (*intimacy, social distance, and authority*).

With this, it was realized that in asking a question, a speaker, not only obtain information, or to communicate his/her experience, or an event, but, would also like to impose his/her influence, or authority, on their hearers, or listeners.

It was also revealed that the functions of questions are numerous, depending on the particular corpora one is engaged with. One, when the expression of immediate concern is needed, it is realized as, *information request*. Secondly, rhetorical questions tend to give information. The third is that emphasis and prominence that hold the hearer's attention. It was concluded that questions carry messages about relationships such as, about status (*assertions of status and challenges to status*). He continued, by saying that questioning carries a command function, apart from asking for information.

Mycock (2013) also conducted a study on 'discourse functions of question words', by using Dalrymple and Mycock's (2011) approach, which has an interface phenomenon, with the concept of LFG framework. Mycock, on the other hand, looked at it from the angle of question words. Mycock argues that question words possess similar values as non-interrogative, for the information features *+_NEW* and *+_PROM* which was proposed by Butt & King (1996). He postulated that the findings support the hypothesis that a *-PROM* question word will only be synthetically *highlighted*, in a language, (i.e., appear ex. situ, as the filler element in a long-distance dependency), if its *+_PROM* question word equivalent is also by default synthetically *highlighted*.

From a different perspective, Kotek (2016) studied the discourse function of wh-question, from a semantic perspective. The researcher made some efforts to bring to the fore, some new framework within which syntax and semantics of interrogative constructions, which takes into consideration the processes "*scope-taking*", adopted in "*wh-movement*", "*wh-in-situ*" and

“partial wh-movement construction”. The researcher purported that the framework seems to represent an initial, most important account for a wide range of syntactic and semantic facts, regarding the organization, or, the form and sense of interrogatives simultaneously, which include “*pied-piping*”, dominance, *presuppositions of questions*, readings of multiple questions, *single-pair vs. pair-list* and intervention effects, in multiple questions. The researchers claimed that their proposed analysis is a comprehensive empirical exposure, than other theories of interrogative syntax-semantics (e.g., Cable, 2007; 2010; Cheng & Demirdache, 2010; Fox, 2002; Hagstrom, 1998; Hamblin, 1973; Karttunen, 1997; Nicholae, 2013). The researchers concluded that the proposed theory is the simplest of all other theories.

Some Studies on Types and some Syntactic Features of Wh-Questions

Cheng (1986) examined the typology of wh-questions. The study puts forward that the typological differences that exist between languages on the composition of wh-questions, can be ascribed, to what is called, “accessibility of interrogative properties” in addition to the fragments of wh-items. It was objected that the presence of interrogation particles, relates alongside the nonexistence of syntactic wh-movement. Due to this, a *Clausal Typing theory* was recommended, to deal with such correlations.

It was made known, that languages adopt whichever syntactic wh-movement, or, an interrogative component to categorize a clause, as a wh-question. It was believed from the study that the assumption of an economy of origin has two projections: one, there is no language that has the possibility of changing between the two methods of clausal typing and as a result, there are no languages with optional movement of wh-words.

The second one was that the movement of one wh-word is appropriate to sort a clause, as a wh-interrogation. It was argued that languages with noticeable optional fronting of wh-words such as “Egyptian Arabic” sentences, in the company of a “clause-initial” wh-word, are cleft. In the case of an in-situ language such as Mandarin Chinese, which was explored in the study, revealed that wh-words in Mandarin are indefinite NPs and it falls short of *quantificational force*, and this makes them *polarity sensitive* Quantifier Raising and LF wh-movements, and landing site of wh-words at LF, were explored and the results showed that “LF wh-movement” does not hold, but, adjunction of wh-words to ‘IP’ at ‘LF’, was proved.

Chernova (2014) studied the syntax of wh-movement in multiple (true and echo) questions: A Q-particle approach. The study explored the typological differences that exist between some wh-fronting languages with regard to the syntax of multiple wh-questions. There were two most important objectives that were in the research. The first goal was to provide a unified syntactic account of different patterns of wh-movement in the multiple wh-questions in general and two, in echo wh-questions in particular.

The study proposed an impetus lying on the ways, languages, resorting to multiple wh-fronting such as Russian, can be considered, under the remit of the *Q-theory* of wh-fronting, such as English. It was contested in the study that analyzing the formation of wh-questions with a unifying theory, and in comparative way, can shed more lights not only on the canonical interrogative syntax, but also on such understudied phenomena, as echo wh-questions. It was posited that in general terms, the fundamental unit of echo-questions in languages, such as the English, well-thought-out that there is no

syntactic wh-movement in this category of interrogatives. The study revealed that multiple wh-fronting languages normally show, “overt wh-fronting” in echo questions.

Fox and Thompson (2010), studied responses to wh-questions in English conversation: Grammatical and interactional features of response-types of wh-questions in American English conversation. The results showed that there are two foremost types of responses to *type-specifying* wh-questions, *phrasal* and *clausal*. The researchers argued that the response types show an exclusive interactional property pointing to the fact that at the instances of phrasal responses, wh-questions do simple answering, in this case, clausal responses happen when there is trouble with the question or sequence. It was recommended that the design of wh-questions allows a *grammatical symbiotic or grammatically significant response*, and such symbiotic phrasal responses fit to the lexicogrammar of wh-questions and they are the optional *no-trouble responses* for advancing the project initiated by the question.

Citko and Gračanin-Yuksek (2013) conducted a study on, towards a new typology of coordinated wh-questions. The study was particularly situated to developing a fresh “typology”, of multiple wh-questions with some harmonized wh-questions. The researcher projected three dissimilar constructions that exist for such questions, and that is one, *non-clausal* and *the other one, is bi-clausal*. For the purposes of this study, four different types of diagnostics, were employed by the researcher to discover whether the three compositions could be manifested or be present in a specific language; the accessibility of multiple wh-questions, and wh-questions together, which is

composed of wh-pronouns, coordination of two argument wh-phrases, transitivity limitations as well as, dominance outcomes.

Coopmans et al. (2002) conducted a study on, Subject-object asymmetry in child comprehension wh-questions. It was observed that their findings were in favour of the 'syntactic distance hypotheses' while a lexical and *SVO* hypothesis was contested (argued). It was noticed that the former assumption was materialized; while the latter did not emerge. This outcome, suggested that it is an all-embracing "*property*" of processing meaning; when more of wh-expression is disconnected after its gap, the extent of complex it is processed wh-movement. It was concluded that "the effects of this difficulty are so pronounced in preschool children's performance, that they even can be detected with *off-line technique*".

Zeng (2022) studied, a dialogic view on construal: A study on the instantiations of wh-interrogatives words in wh-dialogues. Construal, the fundamental idea in cognitive grammar, was posited by the researcher that it could be explained from multiple angles in terms of distinct conversational goals in linguistic communication. Based on the well-discussed aspects of construal from Langacker's perspective, the study examined the dialogue aspects of construal, especially in the context of English wh-dialogues, in order to determine how the dialogue focus, the wh-word placed at the top of the wh-question, is cognitively anchored in the response. The dynamic adjustment of dialogue focuses in wh-dialogues was then looked at in accordance with how these wh-words are grounded in an effort to provide some insight on the perception of the utterance's meaning from a dialogue

perspective. Zeng's study for instance, was though, on wh-items but his focus was on dialogue.

It is seen in the literature that most scholars have made several attempts to explore the wh-items/questions. However, it could also be seen from the previous studies reviewed that this particular study is unique in the sense that this work does not follow the patterns of the previous works reviewed. It is seen again that not all of the previous studies gave much attention to discourse functions of the wh-constructions. It could also be perceived that not much work has been done on English Wh-constructions.

The works that attempted on wh-items are few and those works were not on *where-constructions*. David and Hall (2010), studied "On the semantics of temporal when-clauses". Their study explored the semantics of non-interrogative temporal embedded clauses, introduced by, "when", (temporal when clauses), as well as, the mapping between *syntax* and *semantics*. Their objective, was to offer a completely compositional explanation of temporal, *when clauses* that explains both their formal similarity to interrogate clauses and their substantive difference. They showed temporal *when clauses* in both syntactic and semantic terms. This work looks similar to the present study; however, the difference is that the present study focuses on *where-constructions* by paying attention to the discourse functions.

The literature above pointed to only few works, which gave audience to discourse functions of questions (see, Athanasiadou, 1991; Mycock, 2013), and even with this, the attention was not on any of the wh-items/questions. For the few works that gave attention to investigate the wh-items/questions were, Bloom et al. (1982) and Zhang (2016), they described the wh-item "where", as

an interrogative property. It could, therefore, be concluded that not much studies have explored the discourse functions of *where-constructions*, hence, the present study.

The particular work that drew my attention is attributed to Lenker.

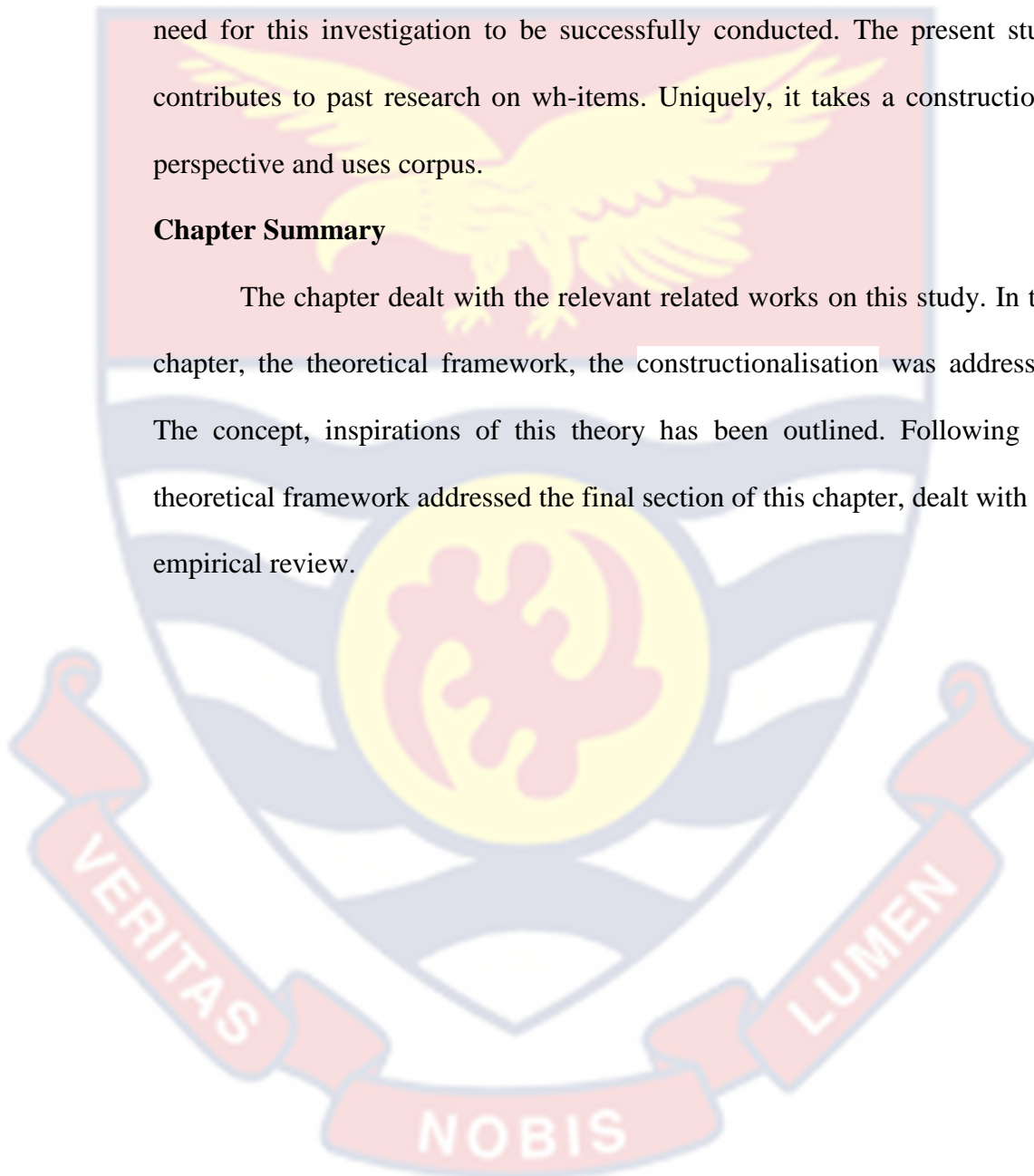
Lenker (2018) studied the signaling functions of the discourse-deictic “*there*” and their compounds (*therein, thereby*) and textual *therefore* in written genres, in the history of English. Lenker (2018) conducted his study, from the diachronic perspective, by tracing the various uses of “*there*”, across a period of time, in the history of English, to the Present-Day English. His studies indicated that until the 19th century, the simple *there*, was only and restrictedly, used with discourse deictic reference. The study showed that in *Present-Day English*, the discourse-deictic *there*, is almost used in *face-to-face* communication of a specific category, which may be issue(s) at a debate, found on Television stations and *radio broadcast* discussions, or, council or which may happen during staff meeting. In all, two particular pragmatic functions were found, where, both are all discourse-organizational.

In these situations, speakers signal their wish to either, expand or, enforce an argument which may be neglected, or, misinterpreted in their immediate proceeding discussion, or, on the other hand, they seem to register their wish of (*end of a topic*), (*or even*), discourse by simple *discourse-deictic there*. Lenker (2018) completed his work, by saying that the functions disclosed above, have a direct link with *there*, being *deictic*, which is an element of a *field of pointing*, as well as, an inherent functions to a *distal place* or *space*.

The aim of the study is to investigate *where-constructions* to ascertain the discourse functions of *where* and its compounds in spoken and written registers and to find out the kinds of *where compounds* that exist, using COCA. It is believed that COCA would contain the necessary data that may need for this investigation to be successfully conducted. The present study contributes to past research on wh-items. Uniquely, it takes a constructional perspective and uses corpus.

Chapter Summary

The chapter dealt with the relevant related works on this study. In this chapter, the theoretical framework, the constructionalisation was addressed. The concept, inspirations of this theory has been outlined. Following the theoretical framework addressed the final section of this chapter, dealt with the empirical review.



CHAPTER THREE

METHODOLOGY

Introduction

The previous chapter reviewed the related literature in consonance with the current study. In chapter two, attention was focused on the conceptual frameworks and the previous studies related to the present study. The present chapter deals with the research design, data source, and procedure of analysis.

The Research Design

The research design for this study is qualitative. The qualitative research design aims at describing naturally occurring phenomena and conditions that necessarily exist without any interference, (see Best & Kahn, 1998, Le Compte et al 1993: 39). According to Merriam, (cited in Creswell, 1994), qualitative enquiries consider meaning as a central phenomenon. The qualitative design could be seen as descriptive for the reason being, the focus of the investigator is constructing meaning of an occurrence and appreciating a procedure, by way of analyzing words. The qualitative research design could also be seen as inductive.

This means that a researcher formulates provisional research questions at the preliminary stages of the enquiry and in the end, are reformed, or altered with novel understandings from the data collection and analysis process. To analyze data qualitatively, one aims at building explanations about forms to explore fundamental links and again grounds on possible explanations, (Creswell, 1994).

The study adopts the qualitative content analysis method under the qualitative research design. Hsieh and Shannon, (2005, p. 1278) describes

qualitative Content Analysis as, “a research method for the subjective interpretation of the content of text data through a systematic classification process of coding and identifying themes or patterns”. Adopting a qualitative “content analysis method”, in any work means that particular attention would be paid to the structures of language as communication and would place emphasis on the contextual meaning, as well as, the text itself.

Hsieh and Shannon (2005) outlined three fundamental approaches to content analysis. These three approaches could be differentiated, depending on the make-up of the preliminary coding that is made on the data. The said three approaches are as follows: *conventional*, *directed*, and *summative*. The interesting thing to note is that in dealing with the “conventional content”, inquiry, the determination of the sets to be employed to the data is not the concern of the researcher; however, the analyst permits the categories themselves to surface from the data engaged by the analyst. This kind of analysis and grounded theory are alike. With respect to the directed content analysis, the researcher underpins his/her analysis based on an existing theory, developing an opening coding scheme preceding the commencement of the analysis of data (White & Marsh 2006). This means that as the analysis develops, further codes emerge and the previous coding scheme is reviewed and developed

Meyer (2004, p.126a) established, “linguistic data do not typically have normal distribution” and with this, it is therefore, relevant to employ what is dubbed, “non-parametric” statistical test. Non-parametric test is the kind of test that does not make any assumption about, whether the data on which they are applied have a “*normal* or *non-normal* distribution”, as

linguistic data is not normally distributed. Many such non-parametric statistical tests are available, but, the researcher considered it significant by choosing the *Chi-square* for this work. The reason for this choice is that the Chi-square is more convenient or more useful in its applicability to the corpus data, Meyer (2004) says “the chi-square statistic is very useful for evaluating corpus”. It is, therefore, the reason I chose this statistical test tool to explore the corpus data.

Data Source

The data for the study is derived from the Corpus of Contemporary American English (COCA). COCA was chosen because it is freely available to researchers. Three registers were considered *spoken*, *newspapers*, and *academic registers*. Currently, the most balanced and the largest corpus readily available for free in relation to corpus of English is COCA, (Davies, 2008). COCA is composed of five registers: spoken, fiction, popular magazines, newspapers and academic journals. COCA comprises about 450 million words in 189,431 texts. Again, from the year 1990-2012, the corpus added about 20 million words with the most recent of texts (Apr 2011 - Jun 2012) which was completed in June 2012 (Davies, 2008).

That was Davies’s assertion then, but, today, it is a different picture with respect to the “number of texts” and the “number of words and registers”. About more than one billion words of text could be found in COCA as of today, worth about 20 million words in each year from 1990-2019. This is contained in about eight registers, comprising: spoken, fiction, popular magazines, newspapers, and academic texts. The latest update in March 2020, added TV, and Movies subtitles, blogs, and with some other web pages. The

spoken part of COCA alone, (which is termed as COCA Spoken), contains more than 95 million words made up of transcripts of the unscripted conversation, taking its source from 150 diverse TV and radio programmes such as, “Good Morning America” (ABC), “Today Show” (NBC), “All Things Considered” (NPR), “Hannity and Colmes” (Fox), Jerry Springer, 60 Minutes (CBS), and a host of others (See Davies 2008).

The total number of words used for the study was estimated at 625,028-word tokens. The distributions across the genres were as follows: spoken 163,595-word tokens, newspapers 116,919-word tokens, and academic 77,664-word tokens. The data selected spanned year range of, 2015-2019 the data in COCA is built on every four years intervals. The present study focuses on the most recent update. This does not mean the study is diachronic as it was noted clear, earlier that the study is non-diachronic.

Figure 1 A pie chart showing genre distribution of COCA

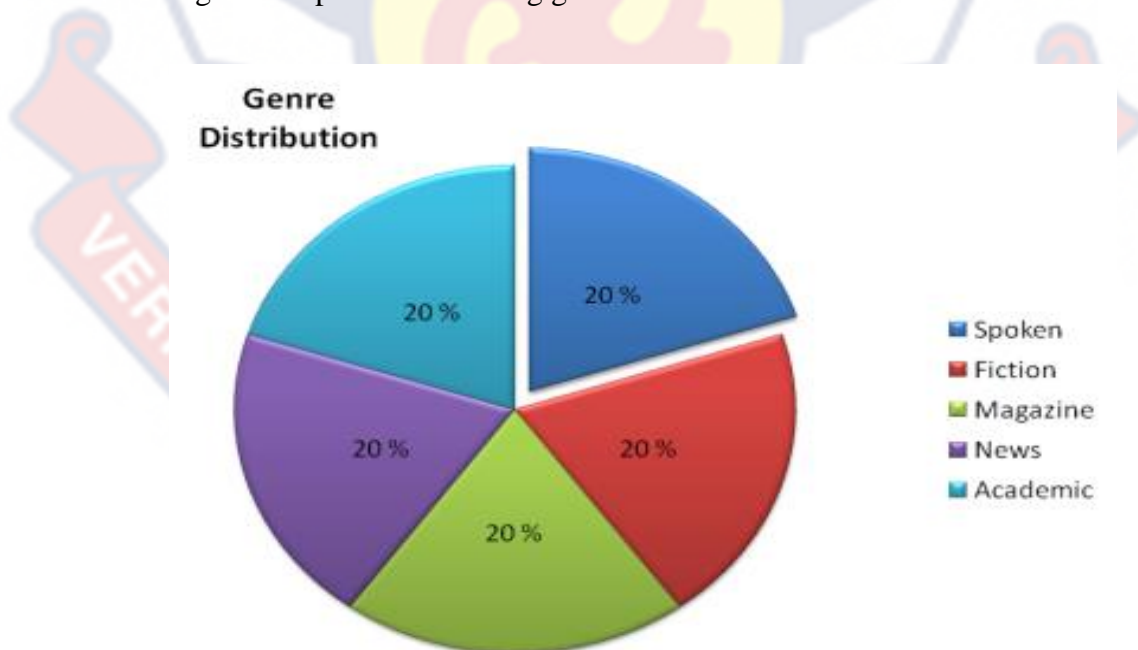


Figure 1: Genre distribution

Data Analysis Procedure

In this study, the data source is COCA. Unlike other corpora, where, one would need a corpus analysis tool, such as, WordSmith Tools (Scott, 2008), or AntConc (Anthony, 2014) to analyze the corpus data, COCA contains all the tools for a researcher to embark upon corpus analysis. It contains all the search engines, the corpus analyst can lay hands upon. COCA has concordances. Nonetheless, for “word-list” purposes, the most vital difference is amongst how many tokens—that is, “how many individual strings of characters that the software recognizes as individual words—and how many distinct strings (types), there are, in a text”.

After the data is gathered, it will be subjected to a content analysis to reveal themes and phenomena that certifies the purpose of the study. Kaid (1989) (as cited in Mnwinlaaru 2012), identifies seven phases in undertaking qualitative content analysis approach: how research questions are being formed, and answered; analyzing the samples that are selected; the categories that are to be applied, are being defined; coding processes need to be outlined; the coding process needs to be executed; the credibility, together with, trustworthiness, needs to be determined; and the last, is the outcome of the coding process, is analyzed. It is worth noting that the pivot in the conducting a qualitative exploration, remains subject to what we call “coding”. This refers to the procedures of placing labels, strokes, tags or descriptions on the samples of the information.

It could, therefore, be seen that the idea of ascribing those tags, stands towards assigning meanings to the samples of information the researcher is working with. It must be emphasized that the summative content study, which

is an aspect of qualitative content analysis, forms the analytical approach used for the study. In this case, the investigator starts by discovering and quantifying specific content/words. Afterwards, the archetypes that appear are very much construed, relative to the “contextual meaning” of the precise words/content.

This present study rests on two of the three approaches discussed above and these are the conventional “content analyses”, and “the summative content analyses”. The analysis of the corpus was done by, first of all, separating sentences and paragraphs in which the *where*, and the *where compounds* were used in the registers in the Corpus of Contemporary American English (COCA), namely; academic, spoken and newspapers. The various sentences, clauses, as well as the paragraphs were subsequently deconstructed to various semantic/syntactic structures introspectively, to assign the discourse functions to *where*, as used in the various registers in the corpus.

Following Weber (1990), it could be summed up that employing a qualitative content analysis, in any qualitative enquiry, suggests that the researcher examines language deeply in support of the determination of categorizing and dealing with a very considerable volume of texts, hooked on appropriate number of groupings which would enable a characterization related to meaning.

To do this, I keyed in, the word, “where” in the Keyword-in-Context search or, find the “*matching strings*” in the case of COCA, to search for the target word(s). Then, the desired concordances were extracted for the analysis.

The present study in focus

To identify, the discourse functions of *where-constructions*, in the corpus, I first of all, downloaded the corpus data, which was readily available online. Then, with the help of the *key-word-in-context search box*, or, *find the matching strings box*, in COCA, I entered in the word *where*. After keying in *where*, the various instances of how *where* were used in the corpus, popped up in the concordance. There are a number of uses of *where*, in each register you searched for and it is numbered from 1 up to the last use of it, in all the registers contained in the corpus, appearing in just a sentence form. But for the purpose of this study, for all the three registers I chose for the investigation, I picked the first 100 uses of *where*, and analyzed them across all the three registers selected for the study. This means that a total of 300 hundred tokens, were used for the analysis across all the three registers selected for the study. The reason for selecting the first 100 lines for each register for the analysis was that I certain that those 100 lines each could help me draw a meaningful conclusion for the study.

In each case, numbering from 1-100, I then clicked on each of the sentences from number 1 to the 100th use of *where*, the surrounding text in context was used to identify the discourse functions.

To describe or label the *discourse functions of where-constructions* in the corpus, I read through the extracts, using the content analysis approach, by looking at how the *where clauses* are used in the extracts, coupled with the other linguistics elements in the extracts. Based on this, the labels were done.

Identifying ‘where-compounds’ in the corpus

The goal of the study was to identify the *where compounds* in the corpus. The various *where-compounds*, were identified, through the “*key-words-in-contest search box*”, or “*find the matching strings box*”, in COCA. I inputted *where*, and the various instances of the *where compounds* used in the corpus, popped up in the concordance. Through the purposive sampling technique, all the variables (in this case, the *where compounds*) were selected for the analysis. We considered the occurrences of the *where compounds* that were above hundreds, meaning that any “*where-compound*” whose frequency was below the hundred was ignored. This was to keep the data manageable. The *where compounds* that occurred only once in the data numbered 30 and above.

86	<input type="checkbox"/>	WHERE*	1
87	<input type="checkbox"/>	WHERE--DEPENDING	1
88	<input type="checkbox"/>	WHERE-@1:10433@	1
89	<input type="checkbox"/>	WHERE-@1:1931@	1
90	<input type="checkbox"/>	WHERE-@1:2738@	1
91	<input type="checkbox"/>	WHERE-@1:31143@	1
92	<input type="checkbox"/>	WHERE-@1:37637@	1
93	<input type="checkbox"/>	WHERE-@1:3764@	1
94	<input type="checkbox"/>	WHERE-@1:50545@	1
95	<input type="checkbox"/>	WHERE-@1:6289@	1
96	<input type="checkbox"/>	WHERE-@2:24483@	1
97	<input type="checkbox"/>	WHERE-@2:48502@	1
98	<input type="checkbox"/>	WHERE-@3:27257@	1

The figure 2 Shows where-compounds that were excluded from the analysis

After the identification, of the *where-compounds* in the corpus, I further looked at the functions of the *where-compounds* and this was elaborated in the discussion section in Chapter four.

What kinds of “where-compounds” are there in English?

Another area the study sought to explore was to appreciate the “*where-compound*” and the most frequent, “*where-compound*” in English. To obtain the most the frequent “*where-compound*”, I keyed in “*where-compound*” through the “*words-in-contest search box*”, or “*find the matching strings search box*”, in COCA. All the various instances of the where compounds used appeared together with their frequency count. To arrive at any meaningful conclusion, the researcher pegged the number of higher occurrences in the thousands range, through the researcher’s introspection; because of the nature of the data that was available to the researcher, appeared to be. For this reason, any “*where-compound*” that fell below the thousands mark threshold, was ignored, or, excluded entirely from the analysis. In so doing, the researcher discovered five *where-compounds* that appeared more frequently in the corpus.

7	<input type="checkbox"/>	WHEREUPON	696
8	<input type="checkbox"/>	WEREWITHAL	554
9	<input type="checkbox"/>	WERES	172
10	<input type="checkbox"/>	WHEREFORE	128
11	<input type="checkbox"/>	WHEREOF	119
12	<input type="checkbox"/>	WHEREFORES	51
13	<input type="checkbox"/>	WHEREON	31
14	<input type="checkbox"/>	WHEREHOUSE	27
15	<input type="checkbox"/>	WEREWITH	27
16	<input type="checkbox"/>	WHERE--	22
17	<input type="checkbox"/>	WEREAT	19
18	<input type="checkbox"/>	WHERE/WHEN	18

Figure 3 Show where-compounds that were below thousands

From the data seen above, all the ‘where compounds’ that fell below the thousands such as, *whereupon*, which occurred 696 times in the corpus was not considered as a most frequent *where-compounds*. But considering the *where-compounds* in generally without specifically looking for the most frequent *where-compounds*, only the where-compounds that were above the hundredth range were considered for the analysis. In this case, *whereupon*, was considered because, its occurrence was 696.

Chapter Summary

This chapter addressed the methodological processes in this present study. The chapter examined the essence for the adoption of the qualitative research design in this study. The corpus for the study was efficiently addressed, the processes for extracting the discourse functions of “*where-constructions*”, the “*where-compounds*” and the most frequent ‘where compounds’ has been shown, the data size decided and procedure for data analysis has been spelt out. In explicating the procedure used in data analysis, it is established that the details of the analysis follow in order of the research questions; the discourse functions of “*where-constructions*”, the kind of “*where-compounds*” and the most frequent “*where-compounds*”.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The study seeks to explore "where-constructions". The purpose of the study is in three strands. First, it investigates the discourse functions of "where-constructions". Second, it examines the distribution of occurrences of the discourse functions of "where-constructions" across registers in English. Finally, it addresses the kinds of "where-compounds" and the most frequent "where-compounds" in English.

RQ1. What are the discourse functions of where-constructions in written and spoken registers?

The first research question of the study examines the discourse functions of *where-constructions* in both spoken and written registers in the Corpus of Contemporary American English. After analyzing the data, six discourse functions of *where-constructions* were identified in both spoken and written registers. These functions include *extending*, *reporting*, *informative*, *referring*, *rhetorical*, and *locative*. Each of the functions constitutes a construction type of *where-construction*.

Extending Function

It refers to a kind of a message/information that discloses a position, place, location, of something through verbal or written narrative which is complete.

The extending function, involves a bi-clausal construction, a principal clause and a relativized *where-construction*. The principal clause, serves as a

frame for the information extended in the *where-construction*. This function is illustrated in the extract below:

Extract 1: *NORAH-O'DONNELL): Mm-Hm. GAYLE-KING): That chapter is moving another direction. I'm Gayle King with John Dickerson and Norah O'Donnell. Bianna is on assignment. **President Trump is back in “Washington after a speech in Miami where he focused on the crisis in Venezuela.** He urged that country's military to turn against President Nicolas Maduro who has blocked U.S. humanitarian aid. Mister Trump said the days of socialism and communism in Venezuela, Cuba and Nicaragua are numbered. JOHN-DICKERSON): The President also repeated his vow that the U.S. will never move that far to the left. (SPOK: CBS News: CBS This Morning).*

In the extract 1 above, the *where-construction* is involved in a biclausal construction. The *where-construction*, *where he focused on the crisis in Venezuela*, extends the information provided in the main clause, *President Trump is back in “Washington after a speech in Miami”*. Syntactically, extending *where-constructions* are non-restrictive relative clauses and thus, they often follow proper nouns denoting place such as Miami in the extract (1). The place noun serves as an antecedent, to the *where*-item that introduces the *where-construction*. Crucially, to the present study however, the *where-construction* is a separate information unit on its own. In extract (1), the main clause informs addressees of a speech in Miami. The information provided in the relativized *where-construction* goes beyond a qualification of Miami. What it does, is to extend the flow of information of the unfolding discourse,

by providing a quantum of information. The main clause becomes the frame within which this new information should be interpreted. A further illustration is given below:

Extract 2: *U.S. Pretrial Service records showed he removed it two blocks from the downtown shooting scene, about five minutes before the killing. # Birt had checked out of the Northwest Regional Reentry Center, a federal halfway house, at 3:21 p.m. **The monitor tracked him to the Hollywood Transit Center, where TriMet video recorded him and Collins traveling downtown together.** From 4:43 until 5:32 p.m., Birt's GPS monitor recorded him in walking-speed motion in the area of Stark and Alder streets, between third and fifth avenues. A day after the shooting, Portland Det. (NEWS: OregonLive.com).*

There are two clauses, in the extract above, a principal clause and a dependent clause. The main clause, “*Hollywood Transit Center*”, is a noun phrase which denotes a place, serving as an object to the prepositional phrase, “*to*”, in extract (2). The dependent clause, on the other hand, contains the *where-construction*, “*where TriMet video recorded him and Collins traveling downtown together*”, in the extract (2) above. The main clause provides the basis, by which there is a flow of information to the interlocutors. The speaker uses the *where-construction* to inform the listeners, about what happened at the, “*Hollywood Transit Center*”, to the addressees. Here again, it could be said that the main clause, turns out to be the frame, within which this new information could be construed, (See Traugott and Trousdale (2013).

Another illustration is provided below:

Extract 3: *“Her responsibilities will include character and leadership development, military training, supervising cadet life activities, and providing facility and logistical support to all cadets”.* **Edmondson has a background in space operations and acquisitions, and will come to the Academy from the White House, where she directs the Space Policy, National Security Council. Before this, she commanded the 81st Training Wing at Keesler Air Force Base, Mississippi, where she led and provided technical training for 12,000 Airmen and civilians, Reservists and other Defense Department agencies, to create combat capabilities. She holds masters' degrees in strategic studies, national security affairs and organizational management, and a bachelor's in aerospace engineering. (NEWS: Colorado Springs Gazette).**

In the extract (4) above, the *where- construction* is involved in a biclausal construction. The *where-construction*, *“where she directs the Space Policy, National Security Council”*, extends the information provided in the main clause, *“Edmondson has a background in space operations and acquisitions, and will come to the Academy from the White House”*.

In the same extract, another instance by which the *wh-construction* was used is contained in a biclausal construction. The *where-construction*, *“where she led and provided technical training for 12,000 Airmen and civilians, Reservists and other Defense Department agencies, to create combat capabilities”*, extends the information provided in the main clause, *“she commanded the 81st Training Wing at Keesler Air Force Base, Mississippi”*.

In the field of syntax, extending *where- constructions* are non-restrictive

relative clauses and consequently they often follow proper nouns symbolizing a place such as White House and Keesler Air Force Base and Mississippi in the extract above. The place noun operates as an antecedent to the *where*-item that introduces the *where*-construction. The *where*-construction, essentially, to the current study, however, is a separate information unit on its own. In extract (4), the main clause, informs addressees of, *White House, Keesler Air Force Base and Mississippi*. What this means is that the information provided in the relativized *where*-construction goes beyond a qualification of *White House, Keesler Air Force Base, and Mississippi*.

In the extract 5 below, it is also noted that the use of *where* is also performing extending function. The use of *where* in this context points to a particular place where something is done and that is Shanghai.

Extract 4: *And the score for the late morning is another typical time-period when the structures of the co-presence potentials are relatively stable. After the lunch-time, another trend emerges and continues until the mid-night. This global tendency, however, is not always held locally. Fig 11b represents a selected area in Shanghai where the centrality of physical interaction potentials shifts fast from the high streets to the back through the public space system. This also suggests that the method introduced can be adopted as a tool to track the temporally changing contribution that urban configuration makes to facilitate interactions. (ACAD: PLoS ONE).*

In the extract (4) above, the *where*- construction is contained in a biclausal construction. The *where*-construction, “*where the centrality of physical interaction potentials shifts fast from the high streets to the back*

through the public space system”, extends the information provided in the main clause, Fig 11b represents a selected area in *Shanghai*. Extending *where-constructions*, in most cases are non-restrictive relative clauses. They often follow proper nouns which denote places such as, *Shanghai*, in extract

(4). The place noun serves as an antecedent to the *where*-item that introduces the *where-construction*. Considering this study, it does appear that the *where-construction* has a distinct information component that enables it to be independent.

In extract (5), the main clause notifies the addressees about information in *Shanghai*. The information provided in the relativized *where-construction* goes beyond a qualification of *Shanghai*.

Reporting Function

The second discourse function to be discussed here is *reporting function*. Reporting function refers to the process of giving an oral or written account of a situation that one has either witnessed, gathered, completed, or probed. In the extracts below, the use of *where-construction* coupled with other elements in the texts generally fits the definition above.

The extract (5), below illustrates the definition above. Two clauses are identified in the extract below, a main clause which is, “*the clearance rate on the index ERCP in our study was 80.8% that resembles the rates reported by other groups*”, and a dependent clause which carries the *where-construction* with the *wh*-item, “*where the duct clearance at the index ERCP ranged from 72.5% to 79.1%. 12, 15 # the higher clearance rate reported in the study by Brown et al.*” It could be deduced that the main clause starts with an open statement. The subordinate clause conversely, having the *where-construction*

contains a reporting message. This confirms, the Construction Grammars point of view, which indicates that grammatical items do not function in isolation, but their meaning depends on the constructions, in which they occur making a whole construction to convey a meaning rather than a part (See, Kay 1984, Lambrecht, 1988, 1990, Filmore, Kay and O'Conner 1988, Kay and Filmore 1999). See extract (6) below:

Extract 5: *'But we believe the value of this study stems from the insight that it might lend to the endoscopist after the index procedure on what the next line of action should be. The duct clearance rate on the index ERCP in our study was 80.8% that resembles the rates reported by other groups where the duct clearance at the index ERCP ranged from 72.5% to 79.1%. 12, 15 the higher clearance rate reported in the study by Brown et al. 12 might be related to the fact. That they accounted for the use of cholangioscopy as a technique in their study while we excluded those who had cholangioscopy (ACAD: Saudi Journal of Gastroenterology).*

The reporting function also, involves a biclausal construction where, the main clause provides a frame for the where-construction. The *where* item, serves as a subordinator, connecting the *where-construction* to its frame. In other words, the *where* item, is not co-referential with any particular item in the framing clause. In the extract above, we see that the *where clause* in the extract is giving out information, "*the duct clearance rate on the index ERCP in our study was 80.8% that resembles the rates reported by other groups where the duct clearance at the index ERCP ranged from 72.5% to*

79.1%. 12, 15 # the higher clearance rate reported in the study by Brown et al”.

The extract 6, below further illustrates the reporting function.

Extract 6: *If I'm around locally, I go to the Cambridge Bar & Grill.*

All they do is burgers. They do one where they put on just an absurd mound of jalapenos, and Swiss cheese. It's delicious, but then you regret it, because you have heartburn for the rest of the day. But they really do it right. “70386207 #Hall of Fame college football coach George Welsh, who helped vault Virginia into national prominence during the 1990s, died on Friday, the university announced in a release. He was 85. “He passed peacefully in the presence of” (NEWS: Minneapolis Star Tribune).

Looking at the extract (6) above, there are two biclausal constructions. A main clause, “*They do one*”, followed by a subordinate clause, “*where they put on just an absurd mound of jalapenos, and Swiss cheese*”. The main clause serves as a frame within which the *where construction* makes meaning from. Based on this, the *where clause* alone, is not telling us some information. The use of *where* in this context together with the entire structure establishes a point that, wh-item makes its meaning from the main clause which serves as a frame. This however, makes the speaker reports to *the* hearers, what, “*the people do*” and what they put on.

Informative Function

The informative *function* is labeled based on how *where-construction* was employed, coupled with the use of other elements in the extracts taken into the consideration ideals of Construction Grammars’ position. The

informative function refers to a message that notifies, or, tells something about a happening to others, (listeners, or addressees), interlocutors.

The extracts (7) below here demonstrate this.

Extract 7: *And on the particular issue that you're referring to on -- on immigration, under my administration, day one, we are going to stop family administration. We're going to reunite those families who have been separated. **We're going to make sure that -- that no one who is fleeing persecution or violence is criminally prosecuted.** And we're going to follow what I was doing in Congress, where we help to introduce legislation that would stop this and rewrite section 1325 of U.S. code to make sure that those families who are at their most desperate and vulnerable moments do not face further fear when they get to the United States. And then, in addition, we're going to rewrite our immigration laws from the ground up. (SPOK: CBS News: Face the Nation).*

In the extract 7 above, there are two statements, where, the latter is the continuation of the former. The former here is, “*We're going to make sure that -- that no one who is fleeing persecution or violence is criminally prosecuted*” while the latter is, “*And we're going to follow what I was doing in Congress*”, “*where we help to introduce legislation that would stop this and rewrite section 1325 of U.S. code*”. The latter carries the “where-construction”. Taking into consideration the latter, there is an involvement of a biclausal construction first, “*And we're going to follow what I was doing in Congress*”, and “*where we help to introduce legislation that would stop this and rewrite section 1325 of U.S. code*”. The former serves as a main clause,

while the latter as a subordinate, or, a dependent clause. The main clause serves as a premise within which the *where construction* makes meaning, (See, Kay 1984; Lambrecht, 1988, 1990; Filmore, Kay and O’Conner 1988; Kay & Filmore 1999). This, however, enables the entire construction in addition to the where-item informing. The speaker therefore is informing the addressees the happenings about immigration issues around the USA and the plans in addition to the measures the speaker thinks would help to support the desperate and the vulnerable who wants to get to the United States, “*to make sure that those families who are at their most desperate and vulnerable moments do not face further fear when they get to the United States*”.

Extract 8: *Civility is important. Violence ain't cool. Civility is -- is powerful. This is the human health crises. No one is safe no matter where you live. So, we are working towards comprehensive legislation.* (INGRAHAM): *Involving what?* (WILLIAMS): *Comprehensive legislation will be under health care the CDC has said that violence is a disease. But it's not a contagious. We do not need vaccines. But we need comprehensive legislation. Same thing like cigarettes, it's almost in American not to smoke at a bar but you can't smoke in a bar anymore, why because it's the law. It's the law that moves the* (SPOK: Fox News: The Ingraham Angle)

The second extract also demonstrates similar function. In the second extract, there are three clauses where, one of the clauses carries the *wh-* construction. The first clause is, “*This is the human health crises*”, the second is, “*No one is safe no matter where you live*” and the final is, “*So, we are working towards comprehensive legislation*”. The second clause carries the

where-construction which is the *wh*-item. In the first instance, a foundation was laid by the speaker by informing the addressees about a situation. Now, the second clause with the *where-construction* contains a biclausal construction, a main and an independent clause, “*No one is safe no*”, and “*no matter where you live*”.

Here, the main clause, serves as a frame within which the *where-construction* makes the completion. Considering both constructions the dependent and the independent clauses mean that there is an element of information where a speaker informs addressees. The speaker informs the listeners about the happenings in America. The speaker further uses the final clause to tell the addressees what is being put in place to save the situation, since meaning cannot be isolation, (See, Kay 1984, Lambrecht, 1988, 1990), the three constructions, with the *wh-construction* seem to inform listeners as established in the discussion. See the extract (9) above.

Referring Function

Referring function refers to the process of making a reference to a particular place, state or situation. The extracts below with the *where-construction*, illustrate this.

It was observed that the *where-construction*, as used in the extract below, makes a reference to a particular places, and positions.

Extract 9: ELIZABETH-PALMER) (CBS-News-Senior-Fore: Good morning. The most recent bomb went off just around the corner from where I'm standing, sending a fresh wave of panic through an already-traumatized city. The Sri Lankan government has said that these bombings have been carried out by a local extremist group,

but probably with international help. (SPOK: CBS News: CBS This Morning).

In extract (9) above, two clauses can be identified. "*The most recent bomb went off just around the corne*", is the main clause, while, the dependent clause is, "*where I'm standing, sending a fresh wave of panic through an already-traumatized city*". The *where-construction* proceeded with the preposition, "from *where I'm standing*", in the extract, is an adverbial clause, following a preposition, "from". "The corner", in the extract, is serving as an antecedent through which the adverbial clause is making a reference to. Though, the subordinate clause is an adverbial, its use in the extract, does not denote a place, but rather, considered as making a reference from, "*where I'm standing*". Based on the idea of the Construction Grammar, (See, Kay 1984; Lambrecht, 1988, 1990), I would consider the entire construction of extract (9) together with the *where-construction*, make a reference. This means that the reporter, or, the speaker, is drawing the attention of the receiver, to a specific place by making a reference to, "*where I'm standing*", indicating how an incident occurred, and goes further to make reference, on how such incident, or, occurrence, caused fear and panic in that vicinity. We could say that it starts with a narration, and then, finally the reference comes in. The reference starts with the *where clause*, and this carries the referring function.

The extract (10) below illustrates similar effect concerning the referring function.

Extract 10: *Leibenstein, 1966). Results of the estimation for each specification are presented in Table 7. In the case of each specification technical aid per capita appeared to be significant (in*

the case of models where asymptotic errors were not assumed - at least at 10% significance level). *In each specification, the signs of parameters were economically significant, i.e., lack of electricity and lack of primary education were associated with lower productivity, while trade openness, development of financial market, political stability - with higher productivity values. This suggests that in a state where government increases access to education and infrastructure and fosters the development of market institutions, technical aid may be absorbed and contribute to total factor productivity. In the case of each specification high values of technological aid received were associated with higher productivity.* (ACAD: *Business and Economic Horizons*).

In extract (10) above, two uses of *where-construction*, were made, “*where asymptotic errors were not assumed - at least at 10% significance level*”), and “*where government increases access to education and infrastructure and fosters the development of market institutions*”. Both of the *wh*-items in the *where-construction* are relative clauses. In the previous discussion, on the extending function, it was discussed that extending functions, have relative clauses. It was seen that those relative clauses, follow their antecedents, which are proper nouns, such as, “*President Trump is back in Washington after a speech in Miami where he focused on the crisis in Venezuela*”. In this extract, we see similar occurrences here, where, some relative clauses are being identified. The difference, between the extending function, and the referring, is that the latter’s relative clauses follow their antecedents which are common nouns (*models* and *state*).

They are preceded, by noun phrases (i.e., *models*, and *state*) respectively. Key functions in the extracts. The noun phrases in the extracts are serving as antecedents to the wh-items where references are made to them. In the first instance, a reference is made to the “*models*” while in the second instance a reference is made to the “*state*”. This affirms the position of Constructionalisation and Constructional changes by Traugott & Trousdale (2013), which states that constructionalisation comprises variations in both form and meaning, which leads to a new form-meaning pairing (*FNEW-MNEW*), while constructional change, refers to a new change(s) in either form (*FNEW-MOLD*) or meaning (*FOLD-MNEW*).

Rhetorical Function

Rhetorical function is a process of making an attempt to produce an effect or to make a statement rather than to get an answer. In other words, rhetorical questions are used to quiz without seeking any response or information about what is being quizzed where. The speaker in the extract below assumes narrating a story about dragons. The narrator/speaker uses a lot of rhetorical questions something.

This is demonstrated in the illustrations below:

Extract 12: *True takes another step back, her breath catching high in her throat. She can't help but wonder at, well, the wonder of it, the unbelievable wonder of dragons suddenly appearing in South Dakota. How? Where do they come from? What does this dragon, right in front of them, see through its green-gold eyes? # The dragon tilts its head as if it has finally spotted them and is curious and*

true freezes, her hand clasping Mallory tight by the front of her slicker.
(*FIC: The Magazine of Fantasy and Science Fiction*).

In extract (11), there are three questions “*how?*”, “*where do they come from?*” and “*what does this dragon, right in front of them, see through its green-old eyes?*” All the questions in the extract are performing rhetorical functions. In the extract, the wh-items containing the *where-construction* are not preceded by main clauses. The *where-construction* is a rhetorical question, which is not demanding, or eliciting any response. The wh-items are used together with the other elements in the extract not to demand responses to the questions raised, by the narrator, but in general, to make meaning following the constructivists’ view point. The question posed with the *where-construction* is asked to produce an effect, or make a statement rather than to obtain a feedback or answer, (Athanasiadou, 1991). By virtue of this, one would say that the *where clause*, is used to produce an effect, taken into consideration the Construction Grammars standpoint, (See, Kay 1984, Lambrecht, 1988, 1990).

Another instance, that supports the illustration above as, rhetorical function is below:

Extract 12: (Related: Will it expand or need to be reconfigured in the future? How much will be purchased, designed, reused, adapted, or integrated?) 2. What's the project schedule? 3. **What sensors will be needed?** 4. **What logic devices will be applied, where will they be located, and what environmental protection will they need? Will these be separate from data acquisition or integrated?** 5. What actuation or other motion elements will be needed? (Related: Will

custom motion be applied and/or can robotics be used?) 6. **Which elements will be automated and how?** (Related: Will open-or closed-loop control be applied? Or a combination?) 7. (ACAD: Control Engineering).

In extract (12), there are a lot of rhetorical questions asked by the addresser. Some of these rhetorical questions are: *What sensors will be needed?*, *What logic devices will be applied*, *where will they be located*, and *what environmental protection will they need?*, *Will these be separate from data acquisition or integrated?*, *What actuation or other motion elements will be needed?*, *Will custom motion be applied and/or can robotics be used?*, *Which elements will be automated and how?*.

Most of the rhetorical questions are introduced by the wh-items. Most of the wh-items, in the extracts are actors in the various sentences. There is only one *where-construction* in the extract, *where will they be located*, performing a rhetorical role in the extract. The *where-construction* follows another wh-item, which is acting as a subject of the verb, *will be applied*. The *where-construction* seems, to act as an object to the verb phrase, *will be applied*. The rhetorical questions employed here, in the extract; do not require any answers from the addressees. The speaker makes uses of rhetorical questions to produce an effect, (See, Athanasiadou, 1991). It could be concluded that all the rhetorical items in the extract make it meaningful since constructivists indicate that grammatical items do not function in isolation but their meaning depends on the constructions in which they occur, (Kay 1984; Lambrecht, 1988, 1990) also Traugott and Trousdale (2013).

Extract 13: *There are far too many people that are fine living off the government even when it means giving birth to children knowing they will become wards of the state, they care about no one but themselves.*

“Most people that live their whole lives in poverty do so because they are irresponsible and lazy ”. Where did that come from? Wait a minute, I know, they are the right-wing nut job ramblings of Fox News groupies and racists. *It comes from lots of day-to-day experience. Like when you are behind someone at the grocery checkout and they pay for their groceries with food stamps and then have cash for their 6 dollar a pack cigarette. (NEWS: Omaha World-Herald).*

As I established earlier on in the above section, that most of the questions are rhetorical in nature, this was evident in the extract, I have just discussed. It is seen that they are all rhetorical properties. One may be tempted to indicate that the rhetorical question used in extract (13) is preceded by a main clause, “Wait a minute”, unlike those I discussed in extract (12). The wh-item containing the *where-construction* takes the subject position. This result is not different from what I discussed above in extract (12). In extract (13), most of the rhetorical questions played the role as subjects, and this is also, seen in extract (12). This outcome would mean that the wh-items containing the *where-construction* performing rhetorical functions help a speaker or an addressee to make an attempt to produce an effect or make a statement (See Athanasiadou, 1991; Traugott & Trousdale 2013).

Locative Function

The locative function is the process of identifying either a place, or something. In other words, we could say that the locative function is a means of discovering the presence of events.

The extracts below illustrate this.

Extract 14: *That decision is up to incoming Labor Commissioner Val Hoyle, who will be sworn in Monday, or her yet-to-be-named civil rights administrator. # Hoyle said Thursday afternoon that she hadn't been sent an advance copy of the report or, had a chance to read it yet. "On Monday, I'll sit down with my staff and figure out where we go from here," she said.* **The fact is, nobody should feel unsafe in the workplace, no matter where it is. That is part of this agency's core jurisdiction. I'm not commissioner until Monday, but we're prepared to do what we need to do to build trust, both with victims and employers... We're going to deal with all of these things in a fair and transparent manner. (NEWS: OregonLive.com).**

Extract (14) contains two clauses, an independent clause, and a dependent clause. The main clause is, *"On Monday, I'll sit down with my staff and figure out"*. The main clause is the actor of the sentence. The *where-construction* that contains the *wh*-item is a subordinate clause, and follows an adverbial, *"out"*. The *where-construction* could also, be realized as a reported speech. The *wh-construction* in this context takes into consideration the entire structure and means that the speaker is thinking to, either locate a place, or, reconsider, a certain decision to take together with the staff. This also is not far from the Construction Grammars' position, which is of the view that

meaning depends on the constructions in which they occur, (See, Lambrecht, 1988; Kay & Filmore 1999). This makes the whole construction to convey a meaning rather than a part, considering the entire construction of extract.

Extract 15: "The sheer size and scope of the bill may be an obstacle to passage, so Democrats, at some point, may want to break up the effort into manageable chunks so voters know exactly where their representatives stand -- for example, on requiring the president and vice president to release 10 years of tax returns, or on knocking down barriers to voting. That can be sorted out later, however. If the House passes all or most of the items in H.R. 1 and sends them to the Senate, voter may begin to ask: (NEWS: Washington Post).

Extract (15) has two clauses, dependent and independent clauses. The main clause in the extract is, "voters know", while, the independent clause is, "where their representatives stand". The independent clause is followed by an adverbial, "exactly". The *where-construction* taking into consideration the Construction Grammars point of view is locating a place. This supports the Construction Grammars' opinion that grammatical properties cannot function alone, (See, Lambrecht, 1988; Kay & Filmore 1999). This makes the entire construction, to express a complete meaning, rather than, a part. A careful consideration would show that the use of *where*, in this context, is a more of discovering or, locating something, this was contained in the expression such as: "so Democrats, at some point, may want to break up the effort into manageable chunks so voters know exactly **where** their representatives

stand”. It could be realized that the addresser tends to locate or discover the whereabouts of their representatives.

A further example below supports the claim above:

Extract 16: *‘Other commenters said they don't trust the school board or district leaders and were dismayed that one school board member abruptly resigned last year, an education reformer who cited bullying by other members as contributing to her decision to quit the elected position. **Primarily, respondents said they didn't vote for the ballot measures because they weren't clear where the money would be spent, the questions were not specific enough, and they thought other solutions would be more cost-effective.** Many mentioned the district's strife with its sole charter school, Monument Academy, as a sore spot, along with students who are accepted to "choice in" to attend D-38 schools but live in other school districts. (NEWS: Colorado Springs Gazette).*

Extract (16) contains independent and dependent clauses. The main clause is, “*Primarily, respondents said they didn't vote for the ballot measures because they weren't clear*”, while, the dependent clause is, *where the money would be spent*. The dependent clause carries the wh-item. The *where-construction* having the wh-item is preceded by an adjectival, “*clear*”. In this case, the main clause is a base within which the *where-construction* makes meaning, (See, Traugott and Trousdale 2013). Taking into consideration the construction grammars’ point of view, the *where-construction* and the entire construction seem to discover a place or something.

In considering the discussion here concerning the locative function, it is observed that the *where-construction*, containing the wh-items follow either an adverbial, or an adjectival. It could be concluded that the *where-construction* in the extracts are able to perform the function identified, (See, Kay 1984; Lambrecht, 1988, 1990).

Summary of Findings for RQ1

In summary, the analysis for RQ1, (What are the discourse functions of *where- constructions* in written and spoken registers?), shows that six clausal construction types of the *where-construction*, can be identified in English based on various discourse functions, namely rhetorical, informative, locative, extending, referring and reporting functions. Each of these functions constitutes a form-meaning pairing. In descriptive grammars' English, *where* clauses, are characterized as relative/adjectival clauses. The present study goes beyond this, to reveal that there are different constructional types that can be identified based on the discourse context and functions of the *where-construction*. In the next section, the study will show that these constructional types have different probabilistic distribution across registers in English.

RQ2. What is the distribution of occurrences of the discourse functions of *where-construction* across the registers in the corpus?

Table 1.1 displays the distribution of the number of times each function occurred in the registers.

Table 1: Distribution of discourse functions of where-construction across the three selected registers (Spoken, Academic, and Newspaper)

Discourse function	Spoken		Academic		Newspaper	
	Total	%	Total	%	Total	%
Rhetorical	16	18.18%	3	3.2%	3	3.09%
Informative	17	19.31%	32	34.4%	47	48.45%
Locative	4	4.55%	4	4.3%	6	6.19%
Extending	25	28.41%	32	34.4%	21	21.65%
Referring	22	25.00%	21	22.6%	8	8.25%
Reporting	4	4.55%	1	1.1%	12	12.37%
Total	88	100%	93	100%	93	100%

Table 1 shows interesting findings of the data analyzed. It appears that some of the discourse functions seem to be used more in some registers, than others. It is seen from Table 1.1, that Rhetorical *functions* are used more in spoken register (18.18%) than in the two other genres, *Academic* (3.2%) and *Newspaper* (3.09%). The analysis also shows that *Informative function*, appears to be applied more in Newspaper (47%), than, the other two registers, *Academic* (34.4%) and *Spoken* (19.31%). *Locative functions* on the other hand, are employed more in Newspaper (6.19%), than, in the Spoken (4.55%) and *Academic* (4.3%) registers. Extending functions are utilized more in *Academic*, representing (34.4%) than the rest of the two other registers, *Spoken* and *Newspaper* denoting 28.41 % and 21.65%. *Referring function* is used more in *Spoken* (25.00%), than *Academic* register (22.6%) and *Newspaper* (8.25%). Then finally, *Reporting functions* are used more in

Newspaper register denoting (12.37%), than Spoken and Academic register, which represent (4.55%) and (1.11%) respectively.

The quantitative distribution of the discourse functions is presented in a bar chart in Figure 4.

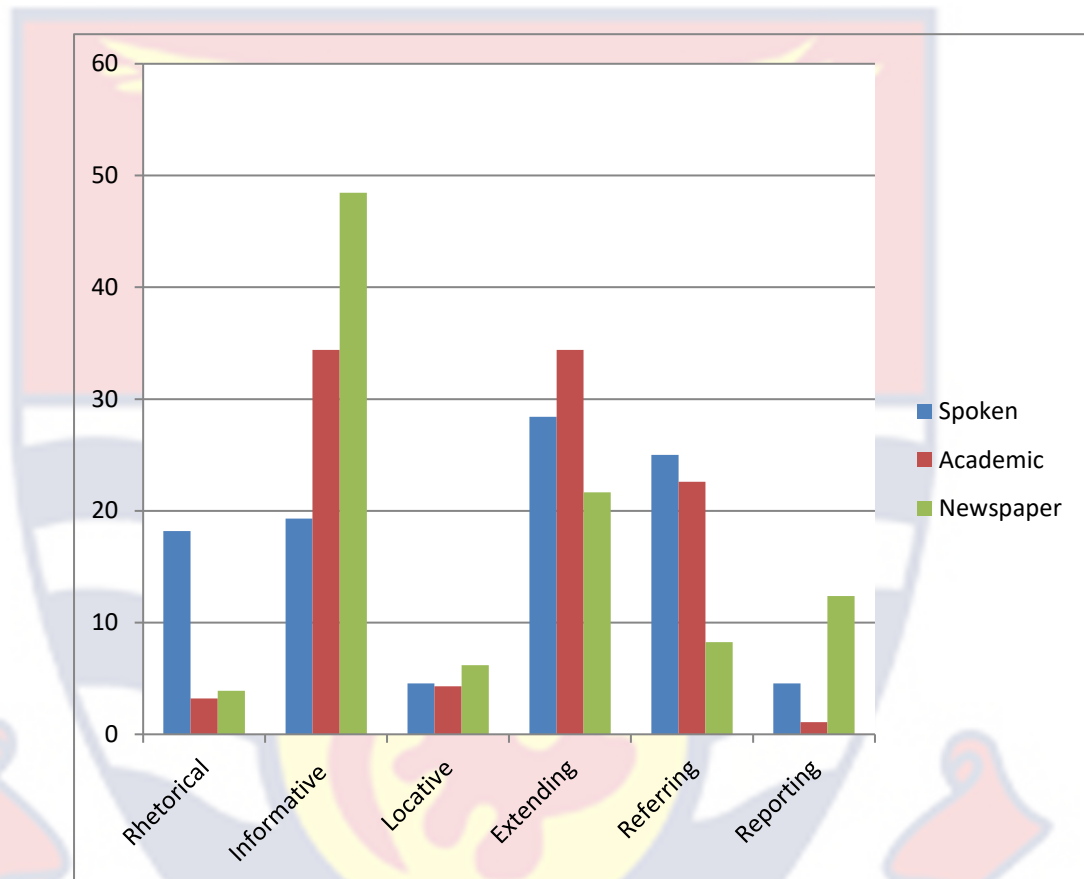


Figure 4: Distribution of the discourse functions of *where*-constructions across selected registers

Distribution of discourse functions of where-constructions in spoken registers

Figure 5 below shows the various instances on how "where-construction" was used in spoken register.

CLICK FOR MORE CONTEXT				<input type="checkbox"/> [?]	SAVE LIST	CHOOSE LIST	<input type="checkbox"/> CREATE NEW LIST	<input type="text"/>	[?]	SHOW DUPLICATES
1	2019	SPOK	CBS_Morning	A	B	C	is on assignment. President Trump is back in Washington after a speech in Miami where he focused on the crisis in Venezuela. He urged that country's military to			
2	2019	SPOK	CBS_Morning	A	B	C	Times Square kiss. It was a good one. Plus, find out why where dueling with Star Wars' lightsaber is now an actual sport. And only on			
3	2019	SPOK	CBS_Morning	A	B	C	. The State Department says that includes several Americans. Elizabeth Palmer is in Colombo where the government has named the suspects. Elizabeth, good morning.			
4	2019	SPOK	CBS_Morning	A	B	C	: Good morning. The most recent bomb went off just around the corner from where I'm standing, sending a fresh wave of panic through an already-traumatized city.			
5	2019	SPOK	CBS_Morning	A	B	C	who -- who either doubt the source of the extra CO2 in the atmosphere and where it's coming from -- RICHARD-BETTS): Even the skeptics those who are disputing that			
6	2019	SPOK	CBS_Morning	A	B	C	few years, we've been going to some of the Earth's extreme environments where the signs of climate change tend to show up first: we've found that			
7	2019	SPOK	CBS_Morning	A	B	C	the Arctic permafrost is being released as it thaws. We've found Antarctic islands where penguin colonies used to thrive that are now almost empty because the sea ice is			
8	2019	SPOK	CBS_Morning	A	B	C	the lights on. And we'll hear from scientists studying the climate in Antarctica where the changes are most severe. You're watching Earth Day here on CBS THIS			
9	2019	SPOK	CBS_FaceNation	A	B	C	News White House correspondent Weijia Jiang, who is in Seoul, South Korea, where she has been covering the president's historic visit to North Korea. WEIJIA-JIANG-			
10	2019	SPOK	CBS_FaceNation	A	B	C	I wouldn't give it up in that short-term gain for the long term, where we need to protect our security and our cybersecurity. BRENNAN): I want to ask			
11	2019	SPOK	CBS_FaceNation	A	B	C	of this country and our laws, are forced to stay in Ciudad Juarez, where they are prey to criminal organizations, where they are penniless, and where they			
12	2019	SPOK	CBS_FaceNation	A	B	C	forced to stay in Ciudad Juarez, where they are prey to criminal organizations, where they are penniless, and where they are suffering, and where too many feel			
13	2019	SPOK	CBS_FaceNation	A	B	C	, where they are prey to criminal organizations, where they are penniless, and where they are suffering, and where too many feel like they are forced to try			
14	2019	SPOK	CBS_FaceNation	A	B	C	criminal organizations, where they are penniless, and where they are suffering, and where too many feel like they are forced to try to cross in between our ports			
15	2019	SPOK	CBS_FaceNation	A	B	C	prosecuted. And we're going to follow what I was doing in Congress, where we help to introduce legislation that would stop this and rewrite section 1325 of U.S.			
16	2019	SPOK	Fox_Sunday	A	B	C	that's what House Democrats are focused on. WALLACE): We'll break down where House Democrats stand in the post-Mueller-report world and get reaction to the atto			
17	2019	SPOK	Fox_Sunday	A	B	C	people asked me to ask you about this than any other question. You know where I'm headed here and that is -- CONWAY): I don't. WALLACE): Yes			
18	2019	SPOK	Fox_Sunday	A	B	C	is more broadly concerning, is the fact that the issue selection is not exactly where it needs to be here. They're fighting a battle that has been waged			
19	2019	SPOK	Fox_Sunday	A	B	C	that has been waged for eight years and largely decided in August of 2017. Where we're at now is Democrats full-throated embrace of a Medicare for all policy.			

Figure 5: A view of the use of "where-construction" in spoken register

Table 2: Displays the distributions of discourse functions of where-construction in a spoken register

Discourse function	Spoken	Percentage
Extending	25	28.41%
Referring	22	25.00%
Rhetorical	16	18.18%
Informative	17	19.31%
Locative	4	4.55%
Reporting	4	4.55%
Total	88	100%

Table 2 shows the distribution of discourse functions of where-construction in spoken register.

Extending function appeared most (25, 28.41%). This outcome shows that in spoken register, extending function is used more than the other discourse functions of *where-constructions*. This result would mean that in our verbal communication, we often extend the flow of information of the unfolding discourse by providing more information than, we making references and other functions that follow. After extending function, the next discourse function that appeared most was *referring* function, which appeared 22 times representing (25%). This also means that we also make use of references in our oral or our verbal communication than the other discourse functions of *where*. *Informative* function follows with 17 occurrences representing (19.31%). This result also shows that in spoken conversations, we do provide information to our hearers or our interlocutors than rhetorical. Following *informative* function was rhetorical function which occurred 16 times represented (18.18 %).

The result here shows that in spoken languages, we probe less. The results reveal that in spoken language, the rate at which we employ locative is similar to that of reporting function. This could mean that we do not employ more locative and reporting functions as compared to the previous discourse functions of "*where-construction*", discussed above. These last two *locative* and *reporting* functions appeared the same number of times, occurring 4 times each which represented (4.55%) respectively. If we look at the bar chart for example, we will see that extending function has the biggest portion meaning that speakers using spoken languages use more of the extending functions as compared to the other discourse functions of the '*where-construction*'. The bar

chart below further gives details about the use of the discourse functions of "where-constructions".

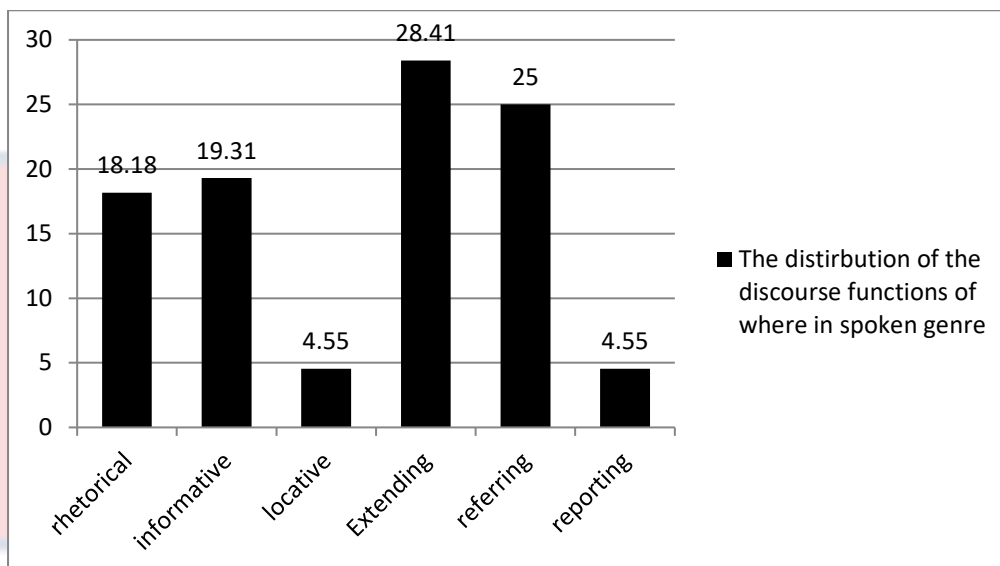


Figure 6: Distribution of discourse functions of where-constructions; inside Spoken register

Distributions of discourse functions of "where-constructions" within written register (Academic)

Figure 7 shows instances of how "where" was used in Written register in the

SECTION: ACADEMIC (77,664)
 FIND SAMPLE: 100 200 500 1000
 PAGE: << < 1/777 > >>

CLICK FOR MORE CONTEXT	[?]	SAVE LIST	CHOOSE LIST	CREATE NEW LIST	[?]	SHOW DUPLICATES
1	2019	ACAD	Business and Economic Horizons	A B C) # Total productivity factors were expressed in categories of purchasing power parity, where US=1. When we analyse the values in Table 1, the varia	
2	2019	ACAD	Business and Economic Horizons	A B C	in the sample. These numbers are used in some of the following charts, where the usage of the country's names would make the figure unclear. # In	
3	2019	ACAD	Business and Economic Horizons	A B C	t-1 + betaX.sub.i, t + eta.sub.i + u.sub.i, t (1) # Where, y.sub.i, t denotes total factor productivity of the i-th African country at	
4	2019	ACAD	Business and Economic Horizons	A B C	& Lucchetti, 2014) # mathematical expression not reproducible (3) # where: # mathematical expression not reproducible (4) # Once the 1-step estima	
5	2019	ACAD	Business and Economic Horizons	A B C	?. sub.i = **26.0,TOOLONG over (t=1) y.sub.it. (8) # Where, T.sub.i is the number of observations for unit i. The two approaches are	
6	2019	ACAD	Business and Economic Horizons	A B C	Figure 6). It takes the lowest values in the case of Niger (where also the literacy rate is one of the lowest in the Sub-Saharan Africa),	
7	2019	ACAD	Business and Economic Horizons	A B C	specification technical aid per capita appeared to be significant (in the case of models where asymptotic errors were not assumed - at least at 10% sig	
8	2019	ACAD	Business and Economic Horizons	A B C	, political stability - with higher productivity values. This suggests that in a state where government increases access to education and infrastructure ai	
9	2019	ACAD	Business and Economic Horizons	A B C	contribute more to the overall economy, than the state level allocation of financial assets where bureaucratic interests and top-down planning overwie	
10	2019	ACAD	...Journal of Language and Literacy	A B C	Overlapping Waves model is a theory of cognitive development which describes a process of learning where a variety of increasingly adaptive and so	
11	2019	ACAD	...Journal of Language and Literacy	A B C) and here you can see a wooden case (point). Think about where your story is set; who is in your story; and what is happening	
12	2019	ACAD	...Journal of Language and Literacy	A B C	various linguistic features that make up individual words. For example, in the instance where the word 'irresponsible' was misspelled as 'ireposebel', n	
13	2019	ACAD	...Journal of Language and Literacy	A B C	letters-those ones I find tricky to sound out, yeah' cause I can forget where I'm up to in the sounds. But I can get the first part	
14	2019	ACAD	...Journal of Language and Literacy	A B C	much more aware of the environmental print around the room and so they'll know where they might have seen that word and go and search it out. # F	
15	2019	ACAD	...Journal of Language and Literacy	A B C	countries and languages... He is interested in finding out how words come about, where they come from... He does have good vocabulary and he lov	
16	2019	ACAD	...Journal of Language and Literacy	A B C	spelling instruction, the students could have benefited from some explicit instruction in spelling. Where the provision for daily spelling instruction appe	
17	2019	ACAD	...Journal of Language and Literacy	A B C	use it, like 'wear' as in what are you wearing and 'where' as in a place. Examples of linguistic cross-mapping strategies articulated in interviews (
18	2019	ACAD	PLoS ONE	A B C	media users can represent the global variations of overall pedestrian flows. In the models where other static network centralities are identified as regr	
19	2019	ACAD	PLoS ONE	A B C	media users are filtered by eradicating invalid information, assigned spatially to the street network where the checked-in places are located, and agr	

Figure 7: Above illustrates a snapshot of the use of where-construction in written register (Academic)

Figure 7 instances of the use of "where constructions" in written register in the corpus

Table 3: The distribution of discourse functions of 'where-construction' in written register (Academic)

Discourse Function	Academic	Percentage
Extending	32	34.4%
Informative	32	34.4%
Referring	21	22.6%
Locative	4	4.3%
Rhetorical	3	3.2%
Reporting	1	1.1%
Total	93	100%

Table 3 exhibits the distributions of the discourse functions of *where-construction* within a written register (Academic).

It shows that among the discourse functions of *where-construction*, in the written register, specifically, Academic, *informative* and *extending* functions are used more than the rest of the discourse functions of '*where-constructions*' found in the study. The *informative* and *extending functions* appeared 32 times each representing (34.4%) respectively. This means that when it comes to academics, *informative* function, as well as, *extending functions* is used more than we saw in spoken language. One may say that when we resort to writing, such as academic, we use more of extending, as well as, informing.

This result is much refreshing in the sense that the result affirms the purpose of academic discourse; it is believed that academic discourse is to

inform, especially on things unknown to us. The statistical data, (the bar chart), shows, or gives a picture of what has been discussed. It is revealed that the extending function and the informative function occupy the highest portions of the bar chart. It also, shows that the locative and the extending functions have the highest frequencies as compared to the other discourse functions of the *where-constructions*. Thereafter, the next most used function was *referring* function, which also occurred 21 times, representing (22.6%) of the data analyzed.

This outcome also indicates that when it comes to written register and academic discourse, in particular, referring function is used more frequently, after informative and extending functions. The bar chart illustrates this. *Locative* function however, recorded four instances (4.3%). The remaining two of the functions, *rhetorical* and *reporting* functions, *rhetorical* functions occurred three times representing (3.2%), while, *reporting* function, occurred only once (1.1%). The results of the last discourse function of *where-constructions*, show that in academic discourse, we do not need more of locative, reporting, and rhetorical functions, meaning that these discourse functions of *where* are employed occasionally in written, specifically, academic register. The bar chart below demonstrates these illustrations.

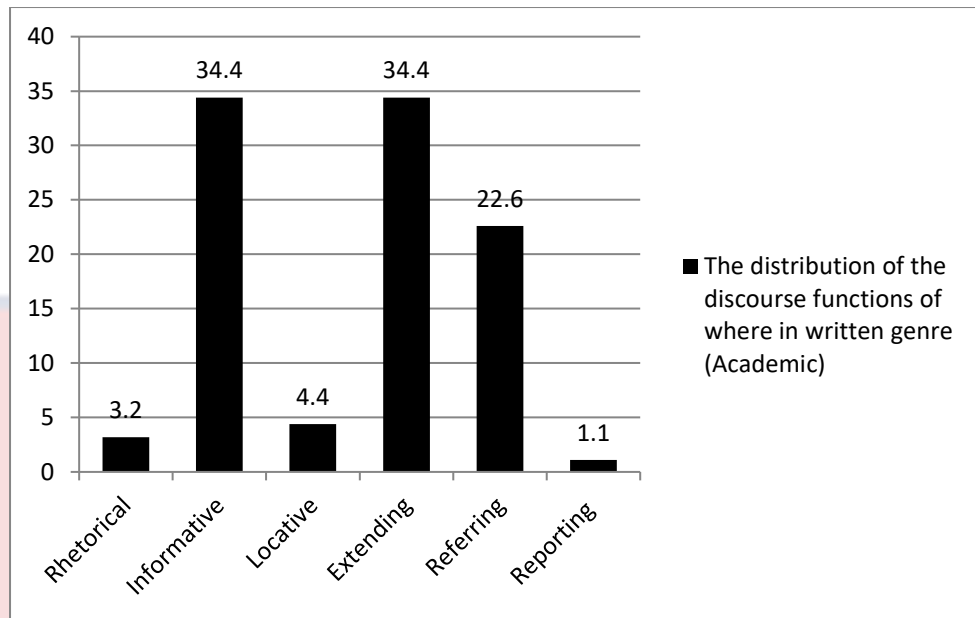


Figure 8: Distribution of the discourse functions of 'where' in written register (Academic)

Figure 8, shows the distribution of the discourse functions of *where* in written register (Academic). From the diagram, two discourse functions are used more in written register specifically academic, it is seen from the above diagram, that the two discourse functions *informative* and *extending* had the highest frequencies of the diagram. They occupy an area of (34.4%) each, covering the greater portions of the diagram. Apart from the two discourse functions having the highest frequencies of the diagram, *referring* function covers the next greatest portion of the total area representing an area of (22.6%). Following the *referring* function is *locative* function with a frequency of 4.4%. The last two functions having the smallest frequencies of the diagram are *rhetorical* and *reporting* functions respectively. The former represents a frequency of 3.2% whereas; the latter represents a frequency of 1.1%.

Distribution of discourse functions of ‘where’ in written register (Newspapers)

Figure 9 shows the various ways ‘where’ was used in newspaper register.

Line	Year	Source	Text Snippet
1	2019	NEWS Chicago Tribune	New Year's Eve. The busy train station is next to Manchester Arena. where a suicide bomber killed 22 people at an Ariana Grande concert in 2017. #
2	2019	NEWS Chicago Sun-Times	wounded by gunfire, according to Chicago police. # Chicago Police investigate the scene where a person was shot in the left foot, Tuesday morning in the first bl
3	2019	NEWS Chicago Sun-Times	said. "I think it would be wonderful if those organizations thought back to where they began." # A new roof is one of the many building repairs
4	2019	NEWS OregonLive.com	, back and left foot. He was taken by ambulance to OHSU Hospital. where he was pronounced dead of wounds that traveled from his neck to his brain and
5	2019	NEWS OregonLive.com	, at 3:21 p.m. The monitor tracked him to the Hollywood Transit Center. where TriMet video recorded him and Collins traveling downtown together. From 4:43 unt
6	2019	NEWS The Detroit News	-- The Cornhuskers finished off non-conference play by beating Division II SW Minnesota State. where Nebraska coach Tim Miles once was in charge. The first v
7	2019	NEWS The Detroit News	we had a hell of a run if you look at who we played, where we played, and when we played them. I thought we did a good
8	2019	NEWS The Detroit News	so frustrated that I watched it (again) with my staff to figure out where were we back then and where are we now. If you remember, (
9	2019	NEWS The Detroit News	(again) with my staff to figure out where were we back then and where are we now. If you remember, (Matt) McQuaid didn't play
10	2019	NEWS Colorado Springs Gazette	operations and acquisitions, and will come to the Academy from the White House. where she directs the Space Policy, National Security Council. Before this, she
11	2019	NEWS Colorado Springs Gazette	, she commanded the 81st Training Wing at Keesler Air Force Base, Mississippi, where she led and provided technical training for 12,000 Airmen and civilians, R
12	2019	NEWS Omaha World-Herald	spent four years in the Air Force and then in 1972 entered the hotel business where he managed the Ramada Inn on Harlan Drive, which eventually went through
13	2019	NEWS Omaha World-Herald	industry and signed on with the U.S. Department of Housing and Urban Development in Omaha where he oversaw Federal Housing Administration loans and the
14	2019	NEWS Omaha World-Herald	in 2015 and agreed to serve on the board of directors of Sarpy Habitat. where three years later he answered the call to keep things afloat pending appointment o
15	2019	NEWS Omaha World-Herald	and this is the person you're actually helping, or giving keys to, where you can see the joy in their faces.
16	2019	NEWS USA TODAY	Washington Post op-ed posted online Tuesday night. " And it is in this province where the incumbent's shortfall has been most glaring. " # Romney's biting public
18	2019	NEWS New York Times	What You'll Find # Somers is more densely populated to the north, where modest homes cluster around small lakes to form the once summer-only, now year-rou
19	2019	NEWS Virginia-Pilot	Sangita Seaburg said. She is now blessed to work on the same floor, where dedicated nurses helped take care of Warren, she said. The nurses have a
20	2019	NEWS cleveland.com	Sports and Les Levine. " # " Now, we've got a vehicle where it's there. And we've got the ability, without having to jump

Figure 9: A snapshot of the use of where-construction in written register
(Newspapers)

The above figure shows how *where*-constructions are used in the various extracts. The above extract is data from a written register (newspaper).

Table 4: Distribution of discourse functions in written register
(Newspaper)

Discourse function	Newspaper	Percentage
Informative	47	48.45%
Extending	21	21.65%
Reporting	12	12.37%
Referring	8	8.25%
Locative	6	6.19%
Rhetorical	3	3.09%
Total	93	100%

Table 4 presents the distribution of discourse functions of *where-construction* in written register, (Newspaper). From Table 4, *informative* function appears to be the most used discourse function of *where* in newspaper register representing (48.45%). This finding has something common to do with the previous discussion on the academic register. We realized that informative function is employed more in newspaper register due to the fact that its purpose is to inform and point out certain things to us. The newspaper register, also has the same, or similar role it plays since the newspaper also, informs and point to us about things, we are either aware of, or not. Informative function, takes the largest portion of the statistical data shown. On the bar chart, we see informative function taking the highest part of it. On the part of the bar chart too, we had informative function dominating with the highest frequency.

Extending function is the second most preferred use after informative function, representing (21.65%). Extending function is used more in the newspaper register and the reason to this could be the nature and the role newspaper play in society. The result continued to reveal that reporting function is the third most used function, representing 12.37%. This outcome is not surprising for the reason that it agrees to the views of Stoyanova et al (2003) that newspapers report issues to the general public for consumption so reporting function becoming the largest use in newspaper register is normal. As seen in the bar chart, it takes the third largest portion as its similar reflection is seen on the bar chart. Following reporting function is the referring function, which recorded 8.25%. Following referring function is the locative function, representing 6.19%. However, rhetorical function is the least used

discourse functions of *where* in newspaper representing (3.09%). This finding is revealed, due to the fact that rhetorical functions are used to produce an effect, or tend to give information rather than, demanding responses, (Athanasiadou, 1991). The findings as revealed from the analysis and readings of the data confirm ideas that previous works (like Stoyanova et al, 2004; Pozzan, 2011; Stingers, 2015) in the literature have established about the functions or features of wh-structures.

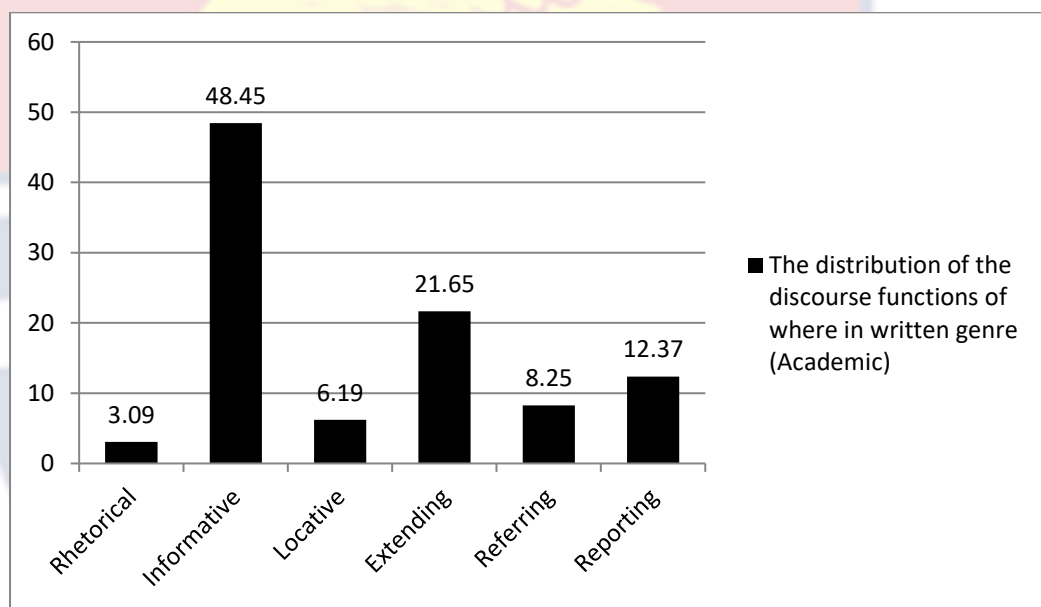


Figure 10: Discourse functions of where in a written register (Newspaper)

From Figure 10, it shows clear that *informative* function occupies the highest proportion of the figure above, while, *interrogative* function occupied the lowest portion of the figure. So, the figure gives more information about the various proportions of the discourse functions of 'where' in written register, (Newspaper) to be specific. However, when the above information is represented on a bar chart, this is how the picture looks like.

Summary of findings for RQ2 (What is the distribution of occurrences of the discourse functions of where-constructions across the registers in the corpus?).

In conclusion, the analysis for RQ2 (What is the distribution of *where-constructions'* occurrences of discourse functions across the corpus' registers?), demonstrate that the registers in the corpus are distributional to the constructional types identified, based on the discourse context and functions of the *where-construction*. The findings indicate that rhetorical function was used 16 times, or 18.18 percent, more frequently in the spoken register. Newspaper register employs informative functions more frequently, 47 times, or 48.45%. Newspaper register, also, uses locate function more frequently, 6 times, for a percentage of 6.19. According to Pozzan (2011), in academic discourse, wh-questions which are mostly introduced by 'what' and 'where' perform extending functions. Such idea is confirmed in this study as the extending function occurred 32 times, or 34.4% of the time in the academic register. Unlike the extending function, the referring function appeared 22 times, or 25%, in the spoken register. Meanwhile, in the newspaper register, reporting function was used 12 times, or 12.37 percent.

RQ3. What kinds of 'where-compounds' are used across the registers and their functions?

On the part of the research question three, we were interested to investigate the kind of *where-compounds* used in both written and spoken registers.

Table 5 Distribution of the where-compounds

Where Compound	Number of Occurrence	Percentage
Whereas	20137	50.8%
Whenever	10899	27.5%
Whereby	3097	7.9%
Whereabouts	1990	5.0%
Wherein	1818	4.6%
Whereupon	696	1.8%
Wherewithal	554	1.4%
Wheres	172	0.4%
Wherefore	128	0.3%
Whereof	119	0.3%
Total	39610	100

Table 5 discloses the distributions of frequencies of *where compounds* within the corpus. In arriving at this conclusion, in Table 5, it was considered that any occurrence of the *where compounds* that was above the hundreds range had the chance to be selected for the analysis, meaning that any “*where compound*” which was below the hundreds range was ignored or excluded. It is, however, observed from the table that *whereas*, appeared to have the highest frequency which appeared 20137 times recording (50.8%) followed by *whenever*, appearing 10899 times representing (27.5%). The data continued to show that *whereby* appeared 3097 times and represented (7.9 %) making it the third most occurring *where-compound*. It is also noticed that per the data we had, *wherefore* and *whereof* recorded a percentage of (0.3%) each

representing (0.3%) and (0.3%) respectively. The below diagram illustrates the above findings.

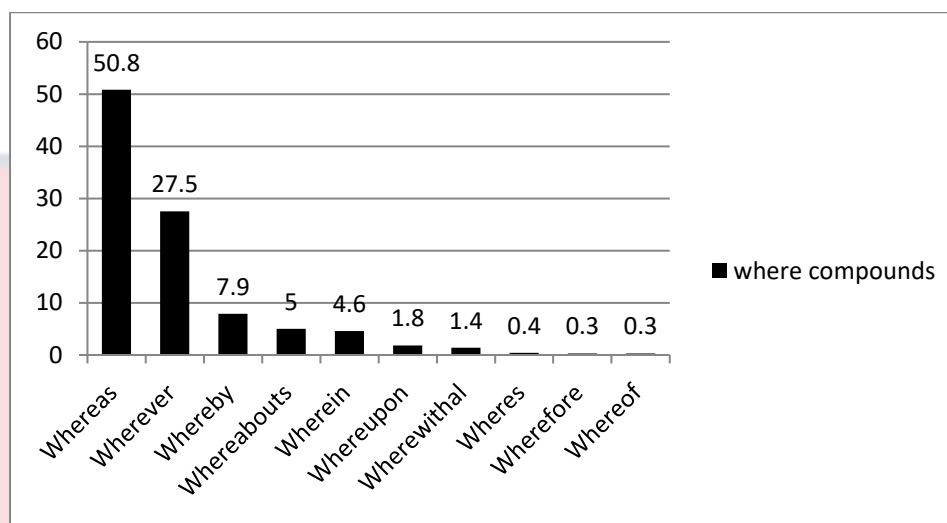


Figure 11: Distributions of 'where compounds in the registers

What are the functions of the where-compounds in the registers?

After identifying the *where-compounds* that are found in the registers, we tried to examine what does some of the said *where-compounds* represent (their functions) in the registers. Frankly speaking, upon a careful look, we could not describe the entire *where compounds* that were identified due to some inconveniences in describing some of them. Therefore, all those items were excluded in our description. An attempt was made to investigate what some of the said compounds represented (their functions) in the registers after identifying the compounds that are contained there. Some of the structures were complicated to be analyzed; as a result, all of those items that were complicated to be analyzed were left out from our description. The study identified the following functions about the *where-compounds* as they are utilized in the registers:

Table 6 Functions of where compounds present in the registers

Where compound	Function
1. Whereas	is used as a conjunction
2. Wherever	used as a conjunction indicating a place
3. Whereby	is used as a conjunction
4. Wherein	it indicates adverb
5. Whereabouts	is used as a conjunction/ adverb/pronominal
6. Wherewithal	is used to refer to pronominals
7. Whereupon	is used to indicate adverb
8. Wherefore	is used as a conjunction
9. Whereof	is used as a conjunction
10. Whereon	is used as a conjunction
11. Wherewith	is used as a conjunction
12. Whereat	is used as a conjunction
13. Wheresoever	is used as a conjunction
14. Whereto	is used as adverb and conjunction
15. Whereafter	is used as an adverb to show time or event
16. Wherefrom	is used as a conjunction
17. Whereunto	is used as an adverb

From Table 6, we see that most of the *where-compounds* are used as conjunctions. This is because from the table we notice that out of the 17 *where-compounds* described, 12 are used as conjunctions.

Table 7: A few sentence examples for each of the functions of the where compounds in the study

Where compound	Sentence
1. Whereas	17a. We felt like it was maybe a little bit of remorse over committing the crime whereas he felt like, you know, he generally was shocked by finding his wife dead. (SPOK: ABC News: 20/20, 2019 (19-03-29))
2. Wherever	18b. So, at fifty-six, I've launched my kids, they're all in their twenties, they're working adult -- young adults, whereas other fifty somethings have kids in middle school. . (SPOK: CBS News: CBS This Morning, 2019 (19-04-30))
3. Whereby	19a. Since last April, April of 2017, so for the last year, Amazon has had a policy of collecting sales tax wherever there are communities -- states where sales tax is levied. (SPOK: Fox News: Special Report with Brett Baier).
4. Wherein	20b. But to move around, like from your Batmobile to your Batcomputer inside the Batcave, you have to shoot a grappling hook at wherever you want to go.(NEWS: New York Times).
5. Whereabouts	3a. This terrible tragedy happens whereby my family is murdered. (SPOK: NPR: Morning Edition).
6. Wherewithal	21b. You get some kind of negotiated agreement whereby the administration shares what they think is not -- doesn't need to be protected from national security purposes. (SPOK: NBC News: Meet the Press).
7. Whereupon	22a. All persons born or naturalized in the United States and subject to the jurisdiction thereof are citizens of the United States and of the state wherein they reside.(SPOK: CNN: CNN Newsroom).
8. Wherefore	23b. The reference set from public domain (dataset A) represented a quantitatively defined set wherein the differences in relative proportions of the constituents between samples made fold-differences in protein quantities predictable. (ACAD: Journal of Translational Medicine).

Table 8: Cont'd

9. Whereof	<p>24a. And anyone who has any information about her whereabouts are encouraged to contact the Vallejo Police Department immediately. (SPOK: ABC News).</p> <p>25b. Six women and three men have been arrested this month, but their whereabouts are unknown. (SPOK: PBS: PBS NewsHour).</p>
10. Whereon	<p>26a. I believe if they continue to follow in their research passions throughout college that they have the skills and the wherewithal to win. (SPOK: NBC News: Today).</p>
11. Wherewith	<p>26b. So, I'm wondering and this is my big fear – do they feel emboldened and just say, well, the hell with Trump and whatever he;s threatening, we got our money, we have got the wherewithal to survive whatever he throws at us? (SPOK: Your world with Neil Cavuto 4:00 PM EST).</p>
12. Whereat	<p>27a. Hupp then jumped between the dog and the trooper, whereupon the trooper grabbed her, threw her to the ground and eventually handcuffed her. She was then charged with obstructing an officer. (NEWS: ORegister, 2017).</p>
13. Wheresoever	<p>27b. Subsequent negotiations proved more difficult, whereupon the Amur oblast association was not averse to strong-arm tactics. (ACAD: Kritika).</p>
14. Whereto	<p>28a. So, perhaps he is pushing his administration to walk the old line, wherefore official purpose at least the only good dollar is a strong dollar. (SPOK: PBS: Nightly Business Report).</p>
15. Whereafter	<p>28b. Open islands have a higher predation pressure on incubating females (Ekroos et al. 2012a; this study) and habitat types may also differ regarding perceived predation risk from a female eider's perspective, wherefore island type was included as a covariate in the statistical analysis. (ACAD: Oecologia).</p>
16. Wherefrom	<p>29a. So when he speaks of a generous and admirable people he knows whereof he speaks. (NEWS: Washington Times).</p> <p>29b. The Lord knew whereof he spoke. The times</p>

Table 8: Cont'd

17. **whereunto**

of judgment are the springtide of the world. (ACAD: Anglican Theological Review).

30a. Vexilla Regis prodeunt! O Tree of Glory, Tree most fair, **whereon** Love Crucified forever saves the world! Away from our poor efforts, our weak contrition, to the power of Him Who sinless bares our sins in His own Body, away from self to Christ. (ACAD: Anglican Theological Review).

31b. We have to remember the threshold of utterance **whereon** logos is between the oral and the literal, the spoken and the written. (ACAD: The Review of Metaphysics).

31a. Cappon ed., 1959) (" Here every one may have land to labor for himself if he chuses; or, preferring the exercise of any other industry, may exact for it such compensation as not only to afford a comfortable subsistence, but **wherewith** to provide for a cessation from labor in old age. (ACAD: Harvard Journal of Law and Public Policy).

32b.The contemporary reviewer R. H. Horne lamented after the Carol's publication that the rapidity of Scrooge's transformation completely eclipses any discussion of "the processes whereby poor men are enabled to earn good wages, **wherewith** to buy turkeys for themselves" (152). (ACAD: Studies in the Novel).

32a. It's just another day at work for **whereat**, who -- along with colleagues and interns -- runs dozens of samples every summer for state officials to monitor bacteria levels at the state's the most popular swimming beaches.(NEWS: Baltimore Sun).

32b. The jarring sound provides a stark contrast to the quiet, clean workspace, but **whereat** doesn't even register the noise. # Scientists know that sound means it is low tide. (NEWS: Baltimore Sun).

Table 8: Cont'd

33a. Be strong and be of good courage; be not afraid, neither be thou dismayed, for the Lord thy God is with thee **wheresover** thou goest.(NEWS: Christian Science Monitor).

33b. For example, he described " the custom, said to prevail among the Indians, of collecting, at certain periods, the bones of all their dead, **wheresover** deposited at the time of their death " (Jefferson 1787 1982, 97). (ACAD: Social Studies).

34a. It's because there was a with-hunting manual writtrn in the Spanish Inquisition, **wheret**o monks said it.(SPOK: CBS Morning).

34b. Moreover, where is a tentative and necessarily non-conclusive, by any means only temporary and non-definitive outlook about **wheret**o and how the - equally complex, experimental and speculative - ideas of Head-Transplanting and Mind-Uploading may evolve? (ACAD: Review of Contemporary Philosophy).

35a. She's come a long way from the small South African town of Piet Retief, **wherafter** first singing in church and at family sing-alongsshe discovered opera as a teenager in a British Airways commercial featuring "The Flower Duet "from Lo Delibes's Lakm. (MAG: Essence).

35b The problem of genre will be discussed in relation to a comment on Francis Fergusson's analysis of Gengangere from 1949-which Templeton contends that I misinterpret -- **wherafter** I shall deal with the theme of visuality by referring to John Northam's Ibsen's Dramatic Method from 1953.(CAD: Scandinavian Studies).

36a. The informal - but soldered in place through managerial institutional culture terms once again - job description conveys the sense of **wherfrom** they derive their authority. (ACAD: Anthropological Quarterly).

36b. Nobody, that is, except some of our finest contemporary poets, including Maxine Kumin in " Morning Swim ": # Into my empty head there

Table 8: Cont'd

comes a cotton beach, a dock **wherfrom** # I set out, oily and nude through mist, in chilly solitude. (ACAD: Writer).

37a. God's majesty against a mere unmoved mover of eternal matter, for Aristotle " spoileth God of the glory of his Creation, but also assigneth him to no higher office than is the moving of the spheres, **whereunto** he bindeth him more like to a servant than a lord.(ACAD: Natural History).

17b. Whereunto is adjoyned a briefe forme of confession (necessary for all good Christians) according to the use f the Catholike Church. (ACAD: Logos: A Journal of Catholic Thought and Culture).

Table 7 illustrates few *where-compounds* used in sentences.

Distribution of where-compounds in spoken register

Figure 12 shows the various ways ‘where-compounds’ were used in spoken register.

HELP	①	★	ALL FORMS (SAMPLE): 100 200 500	FREQ	TOTAL 169,145 UNIQUE 31 +
1	①	★	WHERE	163595	
2	①	★	WHEREVER	2568	
3	①	★	WHEREAS	1825	
4	①	★	WHEREABOUTS	431	
5	①	★	WHEREBY	294	
6	①	★	WHEREWITHAL	155	
7	①	★	WHERE'S	112	
8	①	★	WHEREIN	73	
9	①	★	WHEREUPON	25	
10	①	★	WHERE--	22	
11	①	★	WHEREOF	9	
12	①	★	WHEREFORE	8	
13	①	★	WHERE'S--	4	
14	①	★	WHEREVER--	3	
15	①	★	WHEREFORES	3	
16	①	★	WHERE-ARE-YOU-FROM	2	
17	①	★	WHEREABOUT	2	
18	①	★	WHEREWITH	1	

Figure 12: A snapshot of the use of ‘where-compounds’ in spoken register

The above figure shows how *where-compounds* are used in the various extracts. The above extract is data from a spoken register.

Figure 12, shows that spoken register employs more of *wherever* than the rest of the *where-compounds*. Figure 12 above, shows that *wherever* alone was employed 2568 times more than the rest of the other *where-compounds*, used in the register. Following wherever is *whereas*. *Whereas*, was the second most used *where-compounds*, in spoken register occurring 18325 times. *Whereabouts* follows after *whereas* occurring 431 times. *Whereby* comes after *whereabouts* occurring 294 times. The rest can be seen from figure 12 above. This result indicates that conjunctions are used more in spoken register. Here, it is only *whereabouts* that is used as a pronominal.

A distribution of where-compounds in newspaper register

Figure 13 shows the various ways ‘where-compounds’ were used in spoken register.

1	📄	★	WHERE	116919	
2	📄	★	WHEREVER	1607	
3	📄	★	WHEREAS	940	
4	📄	★	WHEREABOUTS	474	
5	📄	★	WHEREBY	193	
6	📄	★	WHEREWITHAL	132	
7	📄	★	WHEREIN	94	
8	📄	★	WHEREUPON	52	
9	📄	★	WHEREHOUSE	21	
10	📄	★	WHEREOF	12	
11	📄	★	WHEREFORE	11	
12	📄	★	WHEREAT	11	
13	📄	★	WHERE/WHEN	6	
14	📄	★	WHERE'S	5	
15	📄	★	WHEREFORES	4	
16	📄	★	WHEREATT	3	
17	📄	★	WHERE-ARE-THEY-NOW	2	
18	📄	★	WHERE-WITH-ALL	2	
19	📄	★	WHERE:SPACE	2	
20	📄	★	WHEREEVER	2	
21	📄	★	WHERETOEAT.IN/2014	2	

Figure 13: A snapshot of the use of ‘where-compounds’ in newspaper register

The above figure shows how *where-compounds* are used in the various extracts. The above extract is data from a newspaper register.

In newspaper register, which is shown in figure 13 above, it is noted that *wherever* is used more than the rest of the *where-compounds* in the newspaper register. *Wherever* alone occurred 1607 times. From the figure 13

again, it is shown that the next *where-compounds*, mostly used in newspaper register is *whereas*. *Whereas* was used 940 times, as compared to the rest of the *where-compounds* in the newspaper register. After *whereas*, the next most used *where-compounds* in the newspaper register was *whereabouts*, this occurred 474 times. The use of *whereabouts* is followed by *whereby* and *wherewithal*. It revealed that *whereby* and *wherewithal* occurred 193 and 132 times respectively. This outcome shows that the newspaper register makes use of more conjunctions. With the exception of the *where-compound*, *wherewithal* which functions as a pronominal the remaining *where-compounds* are used as conjunctions.

Distribution of where-compounds in academic register

Figure 14 shows the various ways ‘where-compounds’ were used in academic register.

HELP	①	★	ALL FORMS (SAMPLE: 100 200 500)	FREQ	TOTAL 96,065 UNIQUE 53 +
1	①	★	WHERE	77654	
2	①	★	WHEREAS	13472	
3	①	★	WHEREBY	2039	
4	①	★	WHEREVER	1216	
5	①	★	WHEREIN	1093	
6	①	★	WHEREABOUTS	185	
7	①	★	WHEREUPON	129	
8	①	★	WHEREWITHAL	81	
9	①	★	WHEREOF	41	
10	①	★	WHEREFORE	40	
11	①	★	WHEREWITH	12	
12	①	★	WHEREON	11	
13	①	★	WHERE-CITY	11	
14	①	★	WHERESOEVER	8	
15	①	★	WHERE'S	6	
16	①	★	WHEREFORMULA	6	
17	①	★	WHEREFORES	5	
18	①	★	WHEREUNTO	3	
19	①	★	WHEREFROM	3	
20	①	★	WHERE-E'ER	3	

Figure 14: A snapshot of the use of ‘where-compounds’ in academic register. The above figure shows how *where-compounds* are used in academic register. The above extract is data from academic register.

In figure 14 above, it is shown that *whereas* is used more in academic register appearing 13472 times. This is followed by *whereby* occurring 2039

times. Again, it is shown that the next most used *where-compound*, in academic register is *wherever*, which appeared 1216 times. The next most used *where-compound* after *wherever* is *wherein* which appeared 1093 times. *Whereabouts* follows, by appearing 189 times. Figure 14, shows the rest of the results of the use of *where-compounds* in the academic register.

The results above, which shows that when it comes to academic register, the *where-compound*, *whereas*, is mostly used, indicates, academic register make use of conjunctions. From the data, it was revealed that the *where-compound*, *whereas*, functions as a conjunction. It is worth noting that the *where-compound*; *whereby*, *wherever*, *wherein*, are used as conjunctions. This therefore, makes it clear to establish that academic register makes use of more conjunctions.

In summary, the results show that when it comes to spoken register, *wherever* is used more than the rest of the other *where-compounds*. Secondly, it is also shown that in terms of newspaper register, *wherever*, is used more than the remaining *where-compounds*. Finally, for academic register, it occurred that *whereas*, is used more as compared to the rest of the other *where-compounds*. It is interesting to note that the entire *where-compounds* mostly, employed in all the three registers are conjunctions.

What are the most frequent where-compounds in the registers?

The aim at this stage, seeks to examine the most frequent *where-compounds* in both the spoken and the written registers. The intent for this exercise was to find out the most frequent *where-compounds*, in the corpus for the reason that in our daily conversations and writings, we do in most of the time employ such *where-compounds*. An attempt therefore, was made to investigate the most frequent *where compounds* that could be employed by both writers and speakers in our quest of language use daily, or in life. To arrive at a meaningful conclusion, the researcher pegged the number of higher occurrences in the thousands range. This was because of the nature of the data that was available to the researcher, appeared to be. For this reason, any “*where-compound*” that fell below the thousands mark threshold, was ignored or excluded entirely from the analysis. In so doing, the researcher discovered five *where-compounds* that appeared most frequently in the corpus. The findings are below:

Table 8: Frequent where compound in the registers

Where Compound	Number of Occurrence	Percentage
Whereas	20137	53.1%
Whenever	10899	28.7%
Whereby	3097	8.1%
Whereabouts	1990	5.3%
Wherein	1818	4.8%
Total	37961	100

Table 8 shows the most frequent *where-compounds* in both written and spoken registers.

It was realized that under this classification, only 5 *where-compounds* occurred frequently. These include *whereas*, *wherever*, *whereby*, *whereabouts*, and *wherein*. Table 9 above shows that *whereas*, the most frequent *where-compound* by occurring 20137 times representing (53.1%) in both written and spoken registers. The result shows that writers and speakers use more of *whereas* than the other *where-compounds*. *Whereas* is used as a conjunction and this might be the reason, writers and speakers use it more.

This result also tells us that writers and speakers use more conjunctions in their speeches and writings. The statistical data provided, shows especially, the bar chart, shows *whereas* had the highest frequency. This was followed by *wherever* occurring 10899 times representing (28.7%). Here again, the outcome dictates that writers and speakers tend to use more *wherever*.

The reason for more usage of the *wherever* might also be that *wherever* is used as a conjunction denoting a place. This outcome is an impression that writers as well as speakers tend to use more *wherever* in writing and in speaking. This also suggests that in writing and in speaking, we make references to places or point to places most often. The third most frequent *where-compound* was *whereby* occurring 3087 times, representing (8.1%). *Whereby*, per our study, it is seen to be used as a conjunction also. It is used as a conjunction but, does not denote a place, as seen above.

Again, the outcome would mean that writers, as well as, speakers, tend to use more conjunctions. The bar chart, shows that "*whereby*" shows the third highest frequency after *whereas* and *wherever*. When we take a look at the bar

chart provided too, we see that "*whereby*" has the highest frequency. *Whereabouts* recorded the fourth most frequent *where-compound*, from the data, occurring 1990 times representing (5.3%). Per this study, "*whereabouts*" is used as a conjunction.

The results show that writers and speakers use "*whereabouts*" but not as much as the previous ones discussed about. However, considering the frequency *whereabouts* occupies on the bar chart, shows that writers and speakers resort to its use looking at the position it occupies among the total number of *where-compounds* discussed here. The bar chart shows that *whereabouts* indicate the fourth highest frequency among the *where-compounds*. The final most frequent *where-compound* was '*wherein*', occurring 1818 times representing (4.8%). The study shows that *wherein*, indicates a place.

The results show that among the most frequent *where-compounds*, "*wherein*" is least used. This is so because of the purpose of this question. When we look at the *where-compounds* in general, we see that *whereas*, is used more than the other *where-compounds*. The bar chart below shows that *whereas* has the highest frequency. This outcome suggests that writers and speakers do not use *wherein* frequently as compared to those we have discussed above.

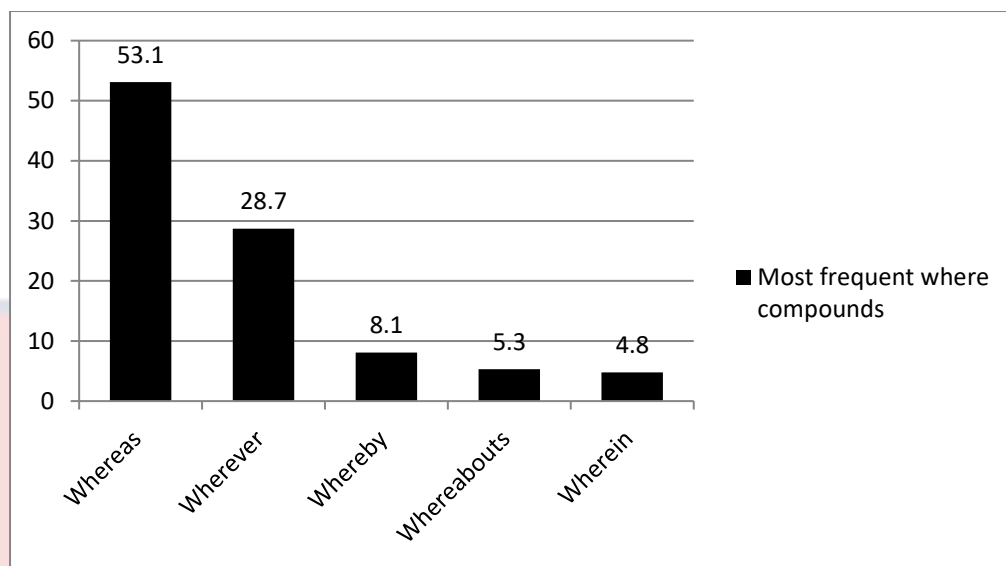


Figure 15: Most frequent where-compounds in the registers

The figure above shows the most frequent *where-compounds* in written and spoken registers

According to Figure15, *whereas* is the highest frequency representing (53.1%). This demonstrates that *whereas* is widely used in both written and spoken registers. This is followed by *wherever*. *Wherever*, from the figure above, represents the next highest positions of the bar chart (28.7%). This also suggests that *wherever*, is the second commonly used *where-compounds* in both written and spoken registers. Apart from these two, the next most commonly used *where-compound* in both written and spoken registers is *whereby*.

Once more, it is clear from figure 15 above, that *whereby*, has a frequency of 8.1 percent of the bar chart. The following compound is *whereby*, which happens to be the most frequently used *where-compounds* in both spoken and written registers. The frequency of the bar chart in figure 15 above, *whereabouts* is 5.3%. *Wherein* is the final most frequently used *where-*

compounds in the data examined, which, on the other hand, made up of only 4.8% of figure 15 above.

Summary for RQ3 (What kinds of ‘where compounds’ are used across the registers and their functions)

The study looked at *where-compounds* of spoken, academic, and newspaper registers all came together. The research discovered 17 *where-compounds*, including: *whereas*, *wherever*, *wherein*, *whereabouts*, *wherewithal*, *wheres*, *whereof*, *wherewith*, *whereat*, *wheresoever*, *wherefore*, *whereafter*, and *whereto*. *Whereas* was the common of the registers, which was the most prevalent.

According to the statistics, *wherever*, is more commonly employed in spoken and in newspaper registers. However, in academic register, the "whereas" is more common. It was observed that wherewithal was the sole compound employed as a pronominal in newspaper register. According to the study, the five most common *where-compounds* are: *wherein*, "*whereabouts*," "*wherever*," "*whereby*," and "*whereas*."

Chapter Summary

The present chapter addressed a wide range of topics. The chapter, investigated the discourse functions of *where constructs*, as well as their distributions across the registers chosen for the study. The chapter looked at *where-compounds*, their roles, the most common *where-compounds*, and some instances of *where-compounds* employed in sentences. The next chapter will go through the summary, important results, conclusions, implications, and recommendations.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter is the closure of this thesis; it gives the general overview of the entire study, by looking at the summary of the main findings, conclusion, and recommendations. The chapter specifically, starts with the summary of the intents of the study, research questions, the research methods, also the variety of approaches adopted for the investigation. These were followed by the key findings derived from the study. It then proceeds with the conclusions, recommendations, implications and proposals for advance exploration.

Summary of the Study

The core objectives for this study were, first, to investigate the discourse functions of *where-constructions* in English discourse; the second objective was to examine *where-compounds* in the corpus used for the study; then the last of the study, was to explore the *where-compounds* and the functions of *where-compounds* in the registers.

The study employed construction grammar and the notion of Constructionalisation as the theoretical framework. Construction is defined as a form-meaning pairing.

The study adopted the qualitative research design. Specifically, the study employs the qualitative content analysis method. Hsieh and Shannon (2005) describe qualitative content analysis as “a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns”.

Key Findings

This part of the study looks at key findings of the study, after the data have been subjected to a close analysis, which is based on the theoretical perspective within which the study is situated. These studies are in line with the study's response to the research questions that guide the study.

Research question one: What are the discourse functions of where-constructions in written and spoken registers?

Here, our primary concern was to investigate the discourse functions of *where-constructions* in both written and spoken registers, as we all know *where* to be used as an adverb most of the times or for questioning. Six, discourse functions were discovered in the study, namely *extending, reporting, informative, referring, rhetorical, and locative* function.

Research question 2: what is the distribution of occurrences of the discourse functions of where-constructions across the registers?

Question two considered the distribution of discourse functions among the registers.

The spoken register featured 25 times of extending function, or 28.41% of all instances. The next discourse function after the extending function was the referring function. Findings show that in spoken language, the frequency of locative use is comparable to that in written language.

In the written register, specifically, Academic register, informative and extending functions were used more than the rest of the discourse functions of *where-constructions* found in the study.

Informative function appears to be the most used discourse function of *where-constructions* in newspaper register. Extending function is the second

most preferred discourse function. Following reporting function is referring function which recorded 8.25%. The next function is locative function, representing 6.19%.

Research Question Three: What kinds of ‘where compounds and their functions across the registers?

For question three, the focus of the study was to examine the kinds of *where-compounds* in the corpus. At the end of the analysis, the results revealed the following *where-compounds*: *whereas*, *wherever*, *whereby*, *whereabouts*, *wherein*, *whereupon*, *wherewithal*, *wheres*, *wherefore*, and, *whereof*.

Implications of the Study

First of all, it should be highlighted that this study's conclusions have some implications for scholarship especially, contribution of the study to research on grammatical description of “*where*”. Most often, the scope given to the treatment of “*where-construction*” in grammar is limited to relative clauses, adjectival clauses, to mention but a few. References could be made to the grammars like, Quirk et.al. (1985), Greenbaum (1996), Huddleson and Pullum, (2006). The present study contributes to the above grammars by going beyond the descriptions of grammar above, by engaging a corpus data, unearthing *discourse functions* and *where-compounds*. The study has looked at the range of *where-compounds* and indicating its various grammatical functions.

The present study has contributed to the research in construction grammar. Studies on construction grammar have always been limited to idioms, formulaic expressions, metaphors, etc. This study has explored

“*where-constructions*”, by expanding the empirical scope showing that different constructional types can be examined using construction grammar and the notion of constructionalisation, in relation to, “*schematicity*”, “*productivity*”, and “*compositionality*”.

The study also, has a contribution to pedagogy. What the study has been able to show especially, on *where-constructions*, would suggest to curriculum designers and textbook writers, to consider including the aspects of *discourse functions of where-constructions* into the curriculum and into the various English textbooks. The outcome of the study, also, has an implication to teachers of English to other languages to consider teaching the aspect of the *discourse functions of where constructions* to their learners.

Recommendations for Future Research

This study considered a variety of registers. However, due to time restrictions, this work could only examine three COCA registers. Therefore, it is advised that future studies be undertaken across all registers or genres in the corpus to examine the discourse functions of “*where-constructions*”. A comparative investigation of the discourse functions of “*where-constructions*” utilizing COCA and other corpora is once more recommended. The six discourse functions that were identified in this work may not be sufficient; hence, it is recommended that additional research be conducted to see if more discourse functions may be discovered. Finally, I would like to recommend that a future research be conducted on other varieties of English, including Ghanaian English.

Conclusions

The main findings of the study led to the following conclusions. The analysis initially, demonstrates that "*where*" *constructs* provide other functions in addition to the interrogative or questioning function. Six, discourse functions of the *where- constructions*, including *rhetorical, locative, informative, reporting, referencing, and extending* functions, have been identified. Second, the study identified several *where-compounds* in the corpus, including the words "*whereas, "whereby, "whereabouts, "wherein, "whereupon, "wherewithal, "wheres, "wherefore, and "whereof."*



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