



Change in the use of conjunctive devices in student academic writing

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DECLARATION

I, Sarah Matsetela, certify that this study has been written by me and has neither been submitted for a degree, nor as part of the requirements at any other institution. I also certify that the sources used in the thesis have been acknowledged. I Sarah Matsetela, hereby certify that this study is my original work and has neither been submitted for a degree nor as part of the requirements at any other institution. I further confirm that all sources used in this thesis have been properly acknowledged

Sarah Matsetela

A handwritten signature in black ink, appearing to read 'Sarah Matsetela', with a long horizontal stroke extending to the right.

DEDICATION

This study is dedicated to my son, Onthatile Matsetela, and my partner – a friend indeed, a confidante, and the wind beneath my wings. Without you, I would not have completed this journey. Thank you for taking on the house chores when I had deadlines to meet, for constantly checking my progress with each chapter, and for always encouraging me when I felt overwhelmed. I am eternally grateful for your unwavering support. Lastly, my mother, Ninivah Morake, you left too soon. However, thank you for being the good angel you are, I love you always.

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ABSTRACT

Conjunctions, as a cohesive device, have received much attention in research on student writing (e.g. Adeyemi, 2017; Bahaziq, 2016; Dastjerdi & Samian, 2011; Henning 2006; Ramasawmy, 2004). The challenges English second language (L2) students have in using conjunctions in their writing is also well documented (Yang & Sun, 2012:33; Granger & Tyson, 1996:17-27).

The current study contributes to this body of research on conjunctions in L2 student writing by comparing conjunctive use in two Southern African corpora collected roughly two decades apart, namely the Tswana Learner English Corpus (TLEC) and the South African Multilingual Corpus (SAMuLCAT). The TLEC is representative of the English writing of students who are first language (L1) speakers of Setswana during the period 2001-2003 while the SAMuLCAT data is representative of the writing of students whose L1 is Setswana, Sesotho or Sepedi during the period 2017-2020. The overarching aim of this study is to come to a better understanding of the challenges involved in the use of conjunctions in present-day L2 student writing by comparing recent corpus data (SAMuLCAT) to data collected two decades ago (TLEC).

The first objective is to identify the various conjunctive devices used in each corpus, noting most frequent, as well as potentially problematic uses. The second objective is to identify the differences in conjunction use between the two corpora. The third aim is to identify reasons for the choice and distribution of conjunctions in the two corpora and to explore the implications of the differences between the two periods.

As in other studies of conjunctions in L2 student writing (cf. e.g. Dastjerdi & Samian, 2011; Adeyemi, 2017), this study makes use of Systemic Functional Linguistics (SFL) as theoretical framework (Halliday & Hasan, 1976; Halliday & Matthiessen, 2014). In SFL, a semantico-functional classification of conjunctions is provided which distinguishes extending conjunctions (e.g. *furthermore*, *and*), elaborating conjunctions (e.g. *however*) and enhancing conjunctions (e.g. *because*, *although*).

The results of this study show clear differences in the use of conjunctive devices between the TLEC and the SAMuLCAT. Certain conjunctions are used significantly more frequently in the TLEC (e.g. *or*, *but*, *also*, *on the other hand*), while other conjunctions are used significantly more frequently in the SAMuLCAT (e.g. *and*, *moreover*, *furthermore*, *in addition*). The choice of conjunction in the TLEC is more consistent with informal registers. With regard to coordinating conjunctions, the conjunction *and* is used more frequently in the SAMuLCAT, while the

coordinating conjunctions *but* and *or* are used more frequently in the TLEC. With regard to the elements conjoined, more clauses were conjoined with the coordinating conjunction *and* in the TLEC than the SAMuLCAT, while more phrases were conjoined in the SAMuLCAT than in the TLEC.

Differences in the use of other conjunctions were also observed. Extending conjunctions used more frequently in the TLEC than in the SAMuLCAT include *also*, and *on the other hand*, whereas *moreover* and *furthermore* are used more frequently in the SAMuLCAT than in the TLEC. The elaborating conjunctions *in other words*, *that is* and *for example* were used more frequently in the TLEC than in the SAMuLCAT, whereas *in particular* was used more frequently in the SAMuLCAT than in the TLEC. The enhancing conjunctions *similarly* and *lastly* were used more frequently in the SAMuLCAT than in the TLEC. These findings highlight differences in the use of conjunctions between the two corpora.

Key terms

conjunctive cohesion, conjunctive devices, corpus linguistics, grammatical cohesion, learner corpus, lexical cohesion, student writing

LIST OF ABBREVIATIONS

AI	Artificial Intelligence
BICS	Basic Interpersonal Communicative Skills
CALP	Cognitive Academic Language Proficiency
CAPS	Curriculum Assessments Policy Statement
DLE	Dutch Learner English
EFL	English Foreign Language
ICLE	International Corpus of Learner English
L1	First Language
L2	Second Language
LiEP	Language in Educational Policy
LOCNESS	Louvain Corpus of Native English Essays
LoLT	Language of Learning and Teaching
NLEC	Nigerian Learner English Corpus
NWU	North-West University
RSA	Republic of South Africa
SAMuLCAT	South African Multilingual Learner Corpus
SFL	Systemic Functional Linguistics
TLEC	Tswana Learner English Corpus

LIST OF NOTATIONAL CONVENTIONS

In the text

Lexical items are printed in italics, e.g. “*and*”.

References to SFL systems are printed in small caps, e.g. “THEME”.

In the quoted examples

The conjunction of import is printed in **bold**.

Incorrect spelling is retained in the corpus examples.

In statistical tables

Following the conventions of Leech, Hundt, Mair and Smith (2009), asterisks are placed next to the numerical quantities in statistical tables to indicate the levels of statistical significance:

- * indicates significance at the level $p < 0.05$
- ** indicates significance at the level $p < 0.01$
- *** indicates significance at the level $p < 0.001$
- **** indicates significance at the level $p < 0.0001$

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CHAPTER 1 INTRODUCTION

1.1 Introduction

Writing is an important skill, especially for tertiary students as it involves learning while enabling students to communicate successfully during their studies, including their day-to-day life and after graduating. Nunan (2000:88) defines writing as:

Both physical and a mental act. It is a physical act of committing words or ideas to some medium, whether it is hieroglyphics inked onto parchment or an email message typed into a computer. It is also the mental work of inventing ideas, thinking about how to proceed with them, and organising them into statements and paragraphs that will be clear to the reader.

Al Fadda (2012:24) defines academic writing as “a mental and cognitive activity since it is a product of the mind”. In order for students to produce academic texts, Weideman (2003:61) points out that students should possess a range of knowledge and skills, such as an understanding of a variety of academic vocabulary in context, an understanding of relations between the parts of a texts, the ability to identify and interpret different text types, see sequence and order, and make meaning beyond the level of the sentence. This means that even though students may be able to gather relevant information, they may not possess the knowledge required to write an academic text in their L2. Kaplan (1966:20) states that because writing conventions differ across cultures, L2 students must learn argumentation style and citation norms in academia, which requires them to know how to use conjunctions to coordinate different parts of a sentence and different ideas in a text. The coordination of different parts of a sentence helps them to build compound sentence and improve fluency (Celce-Murcia & Larsen-Freeman, 1999:519). Rao (2007:100) explains that writing is useful because it motivates students’ thinking, helps them to organise their ideas, and develops their ability to summarise, analyse and criticise. It also strengthens students’ learning, thinking and reflecting.

Bhela (1999:31) further adds that when learners fill gaps in their L2 syntactic structures, they use syntactic structures from their L1. This view that learners use L1 syntactic structures to fill gaps in L2 syntactic structures is also highlighted by researchers such as Berghoff (2020:251) and Cunnings (2017:23). Syntactic structure includes keeping essay writing cohesive and coherent. When students fill L2 gaps with L1 syntactic structures with the aim of producing cohesive academic essays, the possibility is that the cohesive devices they choose from their L2 may not

have the same function as in their L1, and this will affect the cohesion of the essay. L2 students may repeatedly use the same cohesive devices because of a limited vocabulary.

Teaching and assessing essay writing in the Academic Literacy module at the Mafikeng Campus of the North-West University has made the researcher realise that first-year students' academic writing skills are inadequate, even though most of them speak English fluently. According to Cummins (1984:38) students with basic conversational English skills may not have the advanced cognitive abilities necessary for academic success. In this regard, he distinguishes between basic interpersonal skills known as BICS and cognitive/academic language proficiency known as CALP. In higher education, proficiency in writing, along with the ability to maintain accuracy, coherence, and cohesion, requires higher-level cognitive skills (i.e. CALP), that go beyond everyday conversational fluency (i.e. BICS). Additionally, developing these academic skills involves a more complex understanding and use of language, which takes time to acquire and refine. Although students are taught conjunctions in secondary education, it seems as if they do not know their importance and how they function in academic essay writing (Darweesh & Kadhim, 2016:179).

Halliday and Hasan (1976:137) state that a text makes sense when it is cohesive and coherent. That means ideas and thoughts should be well-organised, and there should be a relationship between the different parts of sentences and paragraphs. The academic writing skills expected at tertiary level are more challenging because students at this level are expected to select language structures that best express meaning. One way in which this can be achieved is through the appropriate use of conjunctive devices. Conjunctive devices affect the cohesion of a text. Moreover, De Beaugrande and Dressler (1981:3) contend that cohesion depends on grammatical forms and conventions, which means that what we hear or see must be in a sequence. A text has to make sense to be understood. Thus, any form of misuse of conjunctive devices may distort the intended meaning.

Research on academic essay writing by Wang and Liu (2014), Karasi (1994), Meisuo (2000), and Yang and Sun (2012), as well as studies in Southern Africa by Henning (2006), Van Rooy and Terblanche (2006), Ramasawmy (2004), and Van Rooy (2008) suggests that second language students experience challenges in producing cohesive and coherent discourse.

This study aims to investigate these challenges by comparing the use of conjunctive devices in academic essays written by undergraduate students during two periods: 2017-2020 and 2001-2003. The focus is on identifying differences in the use of these devices over the past two decades. Specifically, the study examines first-year students' academic writing, considering how

broader curriculum reforms since 1994, including the extension of Adult Basic Education, may have influenced these differences. The next section reviews key studies on the use of conjunctive devices in students' academic writing, providing a foundation for the current investigation.

1.2 Literature review

This section examines studies on the use of cohesive devices in students' academic essay writing, focusing on research conducted around the world and in South Africa.

1.2.1 Studies on cohesion conducted across the world

English is studied across the world either as an L1 or an L2. Research on L2 English has primarily focused on identifying areas that need attention in the academic writing of L2 English speakers. Below is a summary of some key studies conducted globally.

Several scholars have noted an overuse of conjunctions¹ or linking adverbials² that corroborate the argument and add points to the argument, such as *moreover*, *for example*, and *for instance* (Granger & Tyson, 1996:17-27; Yuhas, 2013). Conversely, there is an underuse of adversative or contrastive conjunctions, such as *though*, *therefore*, *thus*, *however*, and *instead* (Granger & Tyson, 1996; Dastjerdi & Samian, 2011). Although a comparison between second-year and fourth-year students' writing reveals that fourth-year students produce "intricate and sophisticated" compositions, showing a gradual maturation of writing competence (Yang & Sun, 2012), even advanced-level students still experience difficulties in effectively using conjunctions (Granger and Tyson, 1996:17-27).

These findings can be interpreted against the background of research on reading comprehension conducted by Ozono and Ito (2003), who examined the effect of logical connectors³ and their semantic relations on the comprehension of written texts among Japanese university students studying English as a second language. Their findings suggest that students with low language proficiency find it more difficult to process adversative conjunctions, such as *however*, than causal

¹ Conjunctions are items joining two or more syntactic units such as words, phrases and clauses. There are three kinds of conjunctions: coordinating, paired and subordinating (Brown & Miller, 2013:99).

² Linking adverbials make explicit the relationship between two units of discourse (Biber *et al.*, 1999:765).

³ Logical connectors are items connecting a clause or a sentence to the preceding clause or sentence (Brown & Miller, 2013:100).

conjunctions, like *therefore*. Furthermore, they find causal conjunctions, such as *therefore*, more challenging than exemplifying conjunctions, like *for example*.

Ozono and Ito (2003:293) ascribe this to the phenomenon of “cognitive load”, which they describe as “the psychological load imposed on the reader’s processing capacity by linguistic constituents within text”. With *for example*, the cognitive load is smaller because the direction of reasoning is corroborated. In contrast, *however* imposes a higher cognitive load as it contradicts the reasoning direction. Although this research was conducted on reading comprehension, it is reasonable to infer that the cognitive load associated with these conjunctions in reading comprehension, would similarly affect the cognitive load when writing (Clevinger, 2014:3).

Dastjerdi and Samian (2011) observe that students prefer to use conjunctions such as *or*, *but*, and *for example*. In their study, students frequently used adversative devices like *but* and *however*, while rarely using *on the other hand* and *on the contrary*. The students also used causal devices such as *because*, *because of* and *for*. However, some cohesive devices such as *because* and *because of* were used incorrectly (without any cause-effect relationships among parts of sentences) which made it difficult for the text to be understood. This corresponds with the observation of Hinkel (2001) that advanced L2 English students, even after completing their L2 English and composition training, often continue to rely on a restricted repertoire of features when constructing unified texts.

Hinkel (2001) further notes that, regardless of their L1, Japanese, Korean, Indonesian and Arabic students employ significantly higher median rates of sentence transitions to establish cohesive textual structure. However, their use of sentence transitions in their L2 writing does not always create a contextualised flow of information, as these transitions may fail to effectively convey the meaningful relationships between ideas within the discourse.

Tahsildar and Yusoff (2018) investigated the impact of teaching the use of cohesive devices in academic texts on L2 students’ written language accuracy. The results from pre-test and post-test scores indicate that the teaching intervention significantly improved the accurate use of cohesive devices. Furthermore, the findings demonstrate that cohesive devices are essential tools for enhancing L2 students’ writing accuracy. It can therefore be concluded that teaching cohesive devices prior to writing enhances the ability of students to produce more cohesive texts, ultimately improving the overall quality of their writing accuracy.

The studies cited in this subsection reveal that L2 English students face persistent challenges in using cohesive devices, especially conjunctives. Students tend to overuse certain conjunctive devices while underusing others. In this dissertation, the use of conjunctive devices by South African L2 English students, will be discussed, thus adding to the existing literature on L2 English conjunctions.

1.2.2 Studies on cohesion conducted in Africa

The discussion above reviewed the studies on cohesion in various countries and context across the globe. This section focuses specifically on a review of studies on cohesion conducted in Africa. In this context, English is mostly used as a medium of instruction for NNS, who face significant challenges when writing academic essays, as will be noticed in the discussion below.

Several studies have examined the use of cohesive devices by L2 speakers of English in Africa. Adeyemi's (2017) study shows that students overuse additive conjunctions (e.g. *also* and *furthermore*) in essay writing, while underusing adversative conjunctions (e.g. *yet* and *however*) and causal-conditional conjunctions (e.g. *though* and *because*). These findings align with those of Granger and Tyson (1996), Yuhas (2013), Henning (2006), and Ramasawmy (2004), regarding the overuse of additive conjunctions, as well as those of Granger and Tyson (1996) and Dastjerdi and Samian (2011) regarding the underuse of adversative conjunctions.

Ramasawmy (2004:72-73) finds that students prefer the conjunctions *and* and *therefore*, although they also make use of other conjunctions. The study reveals that students employed the additive conjunctions like *and*, *furthermore*, *such as*, *moreover*, *for example*, *in other words*; causal-conditional conjunctions like *therefore*, *as a result*, *hence*, *thus*, *although*, *whereas*, *nevertheless*, and *despite*; varying conjunctions like *on the other hand*, and adversative conjunctions like *however* and *yet*. However, the findings show that students were more comfortable relying on *and* and *therefore*.

Van Rooy and Terblanche (2006:160) observe that the Tswana Learner English Corpus (TLEC) is characterised by writing that "is less integrated and more fragmented in terms of information presentation; uses more general and potentially more ambiguous cohesive devices; and is more cautious and polite when claims are made". Henning (2006) further notes that students overuse linking adverbials such as *also*, *however* and *therefore* in the TLEC. Moreover, these students use conjunctive devices incorrectly. For instance, Henning (2006:96,114) highlights instances where students use *thus* instead of *therefore*, and *in other words* instead of *moreover*, which

affects cohesion. Additionally, students make incorrect semantic choices, such as using *because* inappropriately, which mars coherence. Henning (2006:29) also points out cases where some students misuse *nor* to add information with a different meaning rather than with the same meaning. Banda (2009) finds that L2 English students experience challenges in expressing themselves in English, noting their over-reliance on casual, everyday English and their inability to differentiate between formal and informal English.

Extensive research on cohesion in the writing of L2 English students has been conducted worldwide (Granger & Tyson, 1996:17-27; Hinkel, 2001; Ramasawmy, 2004; Henning, 2006; Dastjerdi & Samian, 2011; Yang & Sun, 2012; Yuhas, 2013; Tahsildah & Yussof, 2018). The findings reveal that L2 English learners overuse (Granger & Tyson, 1996:17-27; Yuhas, 2013; Henning, 2006), underuse (Granger & Tyson, 1996:17-27) and misuse cohesive devices (Henning, 2006).

However, these studies reveal several limitations, particularly in terms of participant populations. Most studies considered the writing of only a few participants. For instance, Banda's (2009) study examined the writing of 10 students, while Tahsildar and Yusoff (2018) analysed the writing of 40 students. Yang and Sun (2012) focused on the writing of 30 second-year students and 30 fourth-year students. Furthermore, some studies include participants from diverse ethnic groups, whose L1 sentence structures differ significantly. Most L2 students depend on the linguistic structures of their L1 when writing essays in their L2 (Vygotsky, 1978), which can distort the intended meaning (Cohen & Brooks-Carson, 2001).

The discussion in this section and the previous section focused on the study of cohesion in the academic writing of L2 English students globally and in Africa. The next section introduces the theoretical framework underpinning this study.

1.3 Theoretical framework

Soles (as quoted by Chishala, 2022:26) defines an academic essay as a specific writing genre governed by a set of norms, rules and conventions, rooted in various theoretical frameworks. According to Hyland (2003:2) these theories help researchers in understanding students' writing. For students to present reasoned ideas academically, their essays must demonstrate cohesion and coherence, making them "texts with texture". The purpose of an academic essay is to persuade through reasoned discourse.

The theory of cohesion developed by Halliday and Hasan (1976) serves as a foundational framework frequently referenced by scholars researching cohesion and coherence. The taxonomy of cohesive devices outlined by Halliday and Hasan (1976) and further expanded by Halliday and Matthiessen (2014) provides the analytical basis for examining cohesion in students' academic essay writing.

Halliday and Hasan (1976:240) assert that language has three metafunctions. Language is used to represent our experience of the world (i.e. the ideational metafunction), to communicate something about the relationship between speakers and hearers (i.e. the interpersonal metafunction), and to organise ideas, representations and other kinds of information in ways that people can make sense of (i.e. the textual metafunction). The ideational metafunction, associated with experiential and representational meanings, is realised in clauses through participants (nouns) and processes (verbs). The interpersonal metafunction involves the use of language to maintain the relationship between the speaker and recipients and is expressed through features like finite verbs, pronouns and vocatives. The textual metafunction focuses on the sequencing of clauses to form meaningful discourse (Jones, 2012:72-79), ensuring that language, whether spoken or written, has order and sequence. One way the textual metafunction is achieved is through the use of conjunctions, a key cohesive device (Halliday & Hasan, 1976).

In terms of the textual function, Halliday and Hasan (1976:2) outline a taxonomy of cohesive devices, which they regard as essential aspects of good writing. Cohesion is defined as the 'tying' together of words, phrases, sentences and paragraphs to create a text where the relationships between these elements are clear and logical to the reader (Halliday & Hasan, 1976:4). Cohesion is crucial in academic writing because it affects the tone of the text. For written work to be clear and for the intended meaning to be well understood, the text must be connected. In this regard, Halliday and Matthiessen (2014:609) explain that the "cohesive system is a complementary resource for creating and interpreting text".

In their taxonomy of cohesive devices, Halliday and Hasan (1976:2) distinguish between grammatical and lexical cohesion. Grammar is the set of rules that makes up the linguistic ingredients of a language. According to Aarts (2018:4), grammatical cohesion emanates from the grammar of a language and ensures that the different parts of a text flow logically and that ideas are connected. This is achieved by means of grammatical elements that elucidate semantic relationships within and between sentences. Halliday and Hasan (1976:2) identify these components of grammatical cohesion: reference, substitution, and ellipsis.

Lexical cohesion, by contrast, is achieved through the selection of lexical items, such as synonyms and general words (Halliday & Hasan, 1976:274,303). These lexical choices provide writers with tools to establish cohesion within a text.

Halliday and Hasan (1976:2) assert that “a text has texture, and this is what distinguishes it from something that is not a text; in addition, for a group of items to be considered a text they must be cohesive”. One of the key methods to establish cohesion is by means of conjunctive cohesion. Conjunctive cohesion refers to the use of conjunctive devices and other linking devices to logically connect ideas in a text so as to form relationships between different parts of a text (Halliday & Hasan, 1976: 238). Halliday and Hasan (1976:229) explain that conjunctive cohesion lies on the borderline between grammatical and lexical cohesion. They emphasise that while the presence of cohesive markers is not the sole factor that matters in constructing a text, it plays a vital role in ensuring the text flows logically. Therefore, it is important that students are taught cohesive devices and their appropriate use in essays to ensure coherence in their writing.

Conjunctions link sentences, clauses and phrases to create logical relationships within a text. Halliday and Matthiessen (2014:612) differentiate between elaborating, extending and enhancing conjunctions. Elaborating conjunctions provide additional details about similar information; extending conjunctions add contrasting or additive information; and enhancing conjunctions refine or clarify the information already shared. The researcher regards the appropriate use of conjunctions as a foundational skill for writing cohesive academic essays. For this reason, first-year academic literacy courses teach students how to logically connect ideas when writing academic essays. This study aims to highlight the importance of teaching cohesive conjunctions (e.g. *therefore* and *however*), to undergraduate university students in academic essay writing. The framework of conjunctions outlined by Halliday and Hasan (1976:226-273) and Halliday and Matthiessen (2014:612) was employed in this study. A detailed discussion of conjunctions follows in Chapter 2.

This study focuses on how undergraduate students use conjunctive devices to craft cohesive texts. Conjunctions not only connect clauses and sentences but also help structure the text to align with the writer's intended message. By honing their use of cohesive devices, students can enhance their ability to clearly and effectively convey meaning, a crucial skill for academic writing.

1.4 Aim of the study

The aim of this study is to compare the use of conjunctive devices in two corpora to determine differences in their usage over time, thus establishing the first diachronic corpus-based study of conjunctive usage in an L2 variety of Southern African English. The analysis will focus on academic argumentative essays written by undergraduate students, collected approximately 20 years apart. These students share the same linguistic background and are enrolled at the same tertiary institution. All the students are mother-tongue speakers of Sepedi, Sesotho and Setswana and are undergraduate students.

1.5 Research questions

The following questions have been formulated from the literature review above:

- (i) Which conjunctive devices are used by undergraduate students in the TLEC (argumentative essays collected between 2001 and 2003) and in the SAMuLCAT (argumentative essays collected between 2017 and 2020)?
- (ii) What differences can be observed in the use of conjunctive devices between the two corpora?
- (iii) What are the reasons for and effects of these differences?

1.6 Research objectives

The objectives of this research are:

- (i) To identify the conjunctive devices that are used by undergraduate students in the TLEC and in the SAMuLCAT.
- (ii) To determine whether any differences can be observed in the use of conjunctive devices between the two corpora.
- (iii) To determine to which factors differences between the corpora can be attributed and whether this has a positive effect on cohesion in the more recent data.

1.7 Significance of the study

Although several studies have analysed conjunctive devices in student writing, none have undertaken a historical comparison of their use between two data sets of undergraduate students who were enrolled at the same university and who were Setswana, Sesotho, or Sepedi mother tongue speakers. The present study aims to establish whether there have been differences in the

frequency and use of conjunctive devices in current students' writing compared to that of students from 20 years ago.

1.8 Research methodology

1.8.1 Corpus linguistics

In this study a corpus linguistics approach was used to analyse the data. In section 1.8.1.1, a definition of the notion *corpus* is provided. The definition is followed by an outline of the type of corpora used in this study in section 1.8.1.2.

1.8.1.1 Definition of *corpus*

According to Esimaje and Hunston (2019:7), a corpus is a collection of naturally occurring written or spoken material stored on a computer, typically used for linguistic analysis. Texts that are used to carry out a linguistic analysis are selected to represent a language or a variety of a language. The total body of texts which makes up a corpus is large and cannot be studied by hand and eye. Sinclair (1991), Kennedy (2014), Hunston (2022), and McEnery and Wilson (1996) distinguish different types of corpora, namely general corpora, specialised corpora, comparable corpora, parallel corpora, learner corpora, pedagogic corpora, diachronic corpora, and synchronic corpora.

Esimaje and Hunston (2019:23) explain that a general corpus, also known as a reference corpus, "is a systematic collection of texts of different types and genres". It is typically extensive and designed to provide comprehensive linguistic descriptions of an entire language. The primary aim of a general corpus is to serve as a database for addressing a wide array of linguistic research questions. Due to its broad design, a general corpus is representative of diverse genres, enabling it to support numerous research tasks.

In contrast, a specialised corpus is compiled specifically for a certain research task in mind. It is used to investigate a particular type of language and is representative of a given type of text. For example, a collection of newspaper articles would be representative of newspaper language (Esimaje & Hunston, 2019:24).

McEnery *et al.* (2006:65) distinguish between diachronic and synchronic corpora. On the one hand, diachronic corpora contain texts from the same language at different points in time. McEnery *et al.* (2006:65) point out that "such corpora are useful for tracking changes in language evolution". On the other hand, synchronic corpora are representative of language "at a given point

in time, usually the present, without taking its history or development into account” (O’Keeffe & McCarthy, 2010:430).

According to Granger (2002:7), a learner corpus is “an electronic collection of natural or near-natural data produced by foreign or second-language (L2) learners, assembled according to explicit design criteria”. Granger (2002:2) goes on to point out that learner corpora are used to study the language features of L2 learners. These features are often studied in comparison with L1 varieties of the language. The information gained from these comparisons can be used to analyse learner errors with the purpose of identifying learner needs.

1.8.1.2 Type of corpora used in this study

This study used specialised corpora. The corpora in this study were selected with the aim of investigating learner language and therefore consist of written learner language as defined by Granger (2002:7). The corpora can partly be regarded as diachronic as they were collected at different times, aiming to find similarities and differences in learners’ use of conjunctive devices in academic essay writing at two different points in time. The corpora can also partly be regarded as synchronic, since the individual corpora are representative of language at given points in time. Both corpora are learner corpora, as they are comprised of texts produced by L2 English learners.

The content of a corpus depends on the purpose for which it was compiled. In this study, the aim was to compare the use of conjunctive devices in two corpora, namely the Tswana Learner English Corpus (TLEC) and the South African Multilingual Learner Corpus of Academic Texts (SAMuLCAT). These corpora, both of which comprise academic essays written by undergraduate students at different times, are regarded as specialised learner corpora.

1.9 Data analysis

1.9.1 Data

In this study, two corpora were used. The first corpus is the Tswana Learner English Corpus (TLEC), which consists of essays written by Setswana mother tongue speakers. The corpus, collected between 2001 and 2003, comprises 519 essays from students at Kimberly College, University of North-West, Potchefstroom University, and WITS University (Granger *et al.*, 2009:38). However, only the texts collected from the University of North-West and the

Potchefstroom University were used in the analysis. The TLEC can also be found on the International Corpus of Learner English (ICLE)⁴ website.

The second corpus is the South African Multilingual Learner Corpus of Academic Texts (SAMuLCAT)⁵, consisting of essays written by learners from various linguistic backgrounds. Collected between 2017 and 2020, the analysis in this study focused exclusively on texts written by Setswana, Sesotho and Sepedi mother tongue speakers from the North-West University. This corpus is housed in the repository of the South African Centre for Digital Language Resources (SADiLaR).

1.9.2 Corpus analysis tools

In this study, Wordsmith 8 was used to extract word lists and concordances from the corpora. Wordsmith, developed by Scott (2010), is software designed to extract linguistic patterns from corpora. For this research, lists of conjunctive devices, categorised into elaborating, extending and enhancing conjunctions, were compiled. These lists were then applied to the essays loaded into Wordsmith to extract concordances and determine the usage frequency of each conjunction. The concordances generated by Wordsmith was saved as spreadsheets (MS Excel) to facilitate more extensive analysis.

1.9.3 Data extraction and coding

A search list of conjunctive devices was compiled using Halliday and Matthiessen's (2014:612) framework of the grammatical system of conjunction. Separate text files were created for elaborating, extending, and enhancing conjunctions, with each category saved in its own text file. These text files were then applied using the Concordance Tool in Wordsmith to extract the relevant conjunctions in context from both corpora.

The concordances revealed the number of times each conjunction was used. The researcher manually confirmed the conjunctive use of each conjunction within its context in the concordance lines. Each conjunction was tagged according to its specific function in each sentence. The confirmed instances of conjunctive use were used to determine the frequency for each

⁴ The ICLE can be accessed at <https://uclouvain.be/en/research-institutes/ilc/cecl/icle.html>.

⁵ The SAMuLCAT can be accessed at <https://repo.sadilar.org/handle/20.500.12185/557>.

conjunction. Manual tagging was necessary because certain word forms can have more than one function. For example, *so* can function as an adverb or a conjunction as illustrated in example 1 and example 2 below:

(1) He was **so** interesting. (Biber *et al.*, 2017:70).

(2) At least we still get promoted, **so** our season's not completely lost. (Biber *et al.*, 2021:82).

In example 1, *so* functions as an adverb, while it functions as a conjunction in example 2. It was therefore important to manually clean the concordance by tagging the conjunctions. The concordance also assisted in showing where conjunctions were used in sentences.

1.9.4 Statistical analysis

Excel sheets containing frequency counts of conjunctive markers in each category were extracted from the corpora. To facilitate comparison between the findings of the two corpora, the frequencies were normalised, by dividing the frequency counts by the total word count of the corpus and then multiplying the result by 10 000 words.

For each text, the occurrences of conjunctions in each category were identified, and their frequencies were normalised to a rate per 1 000 words. The Descriptive Statistics tool in the Analysis ToolPak add-in in Excel was used to summarise key features of the data. These findings were visualised using the Statistical Charts tool in Excel.

Inferential statistics were performed to better understand the differences in the frequency data between the respective corpora and to determine their statistical significance. In R, the Shapiro-Wilk normality test was conducted to determine whether the data was distributed normally. The Shapiro-Wilk test provides a formal method for assessing whether a sample is drawn from a normally distributed population (Levshina, 2015:56). The test statistic, *W*, of the Shapiro-Wilk test is used to calculate the *p*-value. A *p*-value greater than 0.05 indicates that the null hypothesis (that the sample is from a normally distributed population) cannot be rejected. Conversely, a *p*-value less than 0.05 supports the alternative hypothesis, suggesting that the sample does not follow a normal distribution. The results of this test informed the choice between parametric and non-parametric statistical tests to determine whether the differences in the data sets were statistically significant.

Since the data were not distributed normally, a non-parametric test, namely the Wilcoxon test, was employed to determine whether the differences in the data sets are statistically significant. The Wilcoxon test compares central tendency measures between two groups (Levshina, 2015:87).

Log-likelihood tests were used to compare the frequency of the individual conjunctive devices between the two corpora. According to Dunning (1993:65-66) and Levshina (2015:10) the log-likelihood test is a statistical method used to compare the likelihood of certain events or phenomena occurring in different contexts, even when the sample size (the amount of data) is relatively small. Additionally, Levshina (2015:9) asserts that this test is particularly useful for identifying whether the observed occurrences of rare or common phenomena are significantly different from what would be expected by chance. In simpler terms, the log-likelihood test helps determine whether the frequency of certain events (such as the appearance of specific words in text analysis) is unusual or not, by comparing it to an expected baseline. This is valuable in analysing both rare and frequent events, as it allows for the assessment of their significance without requiring large amounts of data (Levshina, 2015:104). For example, in a text analysis, it could be used to compare how often a rare word appears in one set of documents compared to another, or it could analyse the difference in frequency for a common word. Despite the varying frequencies, the test accounts for the differences in scale, allowing a meaningful comparison between rare and common phenomena.

The data from the essays was analysed and discussed to see whether the objectives of this study had been reached. The analysis identified the conjunctive devices used in both corpora, highlighted differences in the use of these devices, and examined how differences in the use of conjunctive devices between the two corpora affected cohesion.

1.9.5 Text analysis

To determine whether the differences in the use of conjunctions have affected the cohesion of the essays, five texts were selected randomly from the TLEC and the SAMuLCAT and analysed qualitatively.

1.10 Ethical clearance

This study is corpus-based and relies on two existing corpora that are available in the public domain. There was no direct interaction with human participants. The ethical considerations for

this study are focused on ensuring the validity of the findings and their accurate reporting. The study received ethical clearance from the NWU Ethics for Language Matters (ECLM) committee under ethics number NWU-01113-23-A7.

1.11 Outline of the dissertation

Chapter 1 of this study outlines the background of the study, the theoretical framework, the research questions and objectives, the aim of the study, the significance of the study, and the methodology. Chapter 2 provides the theoretical framework of Systemic Functional Linguistics. Chapter 3 describes the methodology employed in this study. Chapter 4 presents the analysis and discussion of the study's findings. Finally, Chapter 5 summarises the findings, conclusion and recommendations of this study.

CHAPTER 2 THEORETICAL FRAMEWORK

2.1 Introduction

This chapter outlines the theoretical framework that was employed to compare the utilisation of conjunctive devices in two corpora, the Tswana Learner English Corpus (TLEC) and the South African Multilingual Learner Corpus of Academic Texts (SAMuLCAT). Section 2.2 provides an overview of Systemic Functional Linguistics (SFL). Section 2.3 discusses cohesion, while Section 2.4 focuses on conjunctions. An overview of academic writing is provided in Section 2.5, and the conclusion is presented in Section 2.6.

2.2 Overview of Systemic Functional Linguistics

Eggins (2004:1) states that theorists from various fields have proposed varying approaches to investigating how texts are written, how culture affects texts, and how the reader or the listener interprets a text. One widely adopted approach is Systemic Functional Linguistics (SFL), developed from Michael Halliday's foundational work in the 1960s (Eggins, 2004:1). The theoretical underpinning of this study is SFL.

SFL is a theory which is centred around the functions of language. It focuses on describing and analysing language and how it is used. Human beings interact with one another through language. Halliday and Matthiessen (2014:1) and Thompson (2014:6) describe language as a tool used by human beings to make sense of their experiences of the world, to express those experiences in a spoken or written form and to interact with others. To make sense of, express and interact with others, Halliday and Matthiessen (2014:26) state that language is organised into different levels called *strata*. The stratification of language is discussed in the next section.

2.2.1 A stratified model of language

Halliday and Matthiessen (2014:24) describe language as “a complex semiotic system with various levels or strata”, which is what is meant when language is referred to as stratified. These strata include phonology, lexicogrammar and semantics, all of which are situated within context. At the stratum of meaning, three strands of meaning are distinguished: ideational, interpersonal and textual (Eggins, 2004:110; Halliday & Hasan, 1989:23; Halliday & Matthiessen, 2014:661-663; and Thompson, 2014:30-34). These strands of meaning serve the function of using language to

talk and write about the world, to interact with people, and to organise language to share experiences about the world (Eggins, 2004:111).

Language can be organised to share experiences with the world, either through verbal or written communication. Each strand of meaning is realised at the stratum of the lexicogrammar through the clause. Halliday and Matthiessen (2014:83) explain that there are three distinct kinds of meaning embodied in the structure of a clause. By analysing a clause from these different perspectives, one can see how language is systematically used to fulfil specific functions in different communicative events.

2.2.2 Three strands of meaning

As mentioned, in Section 2.2.1, Halliday and Hasan (1976:27) and Halliday and Matthiessen (2014:30) distinguish three strands of meaning: ideational, interpersonal, and textual.

Ideational meaning is concerned with how people construe their experiences (Halliday & Hasan, 1976:26 & Halliday and Matthiessen, 2014:83). In other words, ideational meaning is representative of how speakers experience and construe the goings-on in the world around them.

Interpersonal meaning is concerned with how personal and social relationships between people are enacted in the communicative event (Halliday & Matthiessen, 2014:30; Hasan 1976:26). It involves not only the participants' point of view and perception, but also how the relationships in the situation are revealed in what is being said, and the motive for what is being said. This means that the participants may be friendly or authoritative, or distant and not showing any feeling or emotion towards each other. Furthermore, every text is both about something and addressing someone. Both the interpersonal and the ideational function of language can be combined in this regard. To completely understand the meaning of a text, both the interpersonal and the ideational meaning must be interpreted against the background of the textual meaning of a text.

Eggins (2004:12) defines textual meaning as "the way a text is organized as a piece of writing or speech". Halliday and Matthiessen (2014:30) state that textual meaning fulfils "an enabling or facilitating function", since both the experiential and the interpersonal meaning of a text depend on "being able to build up sequences of discourse, organizing the discursive flow, and creating cohesion and continuity as it moves along" (Halliday & Matthiessen, 2014:31). Thompson (2014:30) explains that for a text to make sense, its language should be organised in such a

manner that it fits its context. For example, the language used in the classroom is different from the language used between friends during lunch.

Halliday and Matthiessen (2014:26, 29) explain that the stratum of meaning interfaces with the context of the situation. The following section explores the relationship between the stratum of meaning and the stratum of context.

2.2.3 Looking outwards from meaning to the context of situation

Halliday and Hasan (1989:6-8) refer to the notion “context of situation” that was coined by Malinowski in 1923. Malinowski was an anthropologist and used context of situation to refer to the environment of the text, specifically the circumstance in which the text is taking place. Later, the linguist Firth needed a context that could be built into a general linguistic theory for the study of texts and adopted Malinowski’s notion of the context of situation in the field of linguistics. Halliday and Hasan (1989:7, 8,12) further explain that Firth expands on Malinowski’s concepts of field, tenor and mode.

Halliday and Hasan (1989:12) explain that the field of discourse refers to what the participants are doing and the role that language plays in the activity. One can understand the participants’ internal or external experiences of the world through the field of discourse dimension. This means that the field of discourse dimension interfaces with the experiential meaning of a text, which is the participant’s experience of the world.

To share their experiences, participants need other participants to interact with. The tenor of discourse encompasses the nature of the relationship between the participants, their status and their roles in the communicative context (Halliday & Hasan, 1989:12). The tenor reveals whether the relationship between participants is formal or informal – whether the communication is taking place between friends, or between a learner and teacher, or between an employee and an employer. The tenor dimension interfaces with the interpersonal meaning of a text because through the choice of the words used in communication, one can deduce the role each participant plays in the communicative setting.

The mode of discourse reveals how language is used in the context of a particular communicative setting. Halliday and Hasan (1989:12) refer to mode as participants’ expectation of what language should help them achieve in a communicative setting. Language is expected to deliver a message which aligns with the situational context. The message being delivered should be organised in

such a manner that its meaning is connected to the situational context. By connecting the message to the context, mode interfaces with the textual meaning of a text.

Together, the dimensions of field, tenor and mode are realised in the lexicogrammar, providing insight into how language systematically conveys meaning within its situational context. In this study, the topics the students wrote their argumentative essays on are regarded as the field. The tenor of discourse involves the L2 undergraduate students who wrote the argumentative essay. The mode of discourse refers to the written nature of these academic essays and the specific ways in which conjunctions were employed to structure arguments and enhance coherence.

2.2.4 Looking inwards from meaning to the lexicogrammar

Halliday and Matthiessen (2014:48, 58) refer to *lexicogrammar* as the stratum of wording, which comprises both the lexis and the grammar of a language. They argue that the lexis and the grammar of a language cannot be regarded as two separate entities (Halliday & Matthiessen, 2014:64). Instead, they form a continuum with lexis at one end and grammar at the opposite end. Lexis refers to content words, including names of entities, such as persons or things, and names of processes, such as actions or events, and names of qualities. Grammar refers to the structure of sentences and the organisation of words in a language (Brown & Miller, 2013:197). The three metafunctions of language – ideational, interpersonal, and textual – are realised through certain lexicogrammatical features in clauses.

The system of TRANSITIVITY is the principle grammatical system involved in realising the ideational metafunction (Halliday & Hasan 1989:26; Halliday & Matthiessen, 2014:83, 213; Thompson, 2014:94, 111). From the perspective of the ideational metafunction, the clause serves as a representation of human experience (Thompson, 2014:94). If the structure of the clause is analysed in terms of its experiential meaning, its main elements are Processes, Participants and Circumstances (Halliday & Matthiessen, 2014:213; Thompson, 2014:111).

The principle system by which the interpersonal meaning in lexicogrammar is realised is MOOD (Halliday & Hasan, 1989:26; Halliday & Matthiessen, 2014:83). In the strand of interpersonal meaning, the clause is viewed as an exchange. Thompson (2014:48) explains that one sentence may be structured to be in the indicative (i.e. the declarative or interrogative) mood, which may require the listener to respond or to be aware of something, while another may be structured to be in the optative mood, which is used to express a desire. The system of MOOD is comprised of the Subject and the Finite operator (Halliday & Matthiessen, 2014:23). Together, the Subject and

the Finite cannot form a sentence: one cannot make sense of what they are about if written or spoken without other parts of a sentence. Modality in the interpersonal meaning of a text reveals the attitude of the speaker or writer (Thompson, 2014:67). The remainder of clause is known as the Residue, which means the interpersonal meaning of a text in lexicogrammar may be understood through the choice of mood and the role that is played by the participants in the text (Halliday & Hasan, 1989:31).

The textual metafunction relates to how the information is organised in the text, viewing the clause as a “message” (Halliday & Matthiessen, 2014:83). According to Thompson (2014:145-146) repetition, conjunction and thematisation are the main ways through which the textual metafunction is realised in the lexicogrammar. The THEME is identified as the principal grammatical system. The clause can be analysed into Theme and Rheme. Thompson (2014:145,146) points out that the speaker or the writer constructs their message in such a way that it fits smoothly into the unfolding language. In other words, the new information in the text should be connected to the information already shared. The information shared should revolve around the same theme. Furthermore, Halliday and Matthiessen (2014:659) highlight that the connectivity of the message in a text is realised by means of cohesive relations. Cohesion is explored in the next section.

2.3 Cohesion

Scholars such as Halliday and Hasan (1976) and Halliday and Matthiessen (2014) have contributed to the list of cohesive devices, which serves as a guide for scholars investigating cohesion in L1 English and L2 English student writing.

Cohesion is defined as a “semantic concept which refers to relations of meaning that exist within a text and that defines it as a text” (Halliday & Hasan, 1976:4). It occurs when the interpretation of one element in the discourse depends on another. This means that no single element carries the meaning and interpretation of the entire text by itself. Cohesion links phrases, sentences, and ideas within a text. By organising the text, the writer shapes its structure, provides direction and meaning, and reveals the intention of the writer to the reader.

Halliday and Hasan (1976:21) state that cohesion links ideas within a text or to the context shared by writers and readers. Both writers and readers must be familiar with the topic, content, and context, linking it to what is happening. In other words, writers use words that readers can interpret correctly. In this way, cohesion makes the text relevant.

To illustrate, a building requires a plan, which informs the builder about details such as the size of the structure, the depth of the foundation, the number of bricks, the amount of cement, and other materials like sand and concrete. All these components, from the plan to the roof, used together by the builder, result in a building, such as a church, school, or house. Until these elements are assembled meaningfully, they remain merely a collection of materials.

A text is not simply a collection of ingredients (ideas, sentences), just like a house is not merely a collection of building supplies. Only when the building supplies are combined in a meaningful way do we get a house, just like a meaningful combination of ingredients gives us a text.

Cohesion performs various functions within a text. One of its functions is to provide the text with direction. The direction the text takes reveals the writer's intention. Writers can guide readers from the beginning to the end of the text. In this way, cohesion helps readers follow the text easily. Ebadi *et al.* (2015:29) argue that readers can follow the writer's line of argument more effectively when the text is connected through cohesive devices. The writer's line of argument begins with one sentence, which connects logically to the next, resulting in a logical or chronological order of ideas or events, depending on the genre of the text. As a result, readers are more comfortable reading the text and better able to understand it. Thus, their attention is held longer than when they read a disconnected and unclear text.

One could also compare cohesion in writing to the role of traffic lights for drivers and pedestrians. If traffic lights in a congested area stop working, drivers will experience a traffic jam. Similarly, a lack of cohesion in a text creates disorder and disrupts the flow, making it difficult for readers to follow the argument. Cohesion ensures that the writer takes the reader on a clear journey through the text, presenting their argument logically from start to finish, while helping the reader understand what to expect.

The lack of connection has a detrimental effect on the text. The reader experiences difficulties in understanding the text due to the absence of cohesion. It becomes even more difficult to follow the argument in the text because the writer does not inform the reader where they are going with the text using cohesion. Sentences will be fragmented, and ideas will be scattered all over the text. The reader will not be able to comprehend what the main idea of the text is.

Another function of cohesion is to give meaning to a text. Texts are composed of sentences which structured in a certain way to convey meaning to the reader. These sentences are connected using cohesive devices, which help the reader to understand the text. O'Grady *et al.* (1997:269)

explain that words and phrases inherently form various semantic relationships “with other words and phrases in the language, because these relationships help identify those aspects of meaning relevant to linguistic analysis”. For a text to be meaningful, the writer must connect sentences to develop ideas in a paragraph. Subsequently, each paragraph should logically connect to the next, ensuring all ideas are linked cohesively from the beginning to the end. Cohesive devices play a key role in establishing these connections and maintaining the flow of argument or discussion.

Finally, cohesion shapes the text, by signalling its beginning, climax, and end. As Halliday and Hasan (1976:24) explain, cohesion provides continuity in a text by expressing the relationship between its parts. This continuity is achieved through cohesive links between sentences and across paragraphs. They further argue that cohesion consists of certain explicit linguistic features that contribute to the overall unity of a text, making cohesion an essential property of any text. It is the combination of cohesive devices that gives a text its texture.

According to Halliday and Hasan (1976:2), texture is derived from the ability of a text to function as a unit within a particular environment. Simply put, texture is what distinguishes a coherent text from a random collection of unrelated linguistic items. The way writers skilfully weave words together gives a text its texture. For example, the shape of a house depends on the careful assembly of materials, resulting in a structure that is either beautiful or not. This metaphor of a house illustrates how cohesion creates texture, including elements like juxtaposition and contrast, or signals relationships within the text – what parts belong together to form an identifiable component or subpart of the construction. Halliday and Hasan (1976:2) further emphasise that texture is a “quality which makes a particular set of words or sentences a text rather than a random collection of linguistic items”.

The texture of a text can be considered good or bad, depending on the choice of words and cohesive devices employed by the writer. However, as Halliday and Hasan (1976:328) point out, “the analysis of cohesion will not tell you that this or that is a good text or a bad text or an effective or ineffective one in the context”. They further acknowledge that “the texture involves more than the presence of semantic relations we refer to as cohesion” and that “texture involves much more than merely cohesion. In the construction of a text, the establishment of cohesive relations is a necessary component; but it is not the whole story” (Halliday & Hasan, 1976:23).

Texture can be achieved by means of ties. Halliday and Hasan (1976:3) define a tie as “a single instance of cohesion, a term for one occurrence of a pair of cohesive related items”. Together, the ties in a text create patterns of texture (Halliday & Hasan, 1976:4). There are different types

of cohesive devices, namely reference, substitution, ellipsis, conjunction, and lexical cohesion, which will be discussed in the following sub-section.

In conclusion, cohesion plays a crucial role in shaping a text. It guides readers on a journey from the beginning to the end, using intentionally chosen words to unite the text. Through these choices, the writer paints a clear mental picture of the message, helping readers relate to the message within the text. The role of cohesive devices in achieving this will be explored in more detail in the following section.

2.3.1 Cohesive devices

Cohesive devices are comprised of lexical and grammatical elements. According to Halliday and Hasan (1976:5-6), cohesion can be achieved partly through the grammar of a language and partly through its lexicon, referred to as grammatical cohesion and lexical cohesion, respectively. For instance, a word like *you* has no cohesive force unless its referent can be retrieved from the surrounding text. This demonstrates that one element of a text depends on another element for its complete understanding. This means that different parts of the text connect, creating multiple internal linkages. These connections leave the reader with the impression that the text must be read as a whole, only making sense if all the parts are read together. Isolated sections of the text may not make complete sense independently, as their meaning is tied to other parts.

Grammatical cohesion includes reference, substitution, ellipsis, and conjunction (Halliday & Hasan, 1976:274). Lexical cohesion, on the other hand, is not merely dependent on the choice of a single word but also on its relationship to other elements in the text. For example, cohesion is established when the word *apple* appears alongside related terms, such as *fruit*.

To create lexical cohesion within a text, the writer may use cohesive devices which form either syntagmatic or paradigmatic relations (Halliday & Matthiessen, 2014:63). According to Halliday and Matthiessen (2014:21) syntagmatic relations are those that pertain to the linear structure of language, “the structure, the patterns or regularities, the what goes with what of language”. Halliday and Matthiessen (2014:293) use the sentence, *The cat is on the mat*, to illustrate this relationship. The words “*the, cat, is, on, the, and mat* are in a syntagmatic relationship” (Halliday and Matthiessen, 2014:293).

Paradigmatic relations, on the other hand, involve associations between words that can be contrasted or substituted in context. To illustrate this, Mubenga (2010:19) explains that “in the

sentences *The cat is on the mat* and *The dog is on the table*, the word *cat* is in a paradigmatic relationship with the word *dog*. In the same way, the word *mat* is in a paradigmatic relationship with the word *table*.”

Cohesive devices that form syntagmatic relations occur between adjacent elements and, according to Allen (1990:17), Halliday and Matthiessen (2014:649), and Sinclair and Carter (2004:140), involve the regular use of two or more words in combination, resulting in collocations. Collocation refers to the association of certain words or items caused by their habitual co-occurrence. In other words, it is the frequent juxtaposition of particular words with others at a rate higher than chance, particularly “words which are recurrent, or the frequency-driven sequences of three and more words which function as text building blocks” (Allen, 1990:443).

Some scholars, such as Granger (2002), Wiktorsson (2001), and Manning and Schutze (1999), use terms such as “prefabricated patterns, routines, fixed expressions, formulas, lexical phrases and lexical bundles” to describe collocation. Biber *et al.* (2004:372) provide the example of the word *weather* and note that “words such as *fine, good, poor, bad, wet, windy, cloudy, or stormy* collocate with this word *weather*”. However, other adjectives like *grey* in “the weather is *grey*” and *dark* in “the weather is *dark*” occur less frequently. Other combinations, such as *black weather* and *white weather*, are rare or are unattested, while combinations such as *orange weather* or *blue weather* do not occur at all.

Wiktorsson (2001:5) highlights multiword expressions that function like conjunctive markers, including *on the one/other hand, by way of introduction, to sum up, according to, due to the, so as to, for that purpose, in the same manner, as I was saying, neither/nor* and *either/or*. These are relatively fixed expressions with minimal variation, serving as conjunctive markers to help the reader navigate through the text.

Other types of lexical cohesion that form paradigmatic relations in a text are created by words belonging to the same class, though these words may stand in opposition to each other Hjørland (2015:1367-1373). Lexical cohesive devices that form paradigmatic relations include repetition, synonyms, antonyms, hyponyms and meronyms. These devices contribute to cohesion by connecting elements across the text. Repetition and synonymy remind the reader of the same concept appearing at different points in the text, while antonyms, hyponyms, and meronyms establish relationships between contrasting or related ideas, thereby fostering cohesion in the reader’s mind.

With regard to grammatical cohesion, reference occurs when one word or phrase refers to another word or phrase within a text (endophoric reference) or outside of the text (exophoric reference) (Halliday and Hasan, 1976:32-37). Endophoric references can either look back at previous elements in the text (anaphoric reference) or forward to subsequent elements (cataphoric reference). These references connect different parts of a text using personal (e.g. pronouns), demonstrative (e.g. *this*, *that*), and comparative (e.g. *more*, *less*) markers, thereby contributing to the text's cohesion (Halliday & Matthiessen, 2014:605-606; Brown & Yule, 1983:204). Personal pronouns, in particular, play a key role in maintaining these connections (Halliday & Hasan, 1976:38).

Cohesive references also include demonstrative references, which function to point to specific elements within the discourse. These references can indicate spatial, temporal or distributive context, according to Chafe (1994:97). According to Biber (1988) and Biber *et al.* (1999), demonstratives are an important part of the spoken discourse genre but are generally less common in academic discourse because they provide an imprecise textual reference. Examples of demonstrative reference include determiners such as *these*, *this*, *that*, and *those*.

Another type of cohesive reference is a comparative reference which signifies similarities or differences in a text and can either be an adjective, for example *same*, *better*, *other* or adverbial for example, *similarly* and *less* (Halliday & Hasan, 1976:76-87).

In addition to the kinds of cohesion discussed above, substitution and ellipsis are also important cohesive devices. These types of cohesive devices either replace or omit a word or phrase to avoid redundancy or unnecessary repetition. They form part of Halliday and Hasan's (1976) categories of cohesion, as they contribute to tying a text together. Droga and Humphrey (2003) define substitution as "a term used to replace a component of a clause with a shorter word"; examples are *one*, *some* or *do*. The word *one* can substitute for a word, phrase, or clause to avoid repetition.

Another type of cohesive device is conjunction, which is the focus of this study and will be discussed in detail in the next section.

2.4 Conjunction

Conjunctions are the fourth type of cohesion and the focus of this study. They are a means by which writers organise the flow of their messages. The use of conjunctive devices in the academic

essays of undergraduate students at tertiary institutions is not a new concept to students; it extends from what they were taught in primary and secondary school. Studies have been conducted to investigate the use of conjunctive devices in the academic essays of L2 English students. Researchers have used different terms to refer to these cohesive devices, including 'linking words' or 'linking adverbials' (Biber *et al.*, 2002:356; Yin, 2014:309-319; Makalela, 1998; Wissing, 1987), 'linking adjuncts' (Carter & McCarthy, 2006:219), 'connectors' (Granger & Tyson, 1996; Bolton *et al.*, 2002:165), 'adverbial adjuncts,' 'adverbial connectors' or 'connective adverbials' (Chen, 2006:113; Sanders *et al.*, 2007:219; Tanko, 2003; Yeung, 2009:330), 'discourse markers' or 'pragmatic markers' (Bell, 2010:191-192; Cuenca, 2008:1374), and 'conjunctions' (Halliday & Matthiessen, 2014:612), 'connective' (Kalajahi *et al.*, 2012:1660), and 'pragmatic markers' (Zaides *et al.*, 2018).

According to Yin (2014:44-48), linking adverbials mark a meaning relationship at the discourse level, while conjunctions provide a structural link at the clause-complex level. Furthermore, Biber *et al.* (1999:763) and Rouchota (1998:101) add that linking adverbials establish an explicit meaning relationship, resulting in a cohesive flow of discourse.

Péter (2013:14) explains that pragmatic markers are a functional group of linguistic items that generally do not modify the core meaning of an utterance. Instead, they are vital for structuring discourse, conveying the speaker's attitude toward the proposition, and supporting or restricting pragmatic inference processes.

Halliday and Matthiessen (2014:609) and Rouchota (1998:100-101) view conjunctions as items that relate a clause to a preceding clause in the same sentence (the same-clause complex). These conjunctions typically occur at the beginning of a clause, and if misused, can affect the intended meaning of a text. For this study, the term 'conjunctive devices' will be used.

Conjunctions entail the systematic connection of information within sentences in a text. There are several models of classification, including those by Halliday and Hasan (1976:238), Biber *et al.* (1999:79-85) and Halliday and Matthiessen (2014:612). These models express a variety of relationships between two or more units of discourse.

Halliday and Hasan's (1976:238-239) model distinguishes between five main types of conjunctions: additive, adversative, causal, temporal, and continuative. Additive conjunctions (*and, likewise, furthermore, in addition*) connect units that share semantic similarity. Adversative conjunctions (*but, however, in contrast, whereas*) express contrasting results or opinions. Causal

conjunctions (*so, thus, therefore, because*) introduce results, reasons or purposes. Temporal conjunctions (*finally, then, soon, at the same time*) express the time or the order of events. Continuatives (*now, of course, well, anyway, surely, after all*) signal continuity in discourse.

Halliday and Matthiessen's (2014:612) model expanded on Halliday and Hasan's (1976:242-243) framework by categorising conjunctions into elaborating, extending, and enhancing types, along with their immediate sub-types. The previously identified additive and adversative conjunctions are included under extending conjunctions, while causal and temporal conjunctions fall under the enhancing conjunctions. These classifications are illustrated in Figure 2.3.1.1, which depicts Halliday and Matthiessen's (2014:612) system of conjunctions.

Two types of elaborative conjunctions can be distinguished, namely appositive and clarifying conjunctions. Appositive conjunctions serve either an expository function (*in other words*) or an exemplifying function (*for instance*). Clarifying conjunctions, on the other hand, can be further subclassified based on their specific function, such as corrective (*at least*), distractive (*incidentally*), dismissive (*in any case*), particularising (*in particular*), resumptive (*as I was saying*), summative (*to sum up*), and verificative (*actually*). As can be seen from the examples provided for each type (given in brackets), conjunctions can take the form of single words, phrases, or even entire clauses. The following textbook examples are illustrative of the various elaborating conjunctions:

- (3) I'm coming by yesterday, and he goes oh **by the way** I am coming to the cinema with you, on Saturday, I said, you what?
(Biber *et.al.*, 1999:879) [elaborating: clarifying: dismissive]
- (4) It has further been assumed that the elements that are identified as frequent may not have a formal similarity. **To illustrate** this, I shall take a sample sentence which uses the verb react that was discussed.
(O'Keeffe & McCarthy, 2010:164). [elaborating: appositive: exemplifying]
- (5) **To sum up**, the purpose of the present project was initially to make an applied study of some aspects of driver behaviour which might be relevant in the evaluation of measures to prevent wildlife accidents.
(Biber *et. al.*, 1999:885). [elaborating: clarifying: summative]

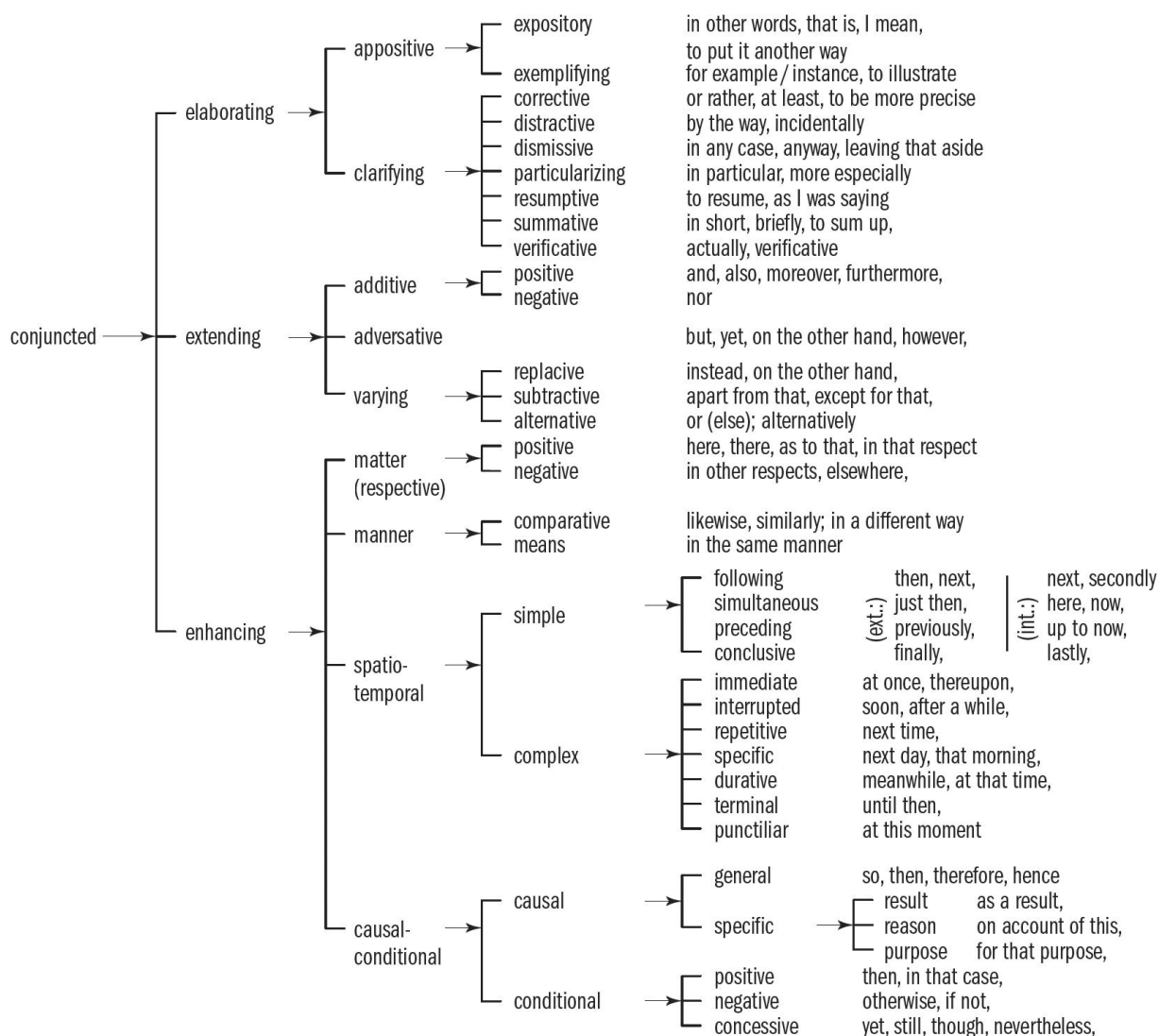


Figure 2.3.1.1: The system of conjunction (Halliday & Matthiessen, 2014:612)

There are three types of extending conjunctions, namely additive (*and*), adversative (*but*) and varying (*or*, when used to conjoin alternatives, as in *coffee or tea*). An example of this category follows in (6) and (7):

- (6) He has made two albums of his own songs. **Furthermore**, he has made three full-length films.

(Greenbaum & Nelson, 2002:206) [extending: additive]

- (7) There must, in addition, be some reason why water excretion by the kidney has failed, **however**, since ingestion of hypotonic fluid does not ordinarily lead to progressive dilution of body fluids.

(Biber *et al.*, 1999:881) [extending: adversative]

The third group of conjunctions comprises enhancing conjunctions, which express matter, manner spatio-temporal, and causal-conditional relations. Examples of enhancing conjunctions that further clarify or develop information shared in a preceding sentence include words or phrases such as *then*, *similarly*, *meanwhile*, and *therefore*. These are illustrated in examples (8) to (10).

- (8) Your directors are planning for steady growth over a considerable period of time. **Similarly**, our intentions in adopting this new investment policy are focused on the long-term prospects of the company.

(Halliday & Hasan 1976:247) [enhancing: manner: comparative]

- (9) The 21 sambas originally submitted were whittled to one. **Meanwhile**, seamstresses and tailors all over Rio made costumes.

(Biber *et al.*, 1999:783). [enhancing: spatio-temporal]

- (10) He works late; **therefore**, he cannot drive me there.

(Biber *et al.*, 1999:879) [enhancing: causal-conditional]

Biber *et al.* (1999:875-880) provide an expanded list of linking adverbials, which, in addition to those compiled by Halliday and Hasan (1976), include enumerative and additive, transitioning and overlapping linking adverbials. Biber *et al.*'s (1999:875-880) classification differs from Halliday and Matthiessen's (2014:612) classification in that the additive conjunctions are combined with the enumerative conjunctions. Although the terminologies differ, they serve similar functions. The various types of enhancing conjunctions overlap in part with other adverbial roles, and each type of conjunction may simultaneously perform different roles. For example, a conjunction may convey circumstantial information relevant to the ideational metafunction while also providing enhancing conjunctive information relevant to the textual metafunction. Although conjunctive elements primarily serve a textual function, they may secondarily act as circumstantial adverbials. As stated earlier, this study focuses on conjunctive cohesion, and Halliday and Matthiessen's (2014:612) system of conjunctions will be used as the analytical framework for examining students' writing.

As previously indicated, in writing – especially academic writing – the writer must actively guide the reader through the discourse, emphasising significant ideas and showing how each sentence links to the rest (Thompson, 2014:176 & Schiffrin, 1987:37). The terms discussed above serve the purpose of structuring the text and guiding the reader or listener to construct meaning. This study adopts the term 'conjunctive cohesion', which is regarded as one of the key aspects of good

writing. Each of these terms has more or less the same function within the text. The next section focuses on the classification of cohesive devices.

The discussion in this section focused on different types of lexical cohesion and grammatical cohesion, with particular attention to conjunctions, which create the platform for studying the use of conjunctions in the current L2 English student writing at the Mahikeng Campus of the North-West University. The use of conjunctive devices to create cohesion in the argumentative essays of first year students will be analysed. When writing academic essays, students are expected to use an academic register. Such essays should reveal their experiences of the world both externally and internally, demonstrating their understanding of the essay topic and indicating how they create a relationship with the reader and how they create a relationship between different parts of the essay using cohesion to create a coherent text so as to create a journey from the beginning of the essay to the end. The next section focuses on academic writing.

2.5 Academic writing and L2 English students

2.5.1 Academic writing

Chakraverty and Gautum (2000:38) define writing as “a reflective activity that requires enough time to think about the specific topic and analyse and classify any background knowledge”. Al Fadda (2012:124), states that it is a “mental and cognitive activity” that transfers information on paper while expressing the writer’s feelings, thoughts, wishes, and schemes in black and white (also see Akkaya & Kirmizi, 2012:4743 & Kheryadi, 2017:377). In simpler terms, a ‘reflective activity’ means that the writer should first think about the information needed when writing and should be familiar with the background information about the topic. To transfer information onto paper, the writer must organise their thoughts logically before transferring these thoughts into written form.

This process requires certain skills. Gutwinski (1976:28), Halliday and Hasan (1976:10), Hilton and Hyder (1992:7), Moe (1979:19), and Perfetti and Lesgold (1977:42) agree that the writer must have the ability to present a coherent argument while following the correct structure of a text. In the process of producing a text, the writer should employ the correct language conventions, present an argument cohesively and interact with the reader in the text. This means that the text must be logically structured.

Abu-Ghararah (1998:87) states that a well-written text is characterised by the “logical organization and arrangement of the written sentences within a paragraph and paragraphs within the units of discourse”. The logical organisation and arrangements of sentences require the correct use of cohesive devices, which in turn results in cohesive paragraphs and, ultimately, a cohesive text.

Machi and McEvoy (2021:5) add that the ability to produce well-structured arguments in a text reflects a writers’ critical thinking skills. Therefore, writers with developed critical thinking skills can collect and compile information from various sources and convey it logically to align with their topic and support their argument. Such skills also demonstrate the writers’ ability to express information convincingly, persuasively, and in a manner easily understood by readers. Kellogg (2008:4) further asserts that the ability to construct a coherent argument following the correct structure of a text should be nurtured from an early age.

Moreover, Kellogg (2008:3) identifies three stages in the development of writing skills: initially, writers convey what they know; next, they transform this knowledge for the author’s benefit; and finally, they craft it with the reader’s benefit in mind. Additionally, Çakiroğlu (2018:204-205) and Cole and Feng (2015:8) highlight that this progression involves building new skills upon existing ones. Halliday (1970:323) notes that as children mature, their ability to spell correctly, use correct vocabulary and grammar, and produce texts that readers can understand also grows. Consequently, children grow into writers who demonstrate increasingly advanced writing skills each year. These writing skills are easily developed in an academic setting, from primary school to tertiary education.

Cummins (1981:24) asserts that achieving cognitive academic language proficiency (CALP), which enables academic success, typically takes 5–6 years. However, Heugh (1995:6) warns of “copious evidence of the failure of most children who are plunged too quickly into English without strong support in the school for their home language”. Republic of South Africa’s (RSA) constitution (1996) recognises 11 official languages, aiming to promote the nine indigenous languages and rectify the marginalisation they experienced under apartheid. This recognition underpins South Africa’s language policy of additive bilingualism. Additive bilingualism entails teaching learners two official languages: one as their mother tongue and the other – typically English or Afrikaans – as an additional language, which becomes the language of learning and teaching (LoLT) later.

Wildsmith-Cromarty and Balfour (2019:296-300) explain that learners are first taught in their L1 from Grade 1 to Grade 3, while a second language is gradually introduced as a subject from

Grade 2. This second language, usually English or Afrikaans, known as the additive language, transitions into the LoLT from Grade 4 onwards.

The introduction of an additive language as LoLT in Grade 4 raises concerns about learners' ability to succeed academically. If it takes 5–6 years to achieve CALP, as Cummins (1981:24) argues, learners may struggle since they have only been exposed to the additive language for two years (grades 2 and 3). Cummins (1981:24) further explains that a bilingual child's level of L2 English competence in CALP is determined by their proficiency in their mother tongue. Cummins and Danesi (1990:106) emphasise that learners must reach a threshold level of linguistic proficiency in their mother tongue before they can fully benefit from using a second language as the LoLT.

If learners are introduced to an additive language at such an early stage in their academic life, it also suggests that they may not have attained full linguistic proficiency in their L1 language. This aligns with Ramokgopa's (2010:2) assertion that learners may lose their mother tongue before they have developed an age-appropriate proficiency in the new language, a phenomenon known as subtractive bilingualism. Subtractive bilingualism occurs when learning a second language undermines the first language, often resulting in the loss of fluency and skills in the mother tongue, especially if not reinforced.

The introduction of an additive language as the LoLT in Grade 4 is in accordance with South Africa's Language-in-Education Policy (LiEP) (DBE, 2011). While this policy aims to support bilingualism, it requires learners to acquire the language and build their writing skills concurrently, potentially compounding challenges in their academic progress.

Wildsmith-Cromarty and Balfour (2019:300-301) state that learners' ability to build their writing skills in a second language depends on the foundation laid in their mother tongue. L2 English grammar development relies on a strong basis of oral language skills, which form the groundwork for academic literacy in English. These oral language skills often develop through exposure, yet such exposure is minimal, especially in schools located in remote rural areas.

Wildsmith-Cromarty and Balfour (2019:300-301) further observes that the Curriculum Assessment Policy Statement (CAPS), which is theoretically orientated towards additive bilingualism and the transfer of skills from mother tongue to an additive language, offers little guidance on how to teach grammar. The challenge arises when learners are introduced to L2 English in Grade 2 and then switch to L2 English as LoLT in Grade 4. At this stage, they may not

have achieved sufficient CALP in their mother tongue to transfer effectively to L2 English. Consequently, these learners often struggle to perform well academically in the additive language.

Furthermore, scholars such as Forson (1992:48) argue that, in addition to learning their mother tongue, Grade 4 L2 English learners face the dual challenge of understanding the structure and nature of L2 English to engage effectively with its literature.

According to Banda (2010:58-59), learners experience difficulties in adjusting to the transition from their mother tongue to L2 English as the LoLT in Grade 4. Researchers such as Enos (2009:4-5) suggest that inadequate acquisition of L2 English is a key factor contributing to poor writing abilities of L2 English high school graduates and their struggles to meet the expectations of tertiary-level instruction. One of these expectations is the appropriate use of language in academic writing. Students may struggle with formal writing, vocabulary and sentence structures (Hyland, 2003:34-49).

In addition to learning L2 English, learners must also become familiar with the culture of the language. Ipek (2009:160) asserts that the cultural distance between the learner and the target-language culture creates further difficulties in acquiring the skills needed for academic success, particularly in writing. Learners often bring elements of their own culture into their writing, which can influence their ability to meet the conventions of the target language when writing an academic text.

Hyland (2003:34) points out “that cultural factors help shape students’ background understandings, or schema knowledge, and are likely to have a considerable impact on how they write their responses to classroom contexts, and their writing performance”. However, according to Hyland (2003:30) the role of a learner’s first culture in second and foreign language learning is frequently underestimated in teaching practices. Teachers sometimes incorrectly assume that students have existing knowledge of text genres or share their cultural understanding of writing.

Students can make meaning, based on the knowledge they have acquired through their cultural backgrounds. Widdowson (2008:48) states that “culture is generally understood as a historically transmitted and systematic network of meanings which allow us to understand, develop, and communicate our knowledge and beliefs about the world”. Similarly, Street and Street (1995:1-20) and Lantolf (1999:22-26) assert that culture is a socially developed framework of practices, especially concerning literacy, where cultural and power dynamics shape the creation and

communication of meaning. It also serves as a dynamic, mediating tool that influences language learning and cognitive growth through social interaction.

In other words, different cultures attribute distinct meanings to events and human relationships, which influence what students find comfortable to write about. Street and Street (1995) and Lantolf (1999) further state that one of the distinguishing factors between L1 English writers and L2 English writers is that L1 English writers draw on bicultural and bilingual understandings. Halliday (1995:32) adds that L2 English students bring their L1 language and cultural experiences into the classroom. Therefore, teachers need to be aware that writers from other cultures may apply different standards to what is considered appropriate or relevant in writing. This means that students may incorporate textual elements that require interpretation within the context of their cultural frameworks. In addition to these cultural aspects, L2 English learners should also be taught other aspects of effective writing.

Erkan and Saban (2011:184) point out that for writing skills to advance, students must “develop confidence in writing conventions, linguistic knowledge, grammar, vocabulary and thinking strategies”. These elements allow students to express themselves proficiently in the second language. Students’ academic success depends on their ability to produce a proficient and well-structured text that the reader can understand.

Once students master the skills described above, they can logically organise their knowledge and beliefs from the beginning to the end of the essay, engaging the reader with convincing arguments throughout the text. Students should transfer the knowledge they acquire to paper by engaging the mental and cognitive processes of their minds. In so doing, they should use appropriate cohesive devices to establish logical connections between ideas. Geiser and Studley (2001:21), Machi and McEvoy (2021:64,103), Moe (1979:19) and Oroji and Ghane (2014:145) suggest that the ability to produce a logically structured text which contains convincing arguments guarantees success in academic writing.

Van Geyte (2013:8-9) and Shannon (2011:2) highlight the significant role of writing in the learning process of L2 English students. Writing is essential not only for learning but also as a means of evaluating students’ progress and determining whether they should proceed with their studies or not. Erkan and Saban (2011:165) emphasise that students must be able to express their ideas accurately and coherently. This underscores the importance of L2 English students becoming familiar with the steps involved in the academic writing process.

An academic text progresses from one central point or theme, with every part contributing to the main line of argument (Shannon, 2011:7). The centrality of this theme, referred to as the field, requires students to demonstrate their personal knowledge and understanding of the topic in their writing. Reither (1985:622) states that “writing begins naturally and properly, probing the contents of memory and the mind to discover the information, ideas and language that give substance to academic writing”. As Van Geyte (2013:19), Matsuda *et al.* (2003), Hyland (2002:12), and Oshima and Hogue (2007:15) put it, students are encouraged to engage in pre-writing activities by jotting down what they already know about the topic before they search for further information.

In other words, once students are given a topic, they should brainstorm ideas about the topic. This activity helps them to discover prior knowledge, organise the main ideas, formulate their claims about the theme, and support these claims in their writing. Additionally, students should translate these ideas into sentences that can serve as topic sentences for each paragraph (Van Geyte, 2013:19-22; Hinkel, 2003:11&13). Hyland (2003:24) and Van Geyte (2013:13) highlight that the writing process begins with uncovering prior knowledge about the topic and choosing the appropriate words when writing. Hogue (1996) adds that it is crucial to guide students through this process. Once the writer is satisfied with the ideas that they generated, they can write an outline of the essay.

The outline of an academic text constitutes a critical part of planning. Ideas in an academic text are organised according to how the writer intends to structure the essay (Oshima & Hogue, 2007:15). The creation of an outline helps to logically structure the essay and requires time to think, analyse and classify any relevant background knowledge (Chakraverty & Gautum, 2000:3). The structure of the academic text becomes the framework of the outline developed by the writer. Each idea within the outline serves as a topic sentence for the respective paragraphs.

The draft of each paragraph begins with the topic sentence. Hogue (1996:4) mentions that the topic sentence conveys the main idea and often signals the beginning of a paragraph. Reasons and examples are then added to further develop the paragraph. The main idea, reasons and examples discussed in each paragraph are linked by cohesive markers to ensure the argument flows logically. It is the responsibility of the writer to connect the various parts of the text using appropriate cohesive markers.

The language used in academic writing should be appropriate. Hyland (2003:6,14,20) states that writers should be able to produce texts with academically acceptable grammar and relevant vocabulary for the topic. In addition, they should construct sentences effectively, using cohesive

conjunctions correctly, and ensure correct spelling and punctuation throughout the text. Eggins refers to academically acceptable grammar and relevant vocabulary as the *mode*. Abdullah and Abdel-Karim (2010:211-212) assert that writers need appropriate vocabulary to structure ideas in the form of a coherent discourse. A discourse needs cohesive devices in order to be coherent. However, Hyland (2003:40) points out that “teachers frequently see language problems as the main obstacle to effective writing”. If students struggle with grammar and vocabulary, producing cohesive and coherent discourse becomes significantly more challenging.

Academic writers should be able to make their voices heard in their written texts (Hyland, 2003:12, 39). They are expected to voice their judgments, display their knowledge, and give their opinions in a written text. Additionally, Elbow (2007) argues that the ability to find their own voice suggests that they understand the topic and can communicate their ideas effectively at the required level to produce an academic text. In other words, they can use language appropriately. Furthermore, Elbow (2007) asserts that the ability to make their voice heard in a text is characteristic of all three linguistic dimensions: field, mode and tenor. This ability, he adds, reveals the writers’ competence in convincing readers of their argument.

Writers should be sensitive to the meaning their texts convey and the audience at whom their message is directed. Hyland (2003:134) further adds that when producing academic information, the writer should be able to show an understanding of the relationships between different parts of the text and its logical development. This ability to reflect the interrelation and development of a text is a defining characteristic of the mode.

Mullany and Stockwell (2010:84) state that academic writing has a more standardised and socially accepted form. Examples (11) and (12), below, illustrate the difference of mode between spoken and written language. Halliday and Hasan (1989:79) compares a sentence from a spoken text in example (11):

- (11) You can control the trains this way and if you do that you can be quite sure that they’ll be able to run more safely and more quickly than they would otherwise, no matter how bad the weather gets.”

with a typical written variant in example (12):

- (12) The use of this method of control unquestionably leads to safer and faster train running in the most adverse weather conditions.

Halliday (2020:79) further explains that the main difference in the above example is grammar, not vocabulary. These examples compare the mode in a verbal text (example (11)) to the mode in a written text (example (12)), which is formal text.

Academic texts are objective rather than personal. In this regard, Shannon (2011:2) explains that “the purpose of academic writing is to present information about a specific subject precisely and objectively”. Its objective is to inform, and not to entertain. Academic writing appears in different forms; for example, Van Geyte (2013:9) says that it is used for publications that are read by teachers and researchers, presented at conferences, and used by students at tertiary institutions to conduct their studies. Students rely on these publications to conduct research on assigned topics, to gather information to answer essay questions and, thus, fulfil academic requirements. Academic texts, therefore, contain fewer references to the writer or the reader. As Hyland (2011:196) points out, the focus of academic texts is on the information and the arguments the writer wants to make. Nevertheless, the writer should be careful how he presents his argument.

According to Halliday and Matthiessen (2014:213,220), writers are required to use relevant conjunctive devices under relevant circumstances. The overall structure of academic writing should be both formal and logical. Biber and Gray (2010:3) explain that academic writing is often detailed and consists of various ideas with clear logical relationships. This implies that academic texts should be cohesive and possess a logically organised flow of ideas. Moreover, the various parts of an essay should form a unified whole. This unity is realised through narrative links between sentences and paragraphs, which help the reader to follow the argument in the text. The use of transition words or phrases keeps the text cohesive and sequential, ultimately resulting in a text being a unified whole (Halliday & Matthiessen, 2014:608).

Weideman and Van Dyk (2014) point out that academic writing differs from other kinds of writing in that academic writers gather and process information relevant to the topic they wish to address, presenting it in such a manner that they convince the reader of their argument.

2.5.2 Conjunctive cohesion in academic writing

As stated in Section 2.2, all texts are composed of ideational meaning, interpersonal meaning, and textual meaning. Together, these strands of meaning allow texts to function effectively in specific communicative situations. While this dissertation focuses on the textual meaning of the text (specifically, the use of conjunctives), it is essential to also consider the ideational and interpersonal meanings when analysing the use of conjunctive devices.

Hyland (2003:48) highlights that students should be able to produce clear and well-organised texts. He further explains that one way to achieve this is through the regular use of signposts, which shows the reader how the writer intends the text to hold together. This is one of the ways in which the writer establishes a relationship with the reader, reflecting the interpersonal meaning of the text (Halliday and Hasan, 1989:45; Bloor & Bloor, 2004:10; Halliday & Matthiessen, 2014:88) – this is associated with tenor which reflects the role and the relationship between the writer and the reader. Interpersonal meaning of a text or language is about the writer and their relationship with and attitude towards the reader and the subject matter. In this context, the social dimension includes the interaction between the writer and the reader.

The writer shares information with the reader through a written text by using carefully selected words. Eggins (2004:111) states that, in addition to associating the concept of tenor with interpersonal meaning, participants display roles and attitudes within a specific communicative situation. In this regard, Bahaziq (2016:112) states that “language could be understood differently depending on the situation and context in which the discourse occurs”. In essence, both the writer and the reader are active participants in the text. Simply put, the writer uses their experience within the discourse community to anticipate and meet the expectations of the reader.

The writer decides about the kind of effect they want to have on the reader. Hyland (2003:34) states that when second-language writers compose in a second language and within an academic context, they should use an appropriate register, which may not be easy, because they are writing in a second language. Banda (2010:58) observes that L2 English students often struggle to use the appropriate register because they have not yet acquired sufficient proficiency in CALP. One way to demonstrate an appropriate register is by making the reader aware of the writer’s intentions through the use of cohesive devices. A cohesive and sequential text enables the reader to follow and understand the ideas shared in a text more easily.

Zamel (1983:182) and Bahaziq (2016:114) emphasise that the use of cohesive devices help prepare the reader to anticipate upcoming ideas – whether these ideas support previously stated points or present contrasting views. Cohesive devices can also signal the writer’s intention to present a contrasting perspective, thereby guiding the reader through the argument. With the appropriate use of cohesive devices, the reader will be able to understand the writers’ point of view and the opposing views included in the essay. However, Hyland (2003:34) notes that researchers have found that texts produced by L2 English students are “less cohesive, less fluent and contain more errors”.

Graddol *et al.* (1994:191) explain that the reader, when reading a text, is remote. This remoteness implies that students should have the reader in mind and ensure that their written work is comprehensible to the reader (in this case, the lecturer), because their academic work is assessed through written arguments. Academic writing, therefore, involves “transmitting messages to a person who is out of sight or earshot” (Graddol *et al.*, 1994:134). Without a solid foundation in writing, students will not be able to transmit messages which are clear and well-understood by their lecturers. The students’ written work must be cohesive. The incorrect use of conjunctions, for instance, can result in a non-cohesive essay. By understanding the role of linking adverbials or conjunctive adjuncts in writing, students can produce texts that aid the reader’s ability to read and understand the material fluently (Halliday and Matthiessen, 2014:655).

The goal of argumentative writing is to convince an audience that the writer or student can effectively argue their point. Dastjerdi and Samian (2011:66) state that argumentative writing should be done in such a manner that the writer convinces the reader of their beliefs on the subject at hand. To achieve this, writers require enough knowledge of cohesive devices to present their arguments appropriately. Through this process, the writer develops a relationship with the reader, enabling the readers to create vivid mental pictures of what the writers have written. As Halliday and Hasan (1976:298) note, writing requires the writer to present a many-faceted phenomenon while ensuring that the reader is carried along in the written text.

2.5.3 Second language writing theories

Research has proven that L2 English students experience problems in writing argumentative academic essays. Some of these problems include a limited syntactic range (Coetzee-Van Rooy & Verhoef, 2000) and dependence on their L1 (Vygotsky, 1978). Due to their limited syntactic range in their L2, students find it difficult to join words and phrases to form a sentence. Furthermore, students rely heavily on the syntactic structures of their L1, often resulting in incorrect sentence structures when translated into English, negatively affecting the cohesion within the text. These problems contribute to a fragmented flow of ideas, making it difficult for the reader to follow the argument in the text. This challenge underscores the importance of studying L2 English students’ writing. Scholars such as Zamel (1976), Hinkel (2004), and Silva (1990) have significantly contributed to our understanding of L2 English students’ academic writing by developing L2 English writing theories.

Atkinson (2018:1) defines the term *theory* by referring to it as:

(1) *thinking tools* – more or less well-developed ways of understanding and speculating about phenomena, including their essential nature, causes, and how they work; and (2) *acting tools* – the putting of one’s thinking on phenomena into action, seeing how it works, and adjusting and adapting it for better action.

The phenomenon being investigated in this case is second-language writing (more specifically, the use of conjunctive devices in academic L2 writing), and the theories pertaining to this phenomenon. Scholars have developed several theories to study L2 English writing, including: (i) the new rhetoric theory; (ii) the social constructionist theory; (iii) the structural approach; (iv) the English rhetorical conventions; (v) the dynamic model of writing; (vi) cognitivist theory; (vii) process writing; (viii) the contrastive approach; and (ix) the genre approach. However, Atkinson (2018) and Nelson (1998) agree that there is no comprehensive theory of second-language writing. Despite this, scholars generally agree that L2 language writing “is a practice-oriented field” (Atkinson, 2018:1).

Two key notions in the field of L2 writing is:

(1) writing is both process and product; and (2) second language/multilingual student writers’ needs are substantially different than those of [L1] students, and so must be addressed specifically.
(Atkinson, 2018:1)

One of the theories that focuses on writing as both a process and a product is the cognitivist approach (Flower & Hayes, 1981:366-367). This process includes planning, drafting, revising, and editing (Hyland, 2003:15; Raimes, 1991:410; Seow, 2002:315; Silva, 1990:160). In this approach, teachers provide students with multiple essay topics to choose from. Students then brainstorm, plan, write, revise, and rewrite. They should be able to process the information required for the topic, arranging and rearranging it before arriving at the final draft (Raimes, 1991:410). This approach, according to Atkinson (2018:1) and Hayes and Flower (1983:275-300) encourages students to generate ideas and develop them through pre-writing, drafting, receiving feedback, revising, and editing. Developing these ideas precedes achieving the correct form. Hyland (2003) and Raimes (1991) agree that this approach encourages students to think and form their own ideas in a positive environment. It also allows writers an opportunity to revise their texts and improve form where they notice the need. This iterative process enables L2 English students to produce cohesive academic texts.

Another theory that has influenced L2 English writing is the process approach, developed by Zamel (1976). Process writing focuses on the writer's engagement in a series of steps and stages involved in producing a written text, emphasising invention, multiple drafts, and the creation of meaning. In academic writing, the process begins when the student is given an essay topic and continues until the final draft is completed. Nelson (1998:278) critiques the process approach for focusing too much on the individual writer and the cognitive relationship between the writer and their internal world. However, Raimes (1991:412) argues that the process approach not only focuses on the intention of the writer but also on the role of the reader.

Matsuda (1997:55-56) expands on this by saying that both the reader and the writer constitute the broader context, which includes cultural, linguistic, and educational experiences. He further asserts that while writers are influenced by their backgrounds, they can transform these influences by changing their perceptions. Matsuda (1997:55-56) adds that teaching L2 English involves raising awareness of text structuring, readers' expectations, and writing patterns without imposing L1 English cultural values. He further critiques the dominance of English, attributing it to socio-political and socio-economic factors, and emphasises that while L2 English learners should be able to access English, they should also resist its dominant influences.

The advantage of process writing is that the cognitive relationship between the writer and their internal world – shaped by their educational experiences – helps ensure that in attempting to give meaning to the text, the writer will use the correct conjunctions.

Kaplan's (1966) article introduces the concept of contrastive rhetoric, defining it as a method of organising syntactic units into larger patterns. Contrastive rhetoric theorists argue that learners should first be taught how to construct individual sentences, then how to combine those sentences into paragraphs, and finally organise the paragraphs to form a cohesive essay (Nelson, 1998:277-278). This approach assumes that teachers emphasise the importance and function of cohesive conjunctions to direct the reader through the text. Kaplan observes that L2 English learners tend to employ rhetorical conventions associated with norms from their linguistic and cultural backgrounds, which may differ significantly from those employed in English academic writing. As a result, there is a need for instruction on syntactic patterns. Activities such as writing outlines, completing paragraphs, and reordering scrambled paragraphs contribute towards teaching students the value of creating cohesive academic essays.

Hyland (2002:83) posits "that effective writing instruction involves guiding students to an awareness of their readers, and the interactional strategies, background understandings, and

rhetoical conventions that these readers are likely to expect". Hyland's (2003:20) genre approach suggests that a genre is a set of texts sharing a similar purpose and, consequently, the same structure. Communication takes place both verbally and in written form. Since students communicate their studies through writing, they should therefore be able to distinguish between different genres and understand their unique structures to write appropriately for different genres. Teachers employing the genre approach, when teaching learners, focus on identifying linguistic patterns that represent social choices and constraints in texts. This method equips students to know the linguistic patterns typical of academic essays, helping them produce meaningful and cohesive writing.

Grabe and Kaplan (2014:217) offer a taxonomy of academic writing skills, knowledge bases, and processes, which they argue integrates all aspects of writing, including social, cognitive, and linguistic skills. This approach attempts to answer questions such as who writes what, to whom, for what purpose, why, when, where, and how. They believe that answering these questions will lead to an initial approximation for an ethnography of writing. Students will then be taught that the language they use in academic essays should be tailored to their intended audience – in this case, the lecturer. The taxonomy entails cognitive, contextual, and linguistic factors as essential components of academic writing.

Given that this study examines the use of conjunctive devices in the academic essays of L2 English first-year students, Grabe and Kaplan's (2014:217) taxonomy can serve as a guide for helping students approach academic essays. This includes understanding the topic and identifying the relevant approach when writing. When combined with Halliday and Hasan's (1976) taxonomy of cohesive devices (outlined in Section 2.3), this framework has the potential to support L2 English students in producing cohesive academic essays. The following subsection will deal with some of the conjunctions commonly used by L2 English students.

2.5.4 Problems L2 English learners experience when writing academic texts

Hyland (2004:34) states that a key factor distinguishing many second-language writers is their difficulty in adequately expressing themselves in English, largely due to their failure to acquire CALP (Cummins, 1981:29). Their L2 English foundation differs from that of L1 English speakers. Most L1 English speakers already have a rich vocabulary since English is their first language, whereas L2 English learners face the dual task of learning English while simultaneously learning how to write in English. Silva (1997) points out that research has proven that because L2 English learners are acquiring both the language and writing skills concurrently, their written texts tend to

be less effective. Hyland (2004:32) suggests that the simultaneous process of learning the language and learning to write in it may explain why some second-language writers struggle to reach the desired level of target language proficiency. This suggests that many second-language speakers who achieve only basic interpersonal communicative skills (BICS) are satisfied with acquiring a functional level of language proficiency – sufficient to deliver a message and be understood – without necessarily constructing well-developed and cohesive messages.

L2 English learners are often reported to face challenges in academic writing. Mpepo (2009:16) reports that the main problem confronting L2 English learners is their low proficiency in English, which manifests in numerous syntactical errors and inappropriate lexical choices. Mpepo (2009:13) further explains that deficiencies in academic writing stem from a lack of linguistic competence, in terms of inappropriate vocabulary and unfamiliarity with the modes and conventions for written work. Mpepo (2009:14) also notes that L2 English writing is affected by lexical transference of certain words like *lend* and *borrow*, for which many indigenous languages have only one word. Furthermore, a lack of understanding of English sentence structure affects the logical progression of ideas, resulting in incoherent texts. The difficulty is compounded by the learners' limited use of conjunctive devices such as *therefore*, *nevertheless*, and *however*, which is a direct result of low language proficiency. Given these challenges, the focus of this study is on examining the differences in the use of conjunctive devices in argumentative essays written by L2 English students.

Hyland (2003:12) highlights that one of the challenges L2 English students experience in academic writing is a lack of topical knowledge. This implies that if students do not fully understand the theme or topic, they may struggle to convey knowledge effectively to the reader. One reason for this unfamiliarity with the topic may be due to their cultural background. Abdel Latif (2015:160) points out that learning L2 English also involves learning a new culture. This cultural shift may explain why students are sometimes not familiar with certain topics in an L2 English context. Holme (2002:210) emphasises that understanding the culture associated with a language is crucial for fully grasping that language. A student's experiences may lead to a different interpretation of the context of a text, potentially making it harder to provide relevant information when writing an essay. This difficulty may result in students being unable to present information cohesively, as they might misuse conjunctive devices or fail to use them appropriately, especially if they are only familiar with a limited range of these devices.

The next section focuses on the use of conjunctions by L2 English students.

2.5.5 Conjunctions used by L2 English students in their writing

A number of studies have investigated the use of conjunctions in L2 English students' writing using the model of Halliday and Hasan (1976) and Halliday and Matthiessen (2014) (also see Ramasawmy, 2004; Dastjerdi & Samian, 2011; Bahaziq, 2016; & Adeyemi, 2017). Ramasawmy (2004) identified the overuse of conjunctions like *and*, *then*, *because*, and *as* to introduce casual and temporal relationships. The study also observed that students frequently used adversative conjunctions like *but*, and *however*, as well as causal-conditional conjunctions such as *although*, in a standardised manner.

Dastjerdi and Samian (2011) reported a similar trend, identifying the overuse of additive conjunctions like *and* and *or*, and causal-conditional conjunctions like *because* and *because of*. Their findings also indicated that while students preferred the use of the adversative conjunction *but* and causal-conditional conjunction *because*, they used additive conjunctions such as *furthermore*, *nonetheless*, and *on the other hand* less frequently.

Bahaziq (2016) similarly identified an overuse of the additive conjunctions *and* and *also*. The study found that students used the additive conjunction *or*, adversative conjunction *but*, causal-conditional conjunction *because*, *then* and *so* in a standardised manner, while they did not use temporal conjunctions.

Adeyemi (2017) highlighted the overuse of the additive conjunctions like *or*, *also*, *furthermore*, and *for instance*, and the underuse of connectors such as *thus*. Students also overused causal-conditional conjunctions such as *as a result*, *because*, *so*, and *so as*, while underusing adversative conjunctions like *instead*, *yet*, *however*, and *though*. Temporal conjunctions like *before*, *after*, *while*, and *meanwhile* were also used infrequently.

It will be interesting to find out which of these conjunctions appear in the current study and whether similar trends can be observed.

2.6 Conclusion

This chapter reviewed SFL and the literature on L2 English students' writing, dividing the discussion into five sections.

The first section introduced the stratified model of language in SFL, which consists of the strata of context (register), meaning, and lexicogrammar. The three strands of meaning – ideational, interpersonal and textual – interface with both the context of a situation and the lexicogrammar.

The second section explored cohesion in a text, emphasising its role in creating unity and coherence. Various types of cohesive devices were discussed, including lexical and grammatical devices such as referential, comparative, and demonstrative cohesion, as well as determiners, ellipsis, and substitution. The function of each cohesive device in sentence construction was also stated.

The third section focused on conjunctions, examining several models for their classification. Particular attention was given to Halliday and Hasan's (1976:238-239) categorisation and Halliday and Matthiessen's (2014:612) system of conjunctions. The latter's categories – elaborating, extending and enhancing conjunctions – were discussed in detail.

The fourth section reviewed academic writing in the context of L2 English students, covering topics such as the development of writing and critical thinking skills, the structure of academic texts, steps for writing academic essays, the role of the writer's voice, features of academic writing, theories on second-language writing, problems experienced by L2 English students, and the specific use of conjunctions in their writing.

Concepts from SFL, specifically those relating to textual metafunction, will serve as a framework for analysing conjunctions in the corpora. Observations from the literature on L2 English students' academic writing will inform the interpretation of the results of the analyses.

The next chapter presents the methodology employed in this study.

CHAPTER 3 METHODOLOGY

3.1 INTRODUCTION

This study adopts a corpus linguistic approach. Through corpus-based research, the researcher can conduct a quantitative description of language use and provide a qualitative interpretation of the findings. The first purpose of this chapter is to describe the research design of this study. Section 3.2 discusses the type of corpora used in this research, followed by a detailed description of the specific corpora in Section 3.3. The research instruments employed in this study are examined in Section 3.5. Section 3.6 focuses on the methods used to extract and analyse the data, while the statistical analysis is discussed in Section 3.7. Finally, issues of ethics and consent are addressed in Section 3.8, and the chapter concludes with Section 3.9.

3.2 Research design

Kerlinger (1986:279) defines research design as “the plan, structure, and strategy of investigation conceived to obtain answers to research questions and to control variance”. This study adopted the corpus linguistics approach.

3.2.1 A corpus linguistic approach

Esimaje *et al.* (2019:7) and Sinclair (2004:1) describe corpora as a systematic collection of language texts of different types and genres, typically large and used for comparing languages in an electronic format. They further explain that these corpora usually serve as a database for broad linguistic research rather than focusing on one specific aspect of language study (Rocha, 2007:13). This means that these corpora encompass various aspects of language, allowing for a wide range of research applications.

Primarily, corpora can contain spoken, written, or a combination of both types of texts. Esimaje and Hunston (2019:23-24) and Gilquin and Granger (2015:10) agree that some corpora include both spoken and written texts. Some examples of corpora include the British National Corpus (BNC), which comprises 100 million words, and the Bank of English, which consists of 400 million words.

Written corpora are made up of different types of texts. Esimaje and Hunston (2019:24) explain that corpora may include newspapers, periodicals, fiction, academic books, letters, and college or university essays. These corpora are particularly valuable for answering questions about specific aspects of a given language, such as grammar, vocabulary, or discourse. They are also useful for comparative analyses.

Additionally, Esimaje *et al.* (2019) explain that corpora are selected to represent a language or a variety of a language. For instance, Esimaje and Hunston (2019:7) note that a collection of corpora may be representative of a specific language variety, such as English spoken in East Africa, English used at academic conferences, or English in written academic texts. Furthermore, Esimaje *et al.* (2019) identify various classifications of corpora, including general, specialised, comparable, parallel, learner, pedagogic, diachronic, and synchronic corpora. The corpora used in this study are specialised in nature.

3.2.2 Specialised corpora

Specialised corpora are one of the classifications of corpora. Granger (2013a) and Esimaje and Hunston (2019:24) agree that “specialised corpora are compiled with a particular research task in mind and, is therefore representative of a given type of text”. Furthermore, Granger (2013b) and Esimaje and Hunston (2019:24) highlight that specialised corpora are used to investigate a particular type of language or topic. Esimaje and Hunston (2019:24) state that these “corpora are often compiled by individual researchers to investigate language phenomena of interest to them”. Examples include collections of female writing, students’ conversations, newspaper articles, or the works of a particular author.

One example of a specialised corpus is the Chris Oyakhilome sermons (COS) compiled by Esimaje (2019). This corpus consists of 400 sermons with a total of 65 000 words and was compiled by Esimaje to investigate the lexical characteristics of Chris Oyakhilome’s sermons. Esimaje *et al.* (2019:10) also recorded other specialised corpora, such as Irish post-primary school textbooks, online reviews of video games, and judges’ statements about women found guilty of murder. They assert that such specialised corpora are valuable for linking language to culture and ideology.

In this study, specialised corpora classified as learner corpora will be employed.

3.2.3 Learner corpora

Gilquin (2015b:9), Callies (2015:35), and Esimaje *et al.* (2019:7-9) define learner corpora as collections of machine-readable, naturally occurring, authentic, continuous, and contextualised texts that are representative of and produced by foreign or second-language learners of a variety of languages stored in an electronic format. As stated by Esimaje *et al.* (2019) and Sinclair (2004) in Section 3.1, the storage of these collections enables the analysis of large amounts of learner data.

Gilquin (2015b:12) and Granger (2002:7) proclaim that learner corpora have been collected in institutions worldwide to investigate learner language and often contain both spoken and written texts. Some of the collected and stored corpora listed by Fuchs *et al.* (2019:45) include the International Corpus of Learner English, the Spoken Xhosa-English Corpus, the Nigerian Learner English Corpus, and the Tswana Learner English Corpus.

Gilquin and Granger (2015:415) define learner language as the production of language by learners in actual use. In other words, learner language is verbal or written language produced by second-language learners. Callies (2015:35) states that learner corpora have the potential to enable the investigation of the developmental processes underlying learning in L2 English. This means that scholars can study the developmental process of learning L2 English from the moment it is introduced to the learner until Grade 12 through to the tertiary level.

The purpose of learner corpora in this study is to compare essays written by L2 English students during the periods 2001–2003 and 2017–2019, respectively. Esimaje and Hunston (2019:25) describe a corpus of texts collected from the same language at different periods as a diachronic corpus. The corpora used in this study can be regarded as diachronic because the data were collected at different points in time and were from the same language. The purpose of employing these corpora in this study is to track similarities and differences in the use of conjunctive devices in the academic essays that form part of the Tswana Learner English Corpus (TLEC) and compare them with the conjunctive devices used in the academic essays that form part of the South African Multilingual Learner Corpus of Academic texts (SAMuLCAT). Following Anthony (2013:141), the corpora in this study are regarded as linguistic data that can be viewed and analysed using specialised computer software.

Learner corpora are used to provide primary evidence of the nature of learner language and are often employed to compare learner language with that of L1 speakers (Van Rooy, 2013:10).

Unlike previous studies, this research compares two L2 corpora collected over 20 years apart, rather than comparing L1 English and L2 English student writing.

The researcher will identify conjunctive devices used by learners in the TLEC and the SAMuLCAT and conduct a comparative analysis of these conjunctive devices. Halliday and Matthiessen's (2014) system of conjunctions will serve as the framework for identifying and understanding the learners' choices of conjunctive devices.

3.2.3.1 Tswana Learner English Corpus (TLEC)

The first corpus used in this study is the Tswana Learner English Corpus (TLEC). The essays in the TLEC were collected from Kimberly College, the University of the Witwatersrand, the former Potchefstroom University and the former University of Bophuthatswana (now both part of North-West University (NWU)). A total of 519 essays were collected from these institutions, amounting to 201 244 words. These essays were gathered under the leadership of Professor Bertus van Rooy. Van Rooy (2020:174) notes that participants involved in the TLEC collection had limited regular interaction with L1 speakers of English. Additionally, learners from Botswana were enrolled at the former University of Bophuthatswana (currently the Mahikeng campus of NWU) at the time that the data was collected. The TLEC forms part of the International Corpus of Learner English (ICLE). According to Fuchs *et al.* (2019:38), ICLE is a compilation of academic writing by students and was initiated by Granger in 2009.

For purposes of comparison with the SAMuLCAT, only the essays originating from the current NWU (i.e. the campuses at Mahikeng and Potchefstroom) were included in this study. Granger *et al.* (2020:51) indicate that the number of essays written by Setswana-speaking learners is 428, comprising a total of 168 142 words. Before participants wrote and submitted their essays, they were required to complete consent forms to confirm their voluntary participation in the study. They were also given biographical questionnaires to fill out.

3.2.3.2 South African Multilingual Learner Corpus of Academic Texts (SAMuLCAT)

The second corpus used in this study is the SAMuLCAT. According to Weideman and Van Dyk (2014), the International Consortium for Language Development and Assessment (ICELDA), alongside other academics at NWU and the University of Pretoria initiated the SAMuLCAT project. These institutions identified the need to collect data for a comprehensive corpus of South African learner texts, aimed at supporting language planning and development in South African higher

education. Weideman and Van Dyk (2014) further explain that the “SAMuLCAT aimed to collect data from various universities in South Africa, to build a multi-L1, multi-L2, multimodal, multi-genre and multi-level corpus of academic learner texts based on internationally accepted corpus-building principles”. The resulting data has been made accessible for downloading from the South African Centre for Digital Language Resources (SADiLaR) under a Creative Commons Attribution-Noncommercial-ShareAlike 4.0 International license (CC-BY-NC-SA).

Gilquin (2015b:13) notes that while early learner corpora primarily focused on languages like English, German, French, and Spanish, multilingual corpora such as the MiLC corpus now include languages like Catalan, English, French, and Spanish, while the USP Multilingual Learner Corpus encompasses English, German, Italian, and Spanish. The SAMuLCAT corpus used in this study includes essays written by students whose mother tongues are Setswana, Sepedi and Sesotho – languages from the same language family. This subset consists of 190 essays, totalling 77 898 words.

Undergraduate students who consented to having their essays analysed were given consent forms to fill in. Background information about these students was collected but was stored separately from the essays to ensure confidentiality. Ethical clearance was granted for the collection and use of this data. The students submitted their typed essays through the learning management system of their institution. Essays written were extracted from the data management system, but no personal information was included in the extraction. The collection and management of this data were coordinated by Professor Tobie van Dyk from NWU’s Potchefstroom Campus. These two corpora, the TLEC and the SAMuLCAT, collected at different points in time, form the basis for this study’s comparison of conjunctive device usage.

3.3 Corpus analysis tools and data extraction

Callies (2015:35) states that the analysis of learner corpus data is facilitated by its electronic storage. This allows the processes of extraction, analysis, interpretation, and presentation of findings to be done semi-automatically. Furthermore, the choice of methods for data extraction, analysis, and interpretation depends on the study’s objectives and the research questions posed. Consequently, the results and findings of the study are dependent on the selected methods or databases. Granger *et al.* (2015:1) explain that the digital medium accelerates data analysis and enables a wide range of investigations through a battery of software tools. Corpus analysis software such as WordSmith (Scott, 2010:2) contains tools such as the wordlist tool, the concordance tool, and the keywords tool, all of which streamline data analysis. Scott (2010)

further explains that (i) wordlists generated with the wordlist tool allow researchers to view all words or word clusters in a text; (ii) concordances generated with the concordance tool enable the search for a single word or phrase, displaying each occurrence of the word or phrase in its context; and (iii) the keywords tool identifies significant keywords within a text.

The software used in this study is Wordsmith Tools 8.0, which was employed to extract concordances of conjunctive devices from the TLEC and the SAMuLCAT, based on Halliday and Matthiessen's (2014:612) system of conjunctions (see Chapter 2, Section 2.4). Esimaje *et al.* (2019:63) explain that concordancing tools enable researchers to view search words in the contexts they were used. For example, the word *so* can function either as an intensifier or as a conjunction. By generating a concordance for the word *so*, the researcher can manually identify and categorise each occurrence according to its specific function. Example (1) and example (2) illustrate how *so* may perform different functions depending on its use in a sentence.

- (1) Is putting a rocket in orbit half **so** significant as the good news that God put his son, Jesus Christ, on earth to live and die to save our hell-bound souls? (Huddleston & Pullum, 2002:1130).
- (2) He's come home early **so** we can all go to the movies together. (Huddleston & Pullum, 2002:734).

In example (1), *so* functions as an intensifying adverb. In example (2), *so* functions as a conjunction.

Concordances were generated for *and*, *but*, and *or* given their high frequency in the corpus. Other conjunctions were concordanced in groups using lists of search terms saved in text files. Three text files were created following the system of conjunctions as set out by Halliday and Matthiessen (2014:611-622). The first text file contained a list of elaborating conjunctions, the second included a list of extending conjunctions, and the third listed enhancing conjunctions. The concordances generated in WordSmith were exported to Excel spreadsheets to facilitate the compilation of tables and enable statistical processing. Conjunctions such as *or*, *else*, *then*, *as a result*, *so*, *except*, and *yet* were disambiguated because they serve different linguistic functions. Instances where abbreviations such as *e.g.* (in place of *for example*) and *i.e.* (in place of *that is*) were used

were identified and added to the list of conjunctions. Additionally, cases of incorrect spelling⁶, such as *insted* (as opposed to *instead*), were identified and included in the list of conjunctions.

After disambiguating and classifying the data by conjunction subtypes, pivot tables were utilised to calculate the raw frequency of each conjunction. These raw frequencies were then normalised employing the following equation to allow for meaningful comparisons between the TLEC and the SAMuLCAT.

$$\text{relative (normalised) frequency} = \frac{\# \text{ instances of word}}{\# \text{ words in corpus}} \times 10\,000$$

Log-likelihood calculations were performed using the Excel spreadsheet created by Xu (2007). Descriptive statistics were performed using the Analysis ToolPak add-in in Microsoft Excel. Inferential statistical analyses were conducted using R (R Foundation, 2024).

3.4 Statistical analysis

The number of occurrences for each category of conjunctions was identified in every text. These occurrences were then normalised to a frequency per 1 000 words to facilitate comparison. The Descriptive Statistics tool in the Analysis ToolPak add-in in Excel was used to describe the most important features of the data. These findings were visualised using the Statistical Charts tool in Excel.

Inferential statistics were performed to better understand the differences in the frequency data between the respective corpora and to determine whether these differences were statistically significant. In R, a Shapiro-Wilk normality test was applied to determine whether the data was distributed normally (Levshina, 2015:56). The test statistic for the Shapiro-Wilk test is denoted as *W*, and it is used to calculate the p-value. If the p-value is greater than 0.05, the null hypothesis (that the sample is from a normally distributed population) cannot be rejected. Conversely, a p-value below 0.05 indicates the sample does not follow a normal distribution. The results of this test determined whether parametric or non-parametric statistical tests would be employed to determine whether the differences in the data sets were statistically significant.

⁶ Since the corpora represent unedited student writing, spelling errors are also retained when corpus examples are quoted in the next chapter.

Since the data were not normally distributed, a non-parametric test, namely the Wilcoxon test, was used to determine whether the differences between the data sets were statistically significant. The Wilcoxon test is designed to compare central tendency measures between two groups (Levshina, 2015:87).

Additionally, log-likelihood tests were employed to compare the frequency of individual conjunctive devices between the two corpora. The log-likelihood test is a statistical method used to evaluate the likelihood of certain events or phenomena occurring in different contexts, even with relatively small sample sizes (Levshina, 2015:10). Levshina (2015:9) further asserts that this test is particularly useful for identifying whether the observed occurrences of rare or common phenomena deviate significantly from what would be expected by chance. In simpler terms, the log-likelihood test helps determine whether the frequency of certain events (such as the appearance of specific words in text analysis) is unusual compared to an expected baseline. This method is valuable in analysing both rare and frequent events, as it allows for the assessment of their significance without requiring large amounts of data (Levshina, 2015:104). For example, in text analysis, it could be used to compare how often a rare word appears in one set of documents versus another or analyse the difference in frequency for a common word. By accounting for varying frequencies, the log-likelihood test ensures a meaningful comparison between rare and common phenomena.

3.5 Text analysis

Five texts from each corpus were randomly selected to be analysed to see if the differences in the use of conjunctions affect cohesion. As outlined in the corpus description, all authors of the texts in both corpora are L1 speakers of Setswana, Sesotho, or Sepedi. In the TLEC, the authors were undergraduate students from the former Potchefstroom University and the former University of Bophuthatswana, now both incorporated into North-West University (NWU). Similarly, in the SAMuLCAT, all authors were undergraduate students enrolled at NWU.

Obtaining additional background information was challenging, as the metadata for each corpus did not provide the same details. For instance, while the TLEC metadata included the authors' gender, this information was not available in the SAMuLCAT metadata. Similarly, the TLEC metadata specified the exact ages of the authors, whereas the SAMuLCAT metadata only provided broader age categories. All texts analysed qualitatively were written by authors aged between 16 and 25.

To ensure a random selection of texts from each corpus, all file names were listed in a dedicated column on an Excel sheet. A random number was generated for each file using the RAND function in an adjacent column. The files were then sorted in ascending order based on these random numbers, and the five files with the smallest values from each corpus were selected for qualitative text analysis.

The texts were analysed using the method used by Halliday and Matthiessen (2014:622), where each sentence of the text was placed in a line of the table, with the conjunctions identified and categorised in the columns next to the sentence. This approach facilitated a more in-depth contextual analysis

3.6 Issues of ethics and consent

Davidson and Griffin (2000:114) define ethics as “an individual’s personal beliefs, regarding what is right and wrong or good or bad”. This implies that researchers must adhere to specific ethical principles, particularly when collecting data involving human participants. It also reveals how research should be conducted. Gillon (1985:1700) defines consent as agreement, acceptance, or assent. To collect data ethically, students must agree to participate in the study. Although ethical clearance was not required for this research, as it did not involve direct human participants, students had provided consent at the time of data collection for their texts to be used.

3.7 Conclusion

This chapter elucidated the research design, entailing general corpora and specialised corpora, learner corpora, and the steps taken to collect data, specifically for the TLEC and the SAMuLCAT. It also detailed the research instruments used and the methods applied to extract and analyse data. Additionally, ethical considerations related to the study were discussed. The next chapter presents the data analysis and corresponding discussion.

CHAPTER 4 ANALYSIS AND FINDINGS

4.1 Introduction

The purpose of this chapter is to present and interpret the results of the analysis conducted as outlined in Chapter 3. Section 4.2, focuses on the results of the analysis of the coordinating conjunctions *and*, *or*, and *but*. The findings for the analysis of the other conjunctions are detailed in Section 4.3. Section 4.4 presents the results of the quantitative text analysis. Finally, the chapter concludes with a summary of key insights in Section 4.5.

4.2 Coordinating conjunctions

Quirk *et al.* (1985:920), Jackson (1990:230) and Biber *et al.* (1999:134,1070) classify the conjunctions *and*, *or* and *but* as coordinators. Coordinators function by joining linguistic units of the same hierarchical type, namely phrases and clauses. According to Biber *et al.* (1999:78-81), Quirk *et al.* (1985:930-935) and Halliday and Matthiessen (2014:612) *and* serves to add information, *or* expresses alternatives or clarification, and *but* highlights contrast.

Quirk *et al.* (1985:935-941) further elaborate that these coordinators may also form part of correlative conjunctions, which reinforce or clarify their meaning. In correlative conjunctions, each coordinator pairs with another word to reinforce the conjunction. For instance, *both* is frequently paired with *and*, *either* with *or*, and *but* with *not only* (Quirk *et al.*, 1985:935).

Given that coordinating conjunctions uniquely coordinate phrases and clauses, the researcher considered it appropriate to analyse these prototypical coordinating conjunctions separately.

4.2.1 Overall frequencies of coordinating conjunctions

Table 4.2.1.1 presents an overview of the raw and relative frequencies of the coordinating conjunctions *and*, *or*⁷, and *but* as found in the TLEC and the SAMuLCAT. The data reveal that *or* and *but* occur more frequently in the TLEC than in the SAMuLCAT, while *and* is more prevalent in the SAMuLCAT than in the TLEC.

⁷ The combined frequency of *or* (i.e. *or* as an elaborating conjunction and *or* as a clarifying conjunction) is reported here. A more detailed analysis is presented in Section 4.2.3.

The results of the log-likelihood test further confirm that the differences in the frequencies of all three coordinating conjunctions between the TLEC and the SAMuLCAT are statistically significant.

Table 4.2.1.1: An overview of the coordinating conjunctions *and*, *or*, and *but* in the TLEC and the SAMuLCAT corpora

	TLEC		SAMuLCAT		Significance	
	Raw frequency	Relative frequency	Raw frequency	Relative frequency	Log-likelihood (G ²)	p-value ⁸
<i>and</i>	4 247	253	2 500	321	88.23	5.83×10^{-21} ****
<i>or</i>	819	49	291	37	15.74	7.28×10^{-05} ****
<i>but</i>	581	35	169	22	30.72	2.97×10^{-08} ****

Figure 4.2.1.1 visually illustrates the frequency and distribution of the coordinating conjunctions *and*, *or*, and *but* across the two corpora, providing a comparative analysis of their usage.

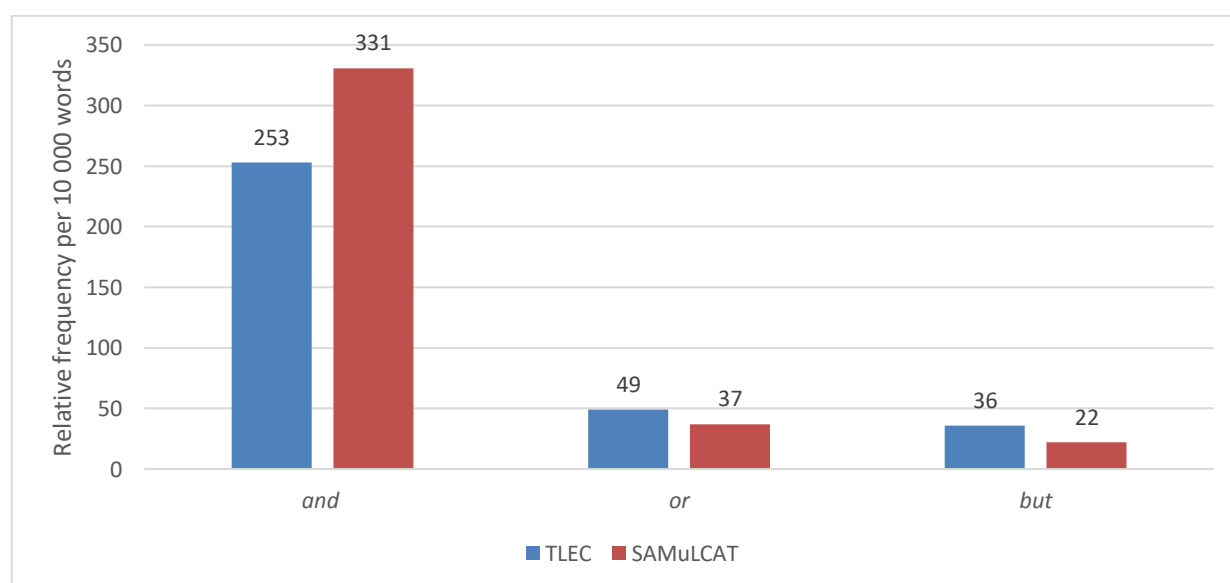


Figure 4.2.1.1: The frequency and distribution of the coordinating conjunctions *and*, *or*, and *but* in the TLEC and the SAMuLCAT

⁸ The statistical significance of the log-likelihood ratio calculation is indicated as follows:

- * $p < 0.05$ (critical value: $G^2 = 3.84$)
- ** $p < 0.01$ (critical value: $G^2 = 6.63$)
- *** $p < 0.001$ (critical value: $G^2 = 10.83$)
- **** $p < 0.001$ (critical value: $G^2 = 15.13$)

In the sections that follow, the results for each of the coordinating conjunctions will be explored in more detail.

4.2.2 A discussion of the coordinating conjunction *and*

As discussed in Chapter 2, the function of *and* is to add information that agrees with what has been stated earlier in the text. The analysis in the previous section, reveals that *and* is used more frequently by student writers in the SAMuLCAT (relative frequency = 331 per 10 000 words) than by those in the TLEC (relative frequency = 253 per 10 000 words). This difference is statistically significant ($G^2 = 88.23$; $p = 5.83 \times 10^{-21}$).

Biber *et al.* (1999:84) notes that *and* occurs less frequently in conversation than in written texts, A pattern they attribute to the higher frequency of verbs in conversational language. Supporting this, Partridge (2011:5) observed that the TLEC is characterised by a higher proportion of verbs than a comparable corpus of L1 student writing, suggesting that the written language of L2 student writers often mirrors features of spoken language. Similar findings have been reported by Shaw and Liu (1998), Terblanche, (2009:47-48), and Van Rooy and Terblanche (2006). This implies that while the language in the TLEC more closely resembles spoken language, the language in the SAMuLCAT aligns more closely with the conventions of written language.

Figure 4.2.2.1 below provides a visual representation of the distribution of the conjunction *and* based on its frequency per 1 000 words in each text across both corpora. In the TLEC, *and* occurs with a median frequency of 2.44 per 1 000 words, while in the SAMuLCAT it occurs with a higher median frequency of 3.09 per 1 000 words. The interquartile range of *and* usage is also greater in the SAMuLCAT (8.03) than in the TLEC (6.47).

To determine whether the data is distributed normally, a Shapiro-Wilk Normality test was performed separately on the data of the TLEC and the SAMuLCAT. The tests indicate that the datum is not distributed normally in either of the corpora (TLEC: $W = 0.985$, $p = 2.642 \times 10^{-4}$; SAMuLCAT: $W = 0.970$, $p = 4.281 \times 10^{-4}$). Therefore, a Wilcoxon test was employed to determine whether the differences in *and* usage between the two corpora are statistically significant. The results confirm a statistically significant difference ($W = 27\ 166$ $p = 4.433 \times 10^{-10}$).

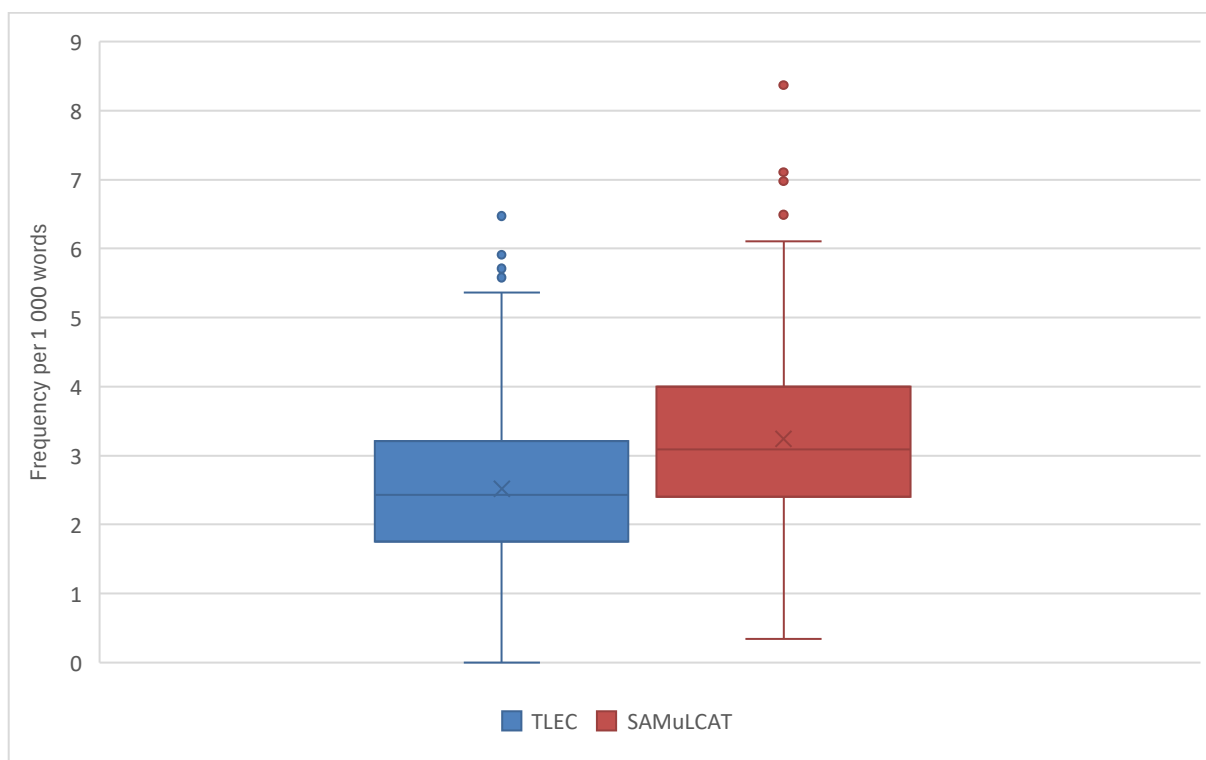


Figure 4.2.2.1: Distribution of the coordinating conjunction *and* based on its relative frequency per 1 000 words in each text of the TLEC and the SAMuLCAT

The coordinating conjunction *and* establishes an additive relationship between elements that occupy the same hierarchical level in syntax and share the same syntactic role (Biber *et al.*, 1999:84). Figure 4.2.2.2 illustrates the contrasting usage of *and* in the TLEC and the SAMuLCAT. In the TLEC, *and* is used to connect clauses 61% of the time and phrases 39% of the time, while in the SAMuLCAT, *and* is used to connect phrases 64% of the time and clauses 36% of the time.

Biber *et al.* (1999:84) point out that in conversational context, *and* is more frequently used to coordinate clauses, whereas in academic writing, it is more commonly used to coordinate phrases. This suggests that the TLEC aligns more closely with conversational patterns, while the SAMuLCAT reflects the conventions of academic writing. The distinction is illustrated in the following examples from the TLEC (1) and the SAMuLCAT (2):

- (1) Because some people are poor **and** doesn't have enough money to educate their children, those children who lacked education usually ends up involving themselves in drugs. They drink beer, smoking daagas **and** as a result they

just sleep around **and** that's when the HIV/AIDS take the chance. (TLEC, TSNO1262)⁹

- (2) learners need freedom to test their own potential **and** their ability to learn on their own. I say creativity in teaching **and** learning should be practised **and** encouraged to improvise our learner with more knowledge **and** self-confidence on their own. (SAMuLCAT, 3549Sepedi)

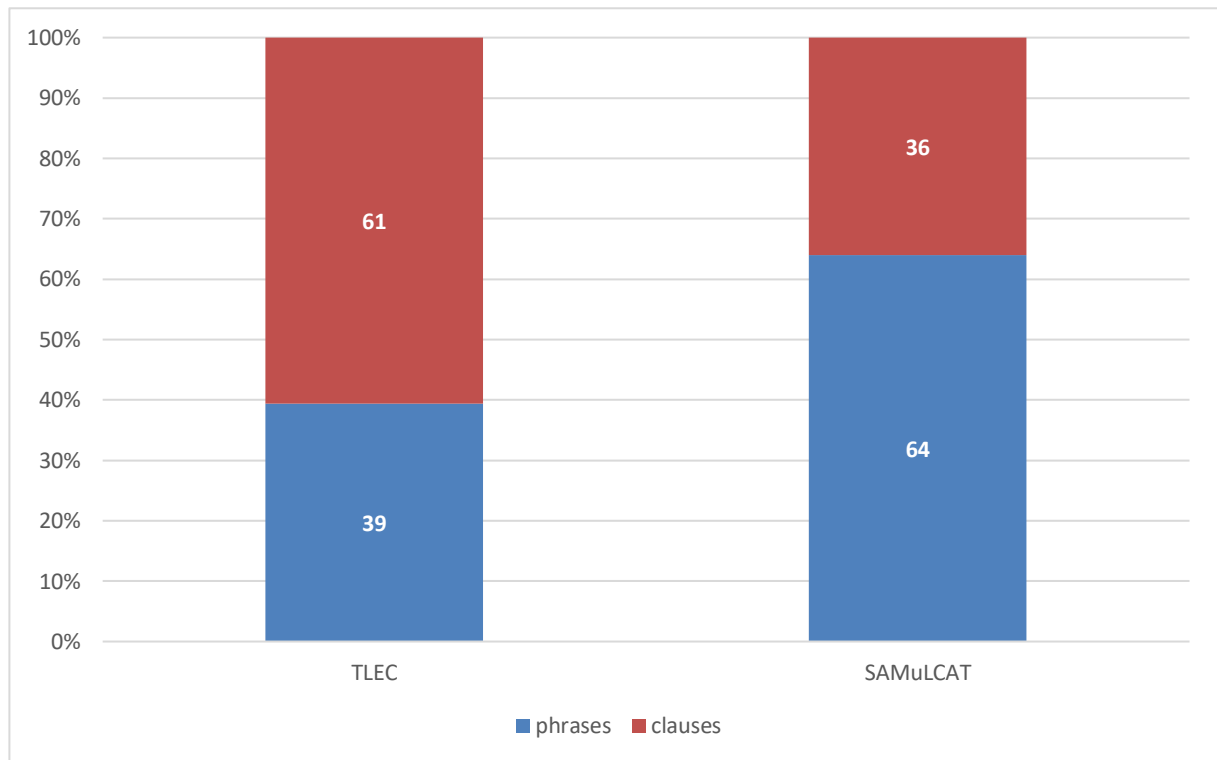


Figure 4.2.2.2: Percentage use of *and* to connect phrases and clauses in the TLEC and the SAMuLCAT

As the instances of the use of *and* were investigated, several instances of pseudo-coordination (also known as false coordination) were observed in the TLEC. Quirk *et. al.* (1985:978) define pseudo-coordination as a sentence construction where two verbs or adjectives are conjoined by a coordinator. They point out that this type of coordination is characteristic of an informal style. Table 4.2.2.1 below presents the instances of pseudo-coordination identified in the TLEC and the SAMuLCAT.

⁹ The examples are quoted exactly as students wrote them and the spelling errors are not corrected.

Table 4.2.2.1: A comparison of pseudo-coordination identified in the TLEC and the SAMuLCAT corpora

	TLEC		SAMuLCAT	
	Raw Frequency	Relative Frequency	Raw Frequency	Relative Frequency
<i>come and</i> VERB	27	1.6	0	0
<i>go and</i> VERB	44	2.6	0	0
<i>stand up and</i> VERB	3	0.17	0	0
<i>stay and</i> VERB	2	0.11	0	0
<i>time and</i> VERB	3	0.17	0	0
<i>try and</i> VERB	7	0.4	1	0.12
<i>wake up and</i> VERB	3	0.17	0	0
<i>nice and</i> ADJECTIVE	1	0.05	0	0

The TLEC displays a more frequent use of verbal pseudo-coordination by student writers compared to the SAMuLCAT. The table above shows that the pseudo-coordinators *come and* VERB, *go and* VERB, *stand up and* VERB, *stay and* VERB appear exclusively in the TLEC. Example (3) below illustrates this type of pseudo-coordination.

- (3) This mines attract the tourist to ***come and invest*** country because of North West. (TLEC: TSNO1096)

Only one form of pseudo-coordination (*try and* VERB) was identified in both the TLEC and the SAMuLCAT. The form occurred more frequently in the TLEC than in the SAMuLCAT. Example 4 below illustrates the only instance of pseudo-coordination found in the SAMuLCAT:

- (4) I will also be discussing different reasons why performing the act of rhino poaching is very wrong, and the measures the government have taken to ***try and prevent*** this situation. (SAMuLCAT: 6613Setswana)

Since several instances of pseudo-coordination were found in the TLEC in contrast to the single instance found in the SAMuLCAT, it could be argued that the language used in the TLEC is more informal than the language used in the SAMuLCAT.

Only one instance of adjectival pseudo-coordination (*nice and* ADJECTIVE), was identified in the TLEC, while no instances were observed in the SAMuLCAT.

The correlative conjunction *both ... and* was also identified in both corpora (see Table 4.2.2.2 below). According to Biber *et al.* (1999:80), the use of *both ... and* stresses the additive meaning of *and*. This correlative coordinator appeared 36 times (relative frequency = 2.1 times per 10 000 words) in the TLEC, and 46 times (relative frequency = 5.9 times per 10 000 words) in the SAMuLCAT.

The results of a log-likelihood test indicate that the difference in the frequency of *both ... and* between the TLEC and the SAMuLCAT is statistically significant ($G^2 = 20.78$; $p = 5.194 \times 10^{-06}$). The correlative coordinator *both ... and* was used more frequently in the SAMuLCAT than in the TLEC. Biber *et al.* (1999:85) found that correlative coordinators occur more frequently in academic registers, aligning with the findings in this study.

Table 4.2.2.2: A comparison of the correlative conjunction identified in the TLEC and the SAMuLCAT

	TLEC		SAMuLCAT		Significance		
	Raw frequency	Relative frequency	Raw frequency	Relative frequency	Log-likelihood (G^2)	p-value	
<i>both ... and</i>	36	2.1	46	5.9	20.78	5.194×10^{-06}	***

Traditionally, the correlative conjunction *both ... and* connects two elements (as expressed in the word *both*). In example (5), the two elements that are coordinated are the noun phrases *science* and *a profession*:

- (5) Currently psychology is ***both science and a profession***, with many perspectives namely, behavioural, psychoanalytic, humanistic, cognitive, biological and evolutionary. (SAMuLCAT: 4746Setswana)

In the TLEC, though, there are instances where *both ... and*, is used to correlate more than two elements, as illustrated in example (6) where three adjectives (namely *rural*, *industrial* and *urban*) are correlated with one another to modify the noun *areas*. No such instances are found in the SAMuLCAT.

- (6) She is capable of attracting tourist with her sweet scent from ***both rural, industrial and urban areas***. (TLEC: TSNO1015)

Biber *et al.* (1999:82) note that the coordinating conjunction *and* in the TLEC may co-occur with other conjunctives such as *if* (example (7)), *because* (example (8)), and *as a result* (example (9)).

Biber *et al.* (1999:82) explain that while the coordinating conjunctions are mutually exclusive, they can be used with other conjunctive adjuncts.

- (7) To get Education here in South Africa, you need money **and if** you are poor it will be very difficult for you to proceed with your education. (TLEC: TSNO1283)
- (8) Normally if the teenagers are in love with old people they would have no choice of sex **and because** they are young they would be exploited and abused. (TLEC: TSNO1033)
- (9) But there was no informal verification made regarding the matter **and as a result** it spread most in Nigeria. (SAMuLCAT: 798Setswana)

Instances of the redundant and emphatic conjoining of each **and** every (Quirk *et al.*, 1985:963) were also identified nine times in the TLEC. However, similar instances could not be identified in the SAMuLCAT. An example from the TLEC follows in example (10).

- (10) For instance you know **each and every** part of the thing that you are going to work with. (TLEC: TSNO1484)

And was also observed in certain collocations in the TLEC, as can be seen in examples (11), (12) and (13) below. Similar instances were not observed in the SAMuLCAT.

- (11) Soccer players can sometimes be loaned to some outside club to learn different styles of football to improve **here and there**. (TLEC: TSNO1507)
- (12) It's very important that parents teach their children about the **pros and cons** of whatever it is they see on TV. (TLEC: TSNO1498)
- (13) It should a **give-and-take** situation. (TLEC: TSNO1446)

Another way *and* is used by student writers in the TLEC and the SAMuLCAT is for intensifying and continuative coordination (Quirk *et al.*, 1985:980). Table 4.2.3.2 below presents the raw and relative frequency of intensifying and continuative coordination identified in the TLEC and the SAMuLCAT. The table indicates a more frequent use of intensifying and continuative coordination in the TLEC than in the SAMuLCAT.

Table 4.2.2.3: Raw and relative frequencies of intensifying and continuative coordination in the TLEC and the SAMuLCAT

	TLEC		SAMuLCAT	
	Raw Frequency	Relative Frequency	Raw Frequency	Relative Frequency
<i>time and again</i>	4	0.23	0	0
<i>more and more</i>	9	0.53	4	1
<i>paid and paid</i>	1	0.05	0	0
<i>lots and lots</i>	1	0.05	0	0
<i>lazier and lazier</i>	1	0.05	0	0
<i>reading and reading</i>	1	0.05	0	0
<i>less and less</i>	0	0	1	0.12
<i>money and a lot of money</i>	1	0.05	0	0

Examples (14) from the TLEC and (15) from the SAMuLCAT illustrate how *and* was used in instances of intensifying and continuative coordination.

- (14) If a man comes to you with ***lots and lots*** of money asking for a sex, you do it because you dont have money and you want to beat this poverty (TLEC: TSNO1315)
- (15) The loss in confidence of private sectors in rhinos it is not impacting well and that different strategies to be implemented on the protection of rhino conservation, the statistics has shown and proved that ***more and more*** rhinoceros are being poached for their horns every day. (SAMuLCAT: 7198Setswana).

The examples above show that intensifying and continuative coordination, correlative coordination and pseudo-coordination are used more frequently in the TLEC than in the SAMuLCAT.

A discussion of the findings related to the use of the coordinating conjunction *or* follows in the next section.

4.2.3 A discussion of the coordinating conjunction *or*

The coordinating conjunction *or* occurs 49 times per 10 000 words and 37 times per 10 000 words in the TLEC and the SAMuLCAT, respectively. The difference is statistically significant ($G^2 = 15.74$, $p = 7.28 \times 10^{-05}$).

Figure 4.2.3.1 below illustrates the distribution of the coordinating conjunction *or* based on its occurrences per 1 000 words in each text across both corpora. In the TLEC, *or* appears with a median frequency of 0.35 occurrences per 1 000 words, while in the SAMuLCAT, it occurs with a median frequency of 0.31 occurrences per 1 000 words. The range of *or* is slightly greater in the TLEC (2.444) than in the SAMuLCAT (2.174).

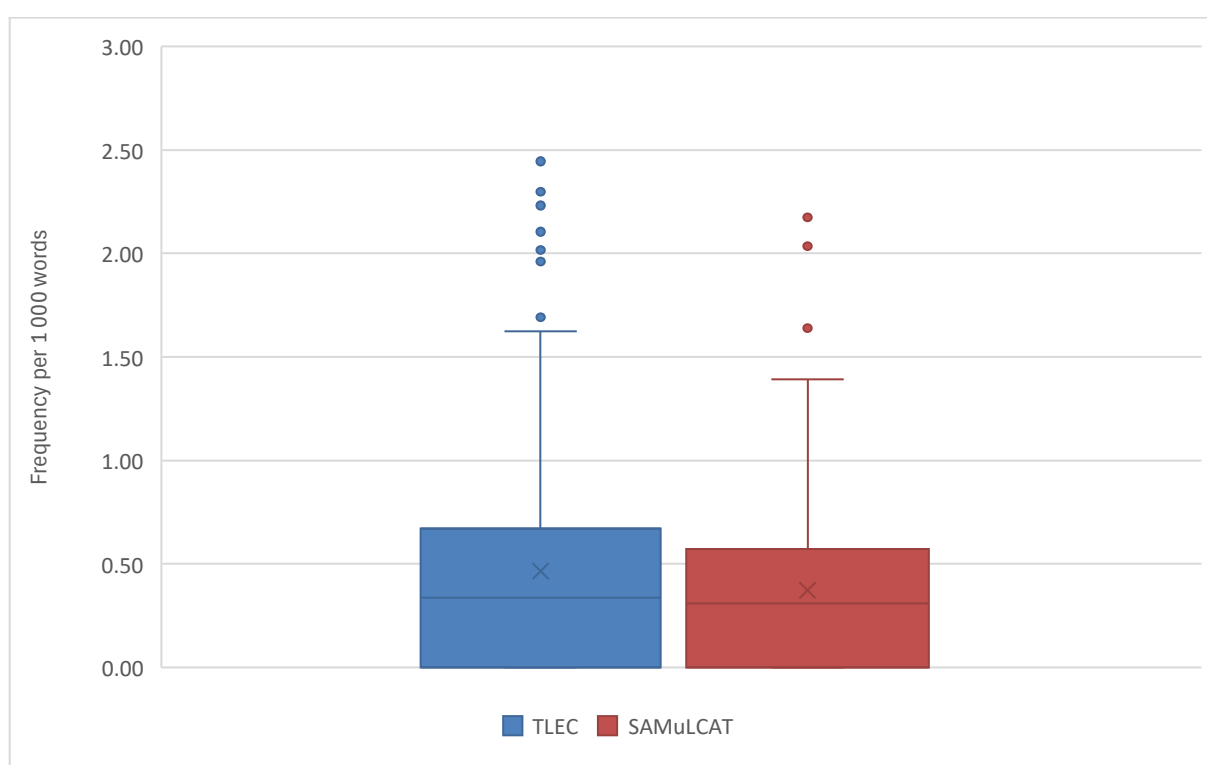


Figure 4.2.3.1: Distribution of the coordinating conjunction *or* based on its relative frequency per 1 000 words in the texts of the TLEC and the SAMuLCAT

A Shapiro-Wilk normality test indicates that the data are not distributed normally in either corpus (TLEC: $W = 0.85$, $p < 2.2 \times 10^{-16}$; SAMuLCAT: $W = 0.83$, $p = 1.972 \times 10^{-13}$). Therefore, a Wilcoxon test was conducted to determine whether the difference between the two corpora is statistically significant. The results indicate that the difference is statistically significant ($W = 45\,570$, $p = 0.015$).

As discussed earlier in Chapter 2, *or* can serve two distinct functions: a varying meaning, where it presents alternatives and a clarifying meaning, where it specifies or rewords the element preceding the conjunction. The varying function falls under the category of elaboration, whereas the clarifying function falls into the category of extension. The varying use of *or* is illustrated in example (16) below, while the clarifying use of *or* is illustrated in example (17):

(16) Perhaps she missed her train. **Or** else she's changed her mind and isn't coming.

(Halliday & Hasan, 1976:247)

(17) This is my conviction, **or** this is what the gods I serve think about this.

(Halliday & Matthiessen, 2014:461)

Table 4.2.3.1 presents the raw and the relative frequencies of *or* as a varying (extending) conjunction and as a clarifying (elaborating) conjunction in the TLEC and the SAMuLCAT corpora. Figure 4.2.3.2 provides a visual representation of these relative frequencies.

Table 4.2.3.1: A comparison of *or* as varying and clarifying conjunction in the TLEC and the SAMuLCAT

	TLEC		SAMuLCAT		Significance	
	Raw frequency	Relative frequency	Raw frequency	Relative frequency	Log-likelihood	p-value
varying <i>or</i>	578	34	213	27	8.43	0.004**
clarifying <i>or</i>	241	14	78	10	8.03	0.005**

The analysis reveals significant differences in the manner in which the student writers of the TLEC and the SAMuLCAT corpora use *or* in their academic essays. For *or* fulfilling a varying function, the results indicate a significant difference between the two corpora ($G^2 = 8.43$; $p = 0.004$). Similarly, for *or* fulfilling a clarifying function, a significant difference was observed ($G^2 = 8.03$; $p = 0.005$). Overall, *or* was used more frequently by the student writers in the TLEC compared to those in the SAMuLCAT.

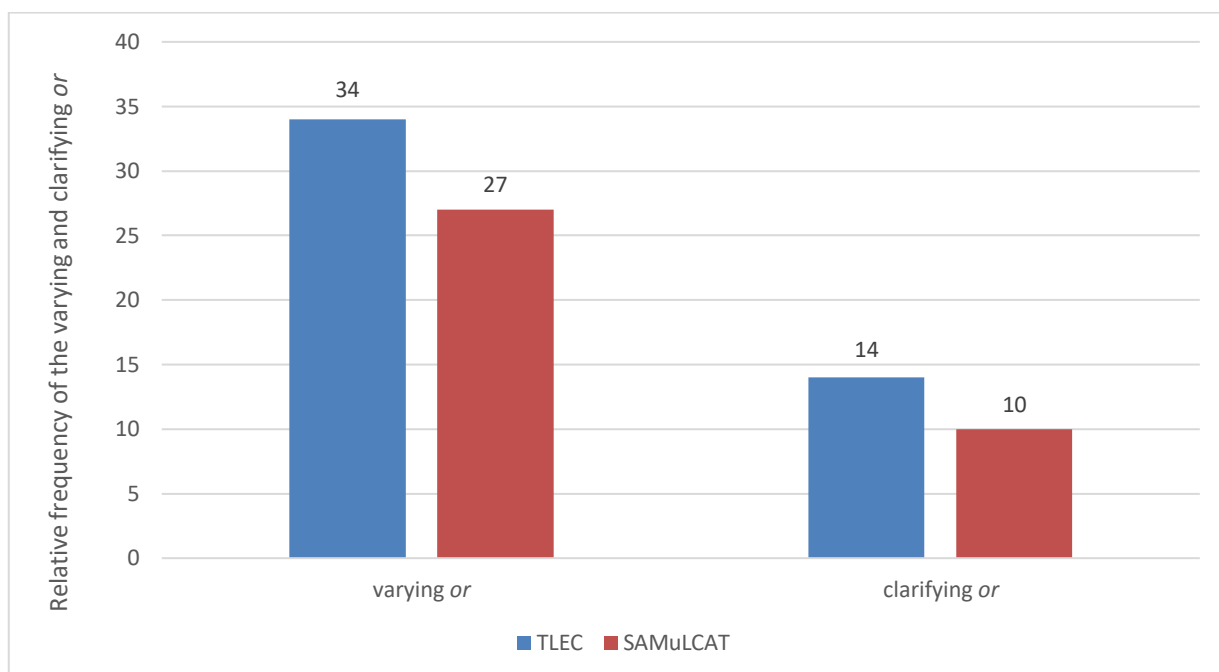


Figure 4.2.3.2: A comparison of the varying and clarifying uses of *or* in the TLEC and the SAMuLCAT

Figure 4.2.3.3 below provides a visual representation of the frequency of the varying use of *or* per 1 000 words across the two corpora. In the TLEC, the alternative conjunction *or* occurs with a median frequency of 0.369 per 1 000 words compared to 0.179 per 1 000 words in the SAMuLCAT. The range of the alternative the conjunction *or* is slightly narrower in the TLEC (2.0) than in the SAMuLCAT (2.097). A Shapiro-Wilk normality test confirmed that the data are not normally distributed in either corpus (TLEC: $W = 0.90$, $p < 6.43 \times 10^{-4}$; SAMuLCAT: $W = 0.76$, $p = 1.972 \times 10^{-16}$). Consequently, a Wilcoxon test was applied to assess the difference between the two corpora, and the results indicate that this difference is statistically significant ($W = 43\,263$, $p = 1.774 \times 10^{-13}$).

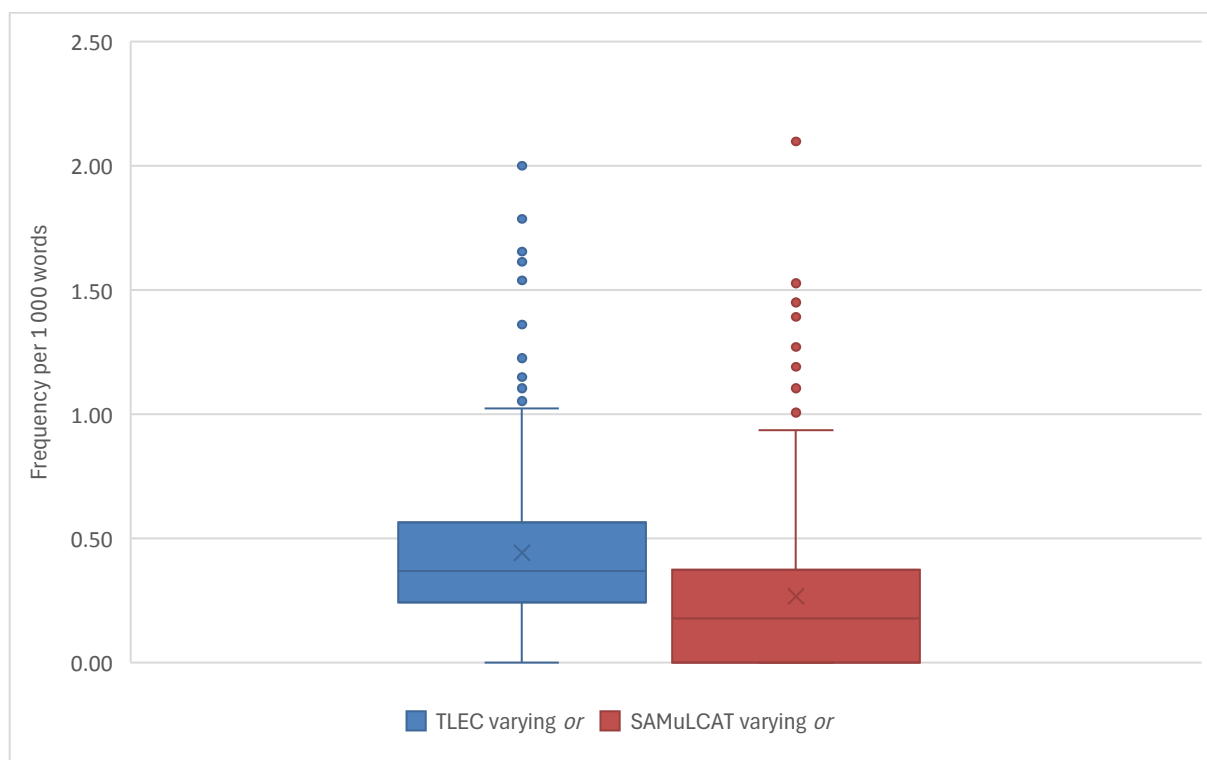


Figure 4.2.3.3: Distribution of the varying *or* based on its relative frequency per 1 000 words in the texts of the TLEC and the SAMuLCAT

Figure 4.2.3.4 below visually represents of the frequency of the clarifying conjunction *or* 1 000 words in each text across both corpora. In both the TLEC and the SAMuLCAT, the coordinator *or* occurs with a median frequency of 0 per 1000 words. However, the range of *or* is slightly broader in the TLEC (1.14-) than in the SAMuLCAT (1.10). A Shapiro-Wilk normality test confirmed that the data are not distributed normally in either corpus (TLEC: $W = 0.78$, $p < 2.20 \times 10^{-16}$; SAMuLCAT: $W = 0.63$, $p < 2.00 \times 10^{-16}$). Consequently, a Wilcoxon test was conducted to determine whether the difference between the two corpora and the results revealed a statistically significant difference ($W = 35\,740$, $p = 2.75 \times 10^{-13}$).

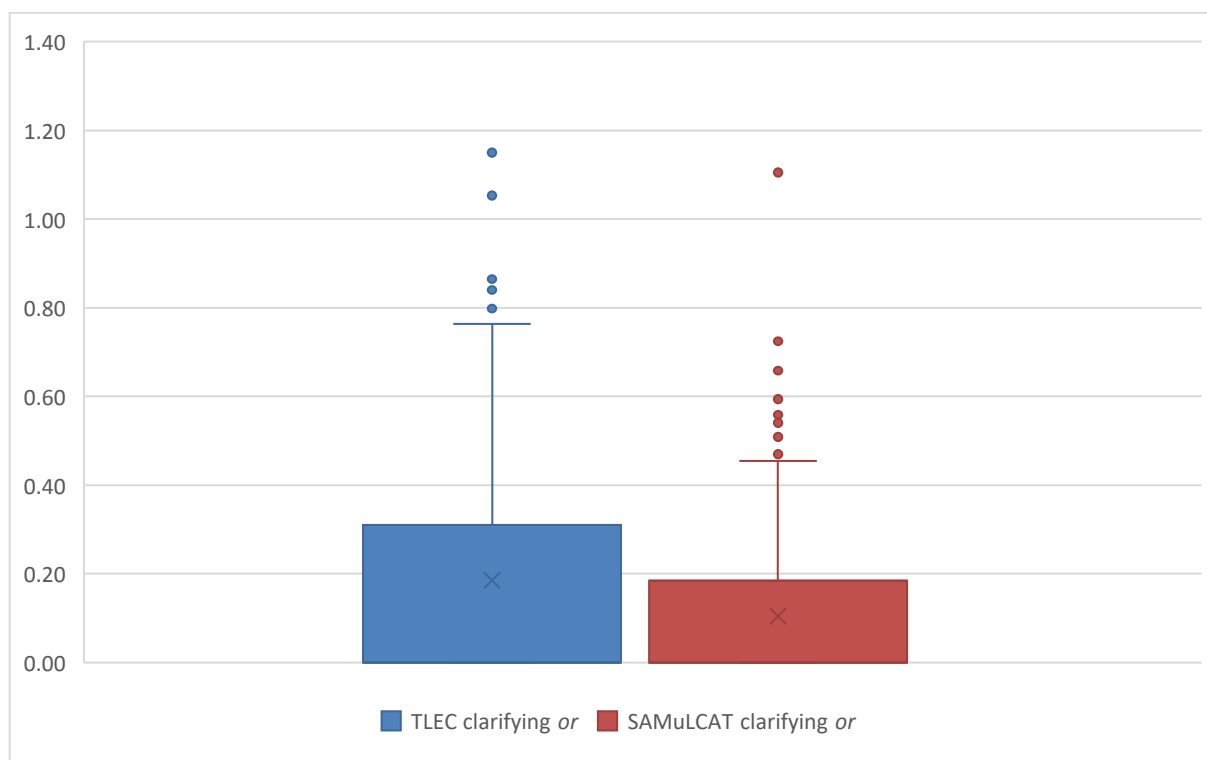


Figure 4.2.3.4: Distribution of the clarifying *or* based on its relative frequency per 1 000 words in the texts of the TLEC and the SAMuLCAT

Dastjerdi and Samian (2011:74) identified the use of the varying conjunction *or* among other cohesive devices, in their study of argumentative essays the written by Iranian English learners. Similar to the student writers in the TLEC and the SAMuLCAT, these learners also overused *or* to present options.

Examples (18) and (19) below illustrate how the TLEC student writers use *or* to fulfil the varying and clarifying functions respectively. In example (18), *or* is used to vary between two alternate modes of sending a message, namely *e-mail* and *SMS*. In example (19), the student writer employs *or* to clarify the quantification of *too much* by specifying it as a *high percentage*.

Similarly, examples (20) and (21) illustrate the use of *or* by the SAMuLCAT student writers. In example (20), *or* a varying option between the coordinated numerals *one or more* while in example (21) it clarifies that everyone should not merely get a chance to talk, but also to express their opinions.

- (18) But now even a message that is so hard to be transmitted, people are not ashamed to send an **e-mail** **or** **SMS** telling the bad news. (TLEC: TSNO1492)

- (19) This is the reason why there is **too much or high percentage** of aids victims in Africa. (TLEC: TSNO1282)
- (20) These panels are grouped to form thirty units, each of which performs **one or more** of the functions requisite to an automatic computing machine. (SAMuLCAT: 412Sepedi)
- (21) Paying attention to group discussions is very important because everyone gets a chance **to talk or express their opinions** and that brings active collaboration in a class. (SAMuLCAT: 3628Sepedi)

There are instances in the corpora where student writers conjoined the coordinating conjunctions *and or* within the same sentence, using them to add information while simultaneously presenting a varying option. This is contrary to Biber *et al.*'s (1999:80) assertion that coordinators cannot coexist in the same context.

Occurrences of the use of a forward slash were identified in the TLEC, functioning as an alternative marker similar to the coordinating conjunction *or*. One frequent instance was the use of the fixed term, *HIV/AIDS* which appeared 82 times in the TLEC only. The high frequency of the use of *HIV/AIDS* is attributed to one of the essay topics provided to the students: *Poverty is the cause of the HIV/AIDS epidemic in Africa*. An example sentence demonstrating this usage is provided in example (22).

- (22) Poverty is the inability of a person to meet his or her needs and it had been looked at it as the cause of the **HIV/AIDS** epidemic in Africa. (TLEC: TSNO1333)

Table 4.2.3.2 below compares the use of the forward slash between pronouns as identified in the TLEC and the SAMuLCAT.

Table 4.2.3.2: A comparison of the use of the forward slash between pronouns in the TLEC and the SAMuLCAT

	TLEC		SAMuLCAT	
	Raw frequency	Relative frequency	Raw frequency	Relative frequency
<i>he/she</i>	15	0.89	1	0.12
<i>she/he</i>	1	0.05	0	0
<i>his/her</i>	3	0.17	1	0.12
<i>him/her</i>	1	0.05	1	0.12

In addition to pronouns, the TLEC used *or* to indicate gender alternatives in nouns 75 times. Examples of such alternatives include *sister or brother*, *mother or father*, *men or women*, *male or female* and *husbands or wives*

The student writers also used the clarifying *or* to ‘audition’ words in both the TLEC and the SAMuLCAT. This researcher uses the phrase ‘auditioning words’¹⁰ to refer to instances where student writers use *or* between words, seemingly uncertain about which word to select. For instance, in extract (23) from the TLEC, the words *beer* and *alcohol* are linked by *or*, while in extract (24) from the SAMuLCAT, the words *ability* and *power* are similarly linked. Instances of this ‘auditioning’ were identified 39 times in the TLEC and 49 times in the SAMuLCAT. The use of ‘auditioning words’ in both corpora may serve to give fuller context or to clarify the intended message.

(23) They are not sent to buy beer **or** alcohol from their neighbours. (TLEC: TSNO:1516)

(24) Creative art means having the ability **or** power to creative, creative art develops the whole child though it unique content and experiences. (SAMuLCAT: 3612Setswana)

¹⁰ ‘Auditioning words’ is a phrase used by the researcher to refer to the linking of two words with a similar meaning by the TLEC and the SAMuLCAT student writers when they seem not to be sure which word to use.

Correlative conjunctions were identified more frequently in the TLEC (9 occurrences) than in the SAMuLCAT (3 occurrences). Examples of such usage are provided in example (25) from the TLEC and example (26) from the SAMuLCAT.

(25) The more the prostitutes increase in number the more the diseases spread **either** knowingly **or** unaware. (TLEC: TSNO1051)

(26) Society does this by expressing their need for a change **either** tacitly **or** vigorously by means of demonstrations. (SAMuLCAT: 4829).

The corrective use of *or rather* was observed in both corpora, appearing 4 times in the TLEC and 3 times in the SAMuLCAT. Examples (27) from the TLEC and (28) from the SAMuLCAT illustrate how authors in both corpora used *or rather*:

(27) They should decrease **or rather** close every market that is promoting prostitution. (TLEC: TSNO1017)

(28) The concept of psychology has changed **or rather** developed throughout time; the problem is in defining the concept. (SAMuLCAT: 4647Setswana)

One instance of the vague use of *or* was identified in the TLEC. Example (29) from the TLEC illustrates this vague usage. No such instances were found in the SAMuLCAT.

(29) When you go to the bank **or** something, you will find that women are the head (TLEC: TSNO1498)

A discussion of the findings related to the use of the coordinating conjunction *but* follows in the next section.

4.2.4 A discussion of the coordinating conjunction *but*

The coordinating conjunction *but* adds information by expressing a contrast, which could often be alternatively expressed using *and* followed by *yet* (Quirk *et al.*, 1985:935). As mentioned earlier in Section 4.2.1, the coordinating conjunction *but* occurs at a relative frequency of 35 times per 10 000 words in the TLEC, compared to 22 times per 10 000 words in the SAMuLCAT. This difference in usage is statistically significant ($G^2 = 30.72$; $p = 2.97 \times 10^{-08}$). The TLEC student writers used *but* more frequently than the SAMuLCAT student writers.

Figure 4.2.4.1 below visually represents the frequency of the conjunction *but* per 1 000 words in both corpora. In the TLEC, *but* occurs with a median frequency of 0.28 per 1 000 words, compared to 0.17 per 1 000 words in the SAMuLCAT. The range of *but* is wider in the TLEC (1.56) than in the SAMuLCAT (1.29). A Shapiro-Wilk normality test indicates that the data are not normally distributed in either corpus (TLEC: $W = 0.87$, $p < 2.20 \times 10^{-16}$; SAMuLCAT: $W = 0.81$, $p = 3.13 \times 10^{-14}$). Consequently, a Wilcoxon test was employed to assess the statistical significance of the difference between the two corpora. The results confirm that the difference is statistically significant ($W = 47\ 698$, $p = 0.00$).

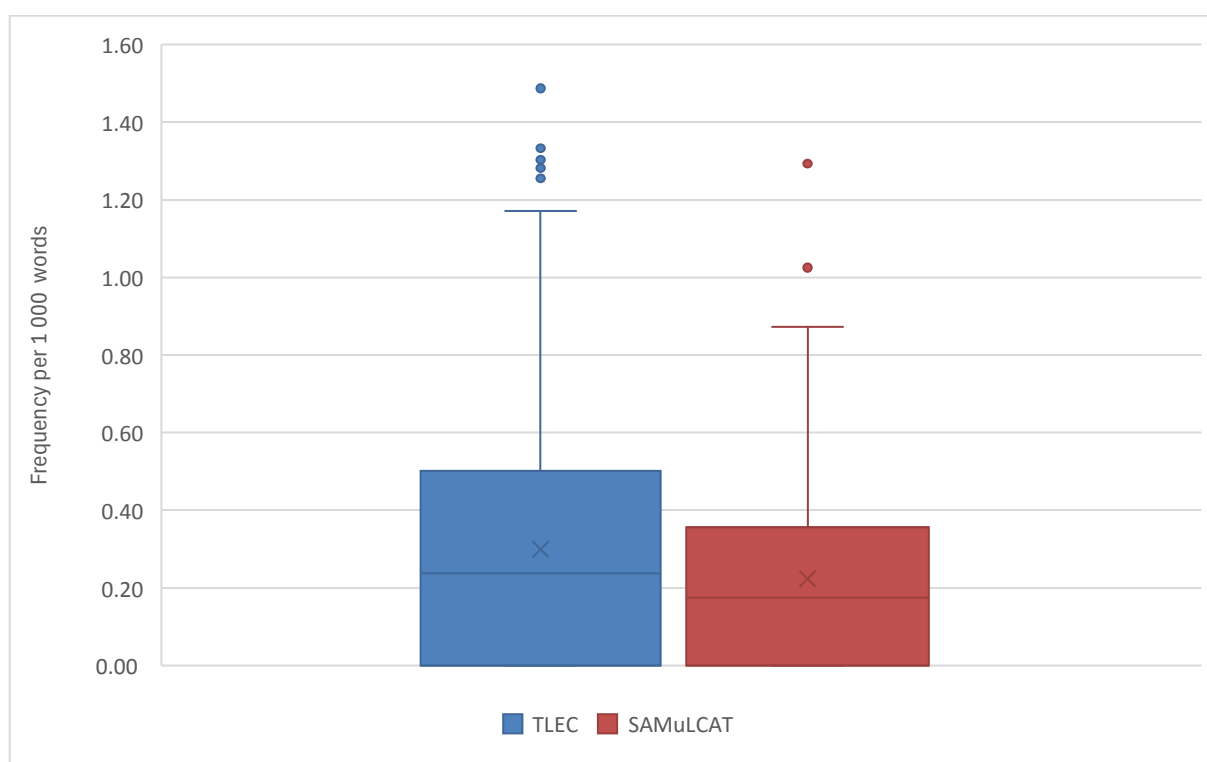


Figure 4.2.4.1: Distribution of *but* based on its relative frequency per 1 000 words in the texts of the TLEC and the SAMuLCAT

Dastjerdi and Samian (2011) observed that Iranian student writers tended to overuse the coordinating adversative conjunction *but*, while Meisuo (2000) reported that Chinese student writers underused it in their texts. In this study, the TLEC authors used *but* more frequently than the SAMuLCAT authors. This means that the frequency of the use of *but* declined in the learner language represented by these corpora.

Example (30) shows the use of *but* in an interrogative sentence as identified in the TLEC. Such use of the adversative *but* in an interrogative sentence was not observed in the SAMuLCAT

corpus. Instead, the student writers in the SAMuLCAT primarily used *but* to link statements within sentences.

- (30) A lot of hardwork has been done to put South African soccer on the map, **but** why can't the very same people who made it possible doesn't benefit from that? (TLEC: TSNO1050)

In example (31), two clauses are joined by the coordinator *but*. The TLEC student writer expresses a contrast. The first part of the sentence, a run-on sentence, expresses the sentiment that one cannot blame prostitutes for their situation. In the second clause, the student writer comments that prostitutes engage in sexual activity with strangers, which is portrayed as a bad thing, despite the earlier sentiment of not assigning blame. However, the second clause does not effectively contrast with the first, as it appears to reinforce rather than oppose the initial assertion.

- (31) I can not blame them for what they are **but** the thing they sleep around with people they do not know. (TLEC: TSNO1001)

In example (32) there is no adversative relationship between the two sentences conjoined by *but*.

- (32) So their should be no mistake with their soccer role models. **But** is seemed as if all our soccer role models have been brought over seas to play soccer. (TLEC: TSNO1002)

Example (33) consists of three clauses. The TLEC author connects the first two clauses with *but*, to express and adversative meaning. add contrast the first clause.

- (33) I do not mean to be strereotype but that is how the minds of Africans operate -- we always try to find something or someone to blame. (TLEC: TSNO1005)

Example (34) illustrates how the SAMuLCAT authors used the coordinating conjunction *but* to link elements in their academic essays:

- (34) The Broadcasting Commission of South Africa is the regulatory body which oversees that media adheres to the rules and regulations set by the body **but** with the emerge of social media it is hard to regulate which means fake news spread like wild fire. (SAMuLCAT: 208Setswana)

The TLEC and the SAMuLCAT student writers used *but rather* to express a corrective meaning. They used it 12 times in the TLEC, whereas they only used it once in the SAMuLCAT. Example (35) from the TLEC and example (36) from the SAMuLCAT illustrate how the authors of both corpora used it in their academic essays.

(35) According to my view, education should be a two sided view. It shouldn't only theory, **but rather** both theory and practical. (TLEC: TSNO1474).

(36) The truth is not delivered **but rather** information that is false spread on social media. (SAMuLCAT: 193Setswana).

Both corpora display the correlative use of *not only... but also* and *not just ... but also*. The TLEC authors utilised these structures 19 times, while the SAMuLCAT authors employed them 42 times. Example (37) from the TLEC and example (38) from the SAMuLCAT illustrate how authors from both corpora incorporated these correlatives into their academic writing.

(37) It showed that soccer is **not just** any sport, **but** a sport that can unite the nation as a whole, and again it showed that South African soccer players have the ability and the skills. (TLEC: TSNO1098)

(38) This report argues that legalising rhino horn trading internationally will **not only** benefit the traders **but** the country's economy. (SAMuLCAT: 2733Setswana)

The idiomatic expression *slowly but surely* was identified twice in the TLEC academic essays but was not observed in the SAMuLCAT academic essays. An example of its use is presented in example (39):

(39) The world is **slowly but surely** coming to an end, our morals and values are not what they used to be. (TLEC: TSNO1094)

The discussion above shows that the coordinating conjunction *but* is used more frequently by the student writers in the TLEC than by those in the SAMuLCAT. Conversely, the use of *but* within correlative conjunctions occurs more frequently in the SAMuLCAT than in the TLEC.

Additionally, the results of the analysis show that the coordinating conjunction *and* is used more often in the SAMuLCAT than in the TLEC. However, the coordinating conjunctions *or* and *but* are more prevalent in the TLEC than in the SAMuLCAT.

Section 4.2 presented the results and discussion of the analysis of the coordinating conjunctions. It included tables showing the raw and relative frequencies of the conjunctions along with their p-values. The next section delves into the results of the analysis of the syntactic elements conjoined by these coordinating conjunctions.

4.2.5 Syntactic elements conjoined by the coordinating conjunctions

As noted earlier in Section 4.2, coordinators link linguistic units of the same hierarchical type, such as phrases and clauses. Table 4.2.5.1 below reports the relative frequencies with which the various coordinating conjunctions were used to coordinate phrases and clauses in the TLEC and the SAMuLCAT.

Table 4.2.5.1: Raw and relative frequencies of syntactic elements conjoined by coordinating conjunctions

	TLEC		SAMuLCAT		Significance	
	Raw frequency	Relative frequency	Raw frequency	Relative frequency	Log-likelihood (G ²)	p-value
Phrases						
<i>and</i>	1 655	982.66	1 591	204.24	421.02	1.5 x 10 ⁻⁹³ ****
<i>or</i>	594	35.33	261	33.51.	0.51	0.474
<i>but</i>	40	2.38	39	5.01	10.66	0.001 ***
Clauses						
<i>and</i>	2546	151.41	899	115.40	51.07	8.91772x10 ⁻¹³ ****
<i>or</i>	211	12.54	30	3.85	48.54	3.23841x10 ⁻¹² ****
<i>but</i>	539	32.04	130	16.68	50.54	1.16976x10 ⁻¹² ****

On the one hand, the student writers in the TLEC use *and* to coordinate phrases with a relative frequency of 983 times per 10 000 words and clauses with a relative frequency of 151 times per 10 000 words. On the other hand, the student writers in the SAMuLCAT use *and* to coordinate phrases with a relative frequency of 204 times per 10 000 words and clauses with a relative frequency of 115 times per 10 000 words. Figure 4.2.5.1 below (first presented as Figure 4.2.2.2 in Section 4.2.2), illustrates that *and* is used to connect phrases 39% of the time in the TLEC and

clauses 61% of the time, while it is used to connect phrases 64% of the time in the SAMuLCAT and clauses 36% of the time.

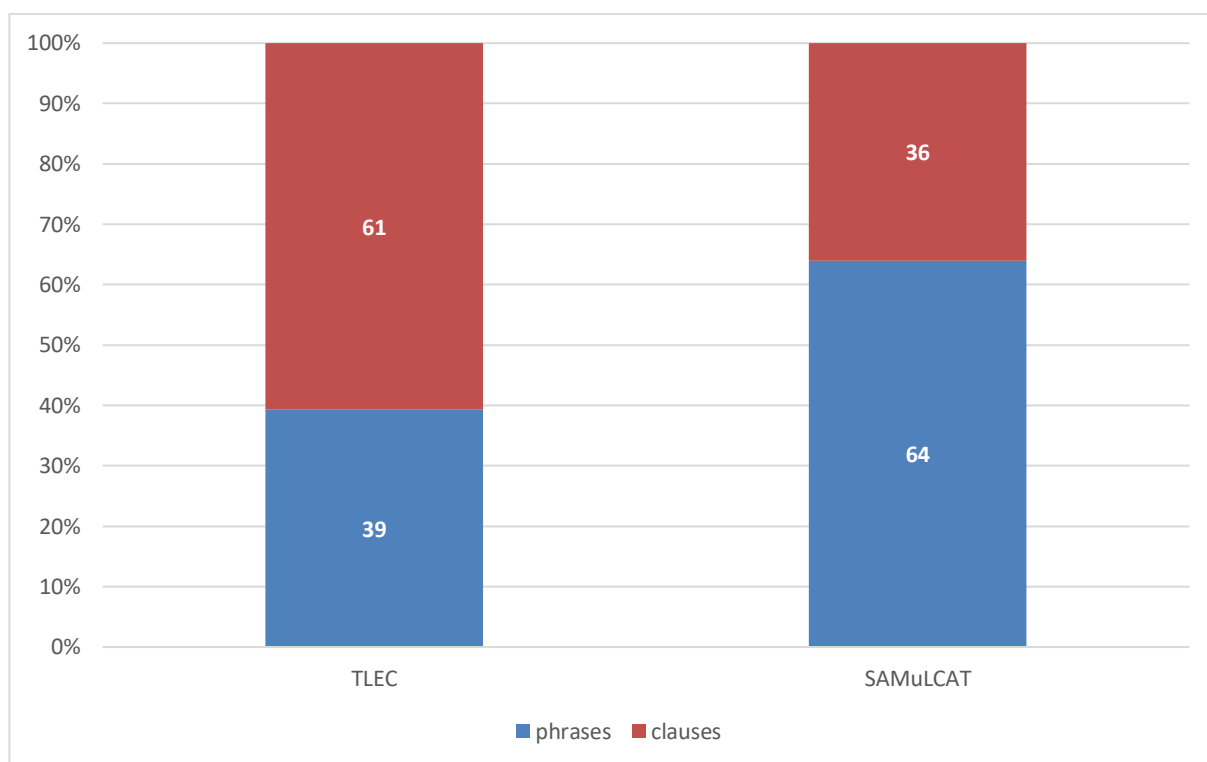


Figure 4.2.5.1: Percentage use of *and* to connect phrases and clauses in the TLEC and the SAMuLCAT

Table 4.2.5.1 indicates that student writers in the TLEC use *or* to coordinate phrases with a relative frequency of 35 times per 10 000 words and clauses with a relative frequency of 13 times per 10 000 words. In contrast, student writers in the SAMuLCAT use *or* to coordinate phrases with a relative frequency of 13 times per 10 000 and clauses with a relative frequency of 4 times per 10 000 words. Figure 4.2.5.2 further illustrates this distinction, showing that *or* is used to connect phrases 74% of the time in the TLEC and clauses 26% of the time, while *or* is used to connect phrases 90% of the time in the SAMuLCAT and clauses 10% of the time.

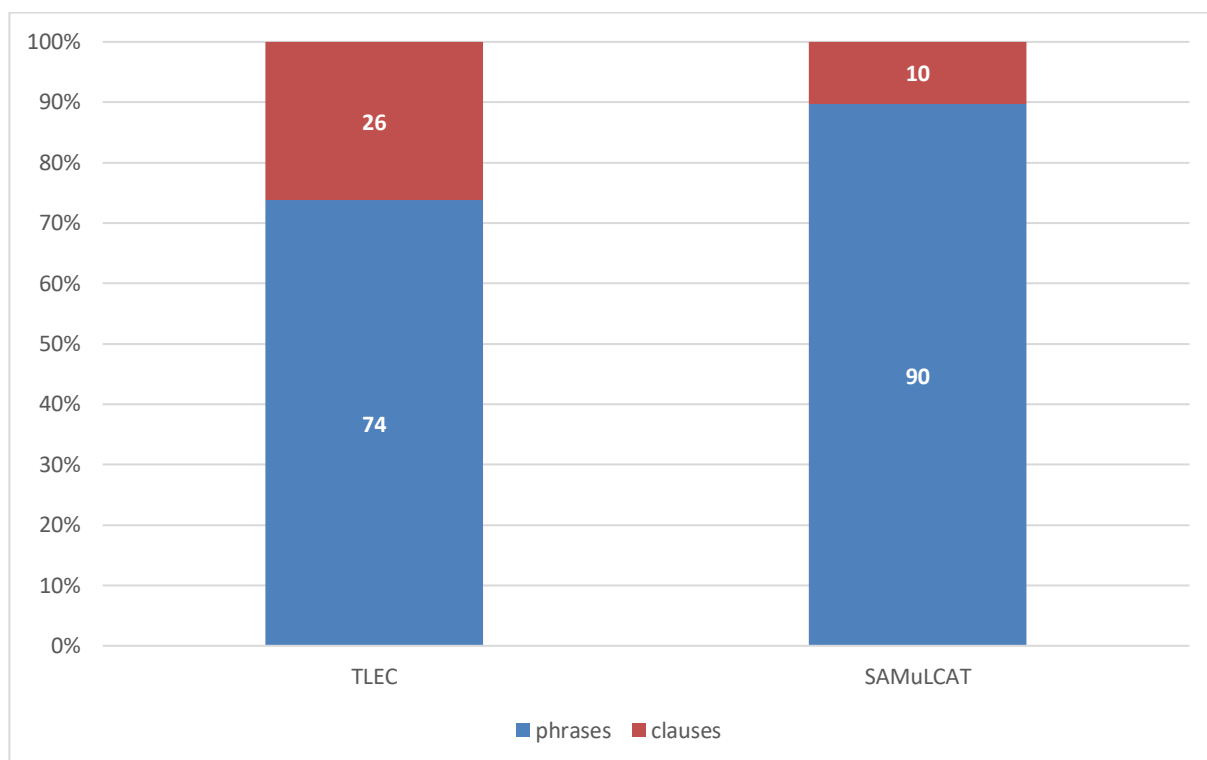


Figure 4.2.5.2: Percentage use of *or* to connect phrases and clauses in the TLEC and the SAMuLCAT

The paragraph below considers the syntactic elements conjoined by the coordinating conjunction *but*.

Table 4.2.5.1 shows that student writers in the TLEC use *but* to coordinate phrases with a relative frequency of 2 times per 10 000 words and clauses with a relative frequency of 32 times per 10 000 words. In contrast, the student writers in the SAMuLCAT use *but* to coordinate phrases more frequently, at 7 times per 10 000 words, while coordinating clauses with a relative frequency of 17 times per 10 000 words. Figure 4.2.5.3 highlights these patterns, showing that in the TLEC, *but* is predominantly used to coordinate clauses (93%) compared to phrases (7%). Meanwhile, in the SAMuLCAT, *but* is used to connect clauses 77% of the time and phrases 23% of the time, reflecting a comparatively higher use of *but* for phrase coordination in this corpus.

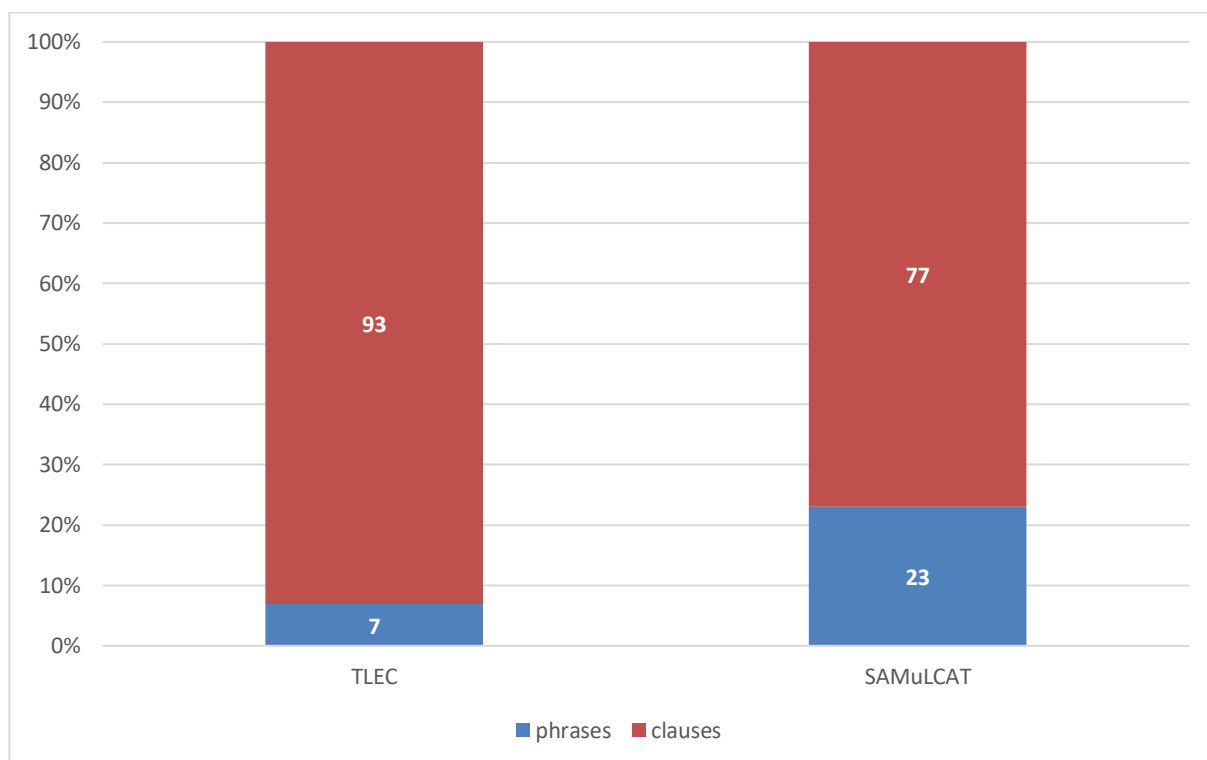


Figure 4.2.5.3: Percentage use of *but* to connect phrases and clauses in the TLEC and the SAMuLCAT

To sum up, the results indicate differing patterns in the use coordinating conjunctions between the TLEC and the SAMuLCAT student writers. The TLEC student writers used the coordinating conjunctions *and*, *or*, and *but* less frequently to conjoin phrases but more frequently to conjoin clauses compared to the SAMuLCAT student writers.

As shown in Table 4.2.5.1, there is no statistically significant difference in the use of *or* to link phrases between the TLEC and the SAMuLCAT corpora ($G^2 = 0.51$; $p = 0.474$). However, a statistically significant difference exists when *or* is used to link clauses ($G^2 = 48.54$; $p = 3.24 \times 10^{-12}$), with the TLEC authors employing *or* more frequently for this purpose. This suggests a shift in the use of *or* to link clauses.

In contrast, there is no statistically significant difference in the use of *but* when linking individual words in both corpora ($G^2 = 0.06$; $p = 0.801$). However, *but* was used significantly more frequently by the SAMuLCAT authors than the TLEC authors to link phrases – the difference is statistically significant ($G^2 = 13.62$; $p = 0.000$). Conversely, the TLEC authors used *but* more frequently to link clauses, with the difference also being statistically significant ($G^2 = 50.54$; $p = 1.16976 \times 10^{-12}$).

These findings align with observations regarding the use of *and* discussed previously, suggesting that the SAMuLCAT authors demonstrate a better understanding of how to link phrases effectively using coordinating conjunctions.

The results in Table 4.2.5.1 and Figures 4.2.5.1 to 4.2.5.3 indicate that the language used by the TLEC student writers appears more informal compared to that of the SAMuLCAT student writers. This aligns with observations by Henning (2006) and Van Rooy and Terblanche (2006), who noted that texts produced by the TLEC student writers often resemble conversational language.

4.2.6 Summary

The above section analysed the coordinating conjunctions *and*, *or*, and *but* as identified in the TLEC and the SAMuLCAT corpora. Significant differences were observed between the two datasets. The coordinating conjunction *and* was used more frequently by the SAMuLCAT student writers, suggesting a more formal writing style compared to the TLEC. The frequent use of *and* in pseudo-coordination to link intensifiers in the TLEC contrasts with the frequent use of correlative conjunctions in the SAMuLCAT, indicating that the SAMuLCAT writing aligns more closely with academic conventions. Furthermore, the SAMuLCAT writers used *and* more often to link phrases, reflecting an increase in its use for this function over time. In contrast, the TLEC writers used *and* more frequently to link clauses, pointing to a decrease in this usage in the SAMuLCAT.

The coordinating conjunction *or* is used more frequently by the TLEC student writers than by the SAMuLCAT student writers. This trend holds true even when *or* is analysed for its varying or clarifying functions, with the TLEC writers demonstrating higher usage across both categories. However, the SAMuLCAT writers use *or* more frequently to link phrases, indicating an increase over time in this function. In contrast, the TLEC writers use *or* more frequently to link clauses, reflecting a decrease in this usage among the SAMuLCAT writers.

The coordinating conjunction *but* was used more frequently by the TLEC student writers than the SAMuLCAT student writers. Although the overall use of *but* to link phrases is relatively low in both corpora, the SAMuLCAT writers used it more frequently for this purpose than the TLEC writers, indicating a shift over time in the use of *but* to link phrases. However, the TLEC writers used *but* more frequently to link clauses than the SAMuLCAT writers, reflecting a decrease over time between the two corpora.

The increased use of coordinating conjunctions to coordinate phrases and the greater frequency of correlative conjunctions in the SAMuLCAT, combined with the absence of pseudo-coordination in the TLEC, suggest that the writing of the SAMuLCAT student writers is more formal than that of the TLEC student writers.

The next section focuses on the results of the analysis regarding other conjunctive adjuncts.

4.3 Other conjunctive adjuncts

Table 4.2.6.1 provides an overview of the extending, elaborating and enhancing categories of other conjunctions, further subdivided into their subtypes as outlined in the Halliday and Matthiessen's (2014:612) system of conjunctions, discussed in Chapter 2. These include extending additives and adversatives, elaborating appositives, and enhancing conjunctions categorised by manner, spatiotemporal, and causal-conditional relationships. The table presents the raw and relative frequencies, log-likelihood values, and p-values for each conjunction subtype. A discussion of the other conjunctives with significant differences between the corpora follows Table 4.2.6.1.

Table 4.2.6.1: A comparison of the other conjunctives in the TLEC and the SAMuLCAT

	TLEC		SAMuLCAT		Significance	
	Raw frequency	Relative frequency	Raw frequency	Relative frequency	Log-likelihood (G ²)	P-value
EXTENDING CONJUNCTIONS						
Additive						
<i>moreover</i>	12	1	19	2	11.46	0.001 ***
<i>furthermore</i>	10	1	49	6	66.62	3.28632x10 ⁻¹⁶ ****
<i>nor</i>	3	0	6	1	4.63	0.031
<i>also</i>	97	6	72	9	8.89	0.002 **
<i>in addition</i>	13	1	40	5	42.85	5.8999x10 ⁻¹¹ ****
Varying						
<i>except</i>	1	0	0	0	0	0
Adversative						
<i>yet</i>	5	0.2	10	1	7.71	0.005 **
<i>on the other hand</i>	23	1	14	1	0.63	0.426
<i>however</i>	36	2	83	11	72.43	1.72675x10 ⁻¹⁷ ****
ELABORATING CONJUNCTIONS						
Appositive						
<i>in other words</i>	9	1	6	1	0.46	0.496
<i>I mean</i>	20	1	0	0	0	0
<i>that is (to say)</i>	40	2	1	0	23.35	1.35x10 ⁻⁰⁶ ****
<i>at least</i>	0	0	2	0	0	0
<i>by the way</i>	2	0	0	0	0	0
<i>for example</i>	136	8	42	6	5.65	0.017 *
<i>for instance</i>	25	1	15	2	0.61	0.434
<i>anyway</i>	4	0	3	0	0.39	0.534
Clarifying						
<i>especially</i>	16	1	2	0	4.22	0.039 *
<i>In particular/particularly</i>	8	0	9	0	3.28	0.069
<i>actually</i>	3	0	3	0	0.87	0.351
<i>to sum up</i>	2	0	1	0	0.00	0.950
<i>In short</i>	2	0	0	0	0	0
<i>to be specific (precise)</i>	1	0	0	0	0	0
<i>to conclude</i>	4	0	4	1	0	0
ENHANCING CONJUNCTIONS						
Manner						
<i>similarly</i>	2	0	4	1	3.09	0.079
<i>likewise</i>	0	0	3	0	0	0
<i>in doing so</i>	0	0	1	0	0	0

Spatio-temporal						
<i>firstly</i>	33	2	29	4	6.14	0.013
<i>secondly</i>	14	1	25	3	17.24	3.2883×10^{-05} ****
<i>lastly</i>	18	1	24	3	11.054	0.001 ***
<i>then</i>	69	4	29	4	0.20	0.657
<i>finally</i>	10	1	12	2	4.90	0.026 *
<i>first</i>	2	0	2	0	0.58	0.447
<i>now</i>	7	0	1	0	0.60	0.205
<i>afterwards</i>	5	0	0	0	0	0
<i>after</i>	157	9	21	3	38.66	5.0566×10^{-10} ****
<i>meanwhile</i>	3	0	1	0	0.09	0.769
<i>meantime</i>	2	0	0	0	0	0
<i>At that time</i>	5	0	0	0	0	0
<i>next</i>	3	0	1	0	0.09	0.769
<i>since</i>	83	5	56	7	4.59	0.032 *
Causal-conditional						
<i>so (that)</i>	556	33	68	9	151.56	1.76311×10^{-34} ****
<i>hence</i>	39	2	22	3	0.53	0.465
<i>as a result</i>	50	3	27	3	0.41	0.524
<i>consequently</i>	7	0	5	1	0.53	0.467
<i>therefore</i>	98	6	104	13	33.98	5.56639×10^{-09} ****
<i>because</i>	1414	84	219	28	293.11	1.04412×10^{-65} ****
<i>otherwise</i>	6	0	2	0	0.17	0.679
<i>nevertheless</i>	2	0	4	1	3.09	0.079
<i>still</i>	14	1	0	0	0	0
<i>for that reason</i>	3	0	0	0	0	0
<i>then</i>	82	5	10	1	22.18	2.484×10^{-06} ****
<i>If not</i>	7	0	2	0	0.40	0.529
<i>although</i>	17	1	46	6	45.28	1.70678×10^{-11} ****
<i>though</i>	44	3	14	2	1.59	0.207
<i>In that case</i>	3	0	1	0	0.09	0.769

Figure 4.2.6.1 below is a visual presentation of the comparison of the relative frequencies between the extending, elaborating and enhancing conjunctions as identified in the TLEC and the SAMuLCAT.

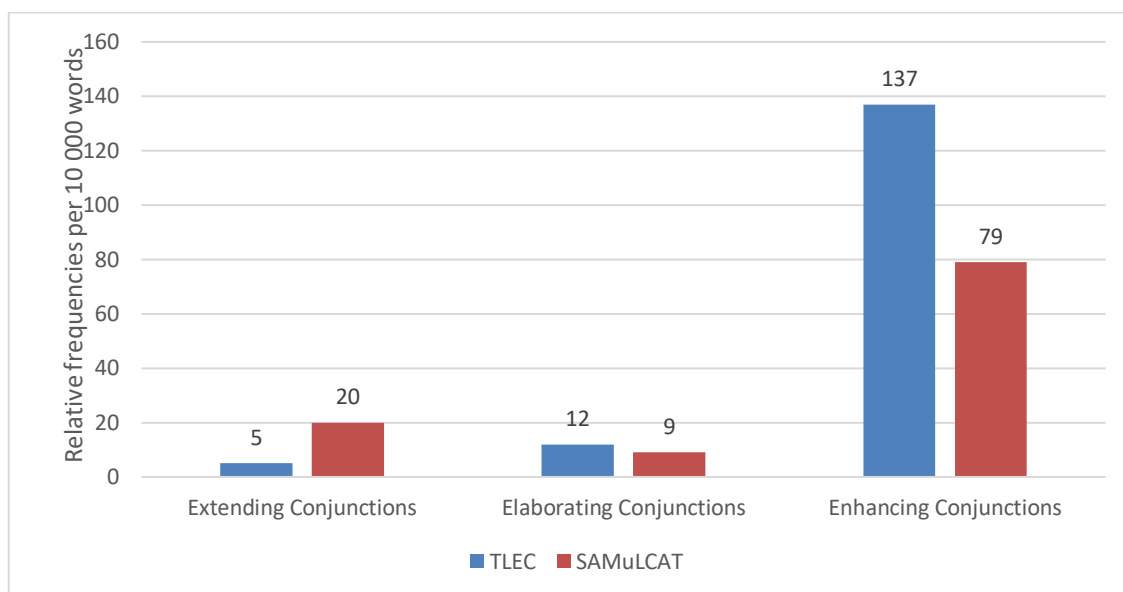


Figure 4.2.6.1: A comparison of the relative frequencies of the extending, elaborating and enhancing conjunctions per 10 000 words

4.3.1 Extending conjunctions

Figure 4.3.1.1 visually represents the dispersion of extending conjunctions, measured by the number of occurrences per 1 000 words across both corpora. In the TLEC, extending conjunctions occur with a median frequency of 0 per 1 000 words, compared to 0.294 per 1 000 words in the SAMuLCAT. While the range of extending conjunctions is broader in the TLEC (2.238) than in the SAMuLCAT (1.485), the interquartile range is larger in the SAMuLCAT (0.57) than in the TLEC (0.26). This suggests that extending conjunctions are used by more students in the SAMuLCAT than in the TLEC. A Shapiro-Wilk normality test indicates that the data are not normally distributed in either corpus (TLEC: $W = 0.61$, $p < 2.2 \times 10^{-16}$; SAMuLCAT: $W = 0.86$, $p = 5.693 \times 10^{-12}$). Consequently, a Wilcoxon test was performed to evaluate the statistical significance of the difference between the two corpora. The results confirm that the difference is statistically significant ($W=27162$, $p=3.072 \times 10^{-13}$).

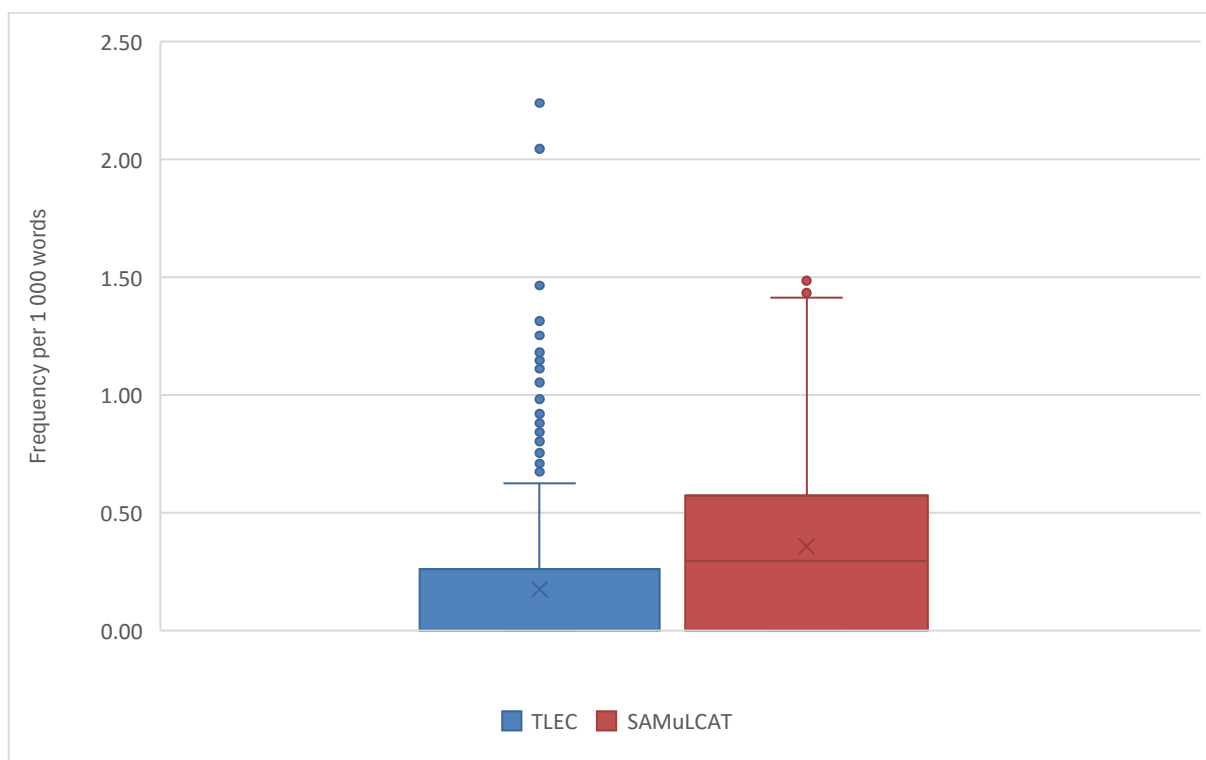


Figure 4.3.1.1: Distribution of the extending conjunctions based on their relative frequency per 1 000 words in the texts of the TLEC and the SAMuLCAT

Among the extending conjunctions, the positive additives *moreover* and *furthermore* were identified in the analysis. The results presented in Table 4.3.1 indicate that these conjunctions were used significantly more frequently by the SAMuLCAT student writers compared to the TLEC student writers. The statistical analysis reveals a significant difference for *moreover* ($G^2 = 11.46$; $p=0.001$), and *furthermore* ($G^2 = 66.62$; $p=3.28632 \times 10^{-16}$). Similar findings have been reported in other corpora, with Meisuo (2000) identifying the use of *moreover* in the writings of Chinese undergraduate students and Adeyemi (2017) in the NELC. Example (40) demonstrates the use of the additive conjunction *moreover* by the TLEC student writers to link sentences, while example (41) illustrates its use in the SAMuLCAT.

(40) I attach this to the name of poverty. **Moreover**, the question of drought.
(TLEC TSNO1331)

(41) Fake news creates terror and builds fear psychosis among people.
Moreover fake news spreads communal hatred in the society often resulting in communal violence. (SAMuLCAT: 2025Setswana)

Dastjerdi and Samian (2011:65-76) observe that although EFL students used some of the conjunctions in their writing, they were not used in a standard manner. Adeyemi also identified the use of *furthermore* in the NELC. A similar finding is evident in the use of the extending conjunction *furthermore* by both the TLEC student writers and the SAMuLCAT student writers as shown in examples (42) from the TLEC and (43) from the SAMuLCAT.

- (42) That is what tourist attraction means, things that would be able to appeal to the naked eye. Then when looking for all these things North-west would be your destination, as it is having a good spot of hiking around Groot-Marico and Magaliesburg region. A tourist would definitely enjoy its mountains, a peaceful landscape and being exposed to wild animals. That is the reason most people are getting arrested of poaching in those regions. ***Furthermore*** you wouldn't want to miss going to the parks and museums whereby someone can go and relax the mind. (TLEC: TSNO1417)

Furthermore fulfils the function of an extending additive conjunction. There seems to be no relationship between the two sentences that are being conjoined in example (42). One would expect the sentence that starts with *furthermore* to give more information about people being arrested for poaching rhinos. However, the next sentence is about someone who would not want to miss going to the parks and museums. The sentence would read better if constructed as below:

- (42a) That is what tourist attraction means, things that would be able to appeal to the naked eye. Then when looking for all these things North-west would be your destination, as it is having a good spot of hiking around Groot-Marico and Magaliesburg region. A tourist would definitely enjoy its mountains, a peaceful landscape and being exposed to wild animals. ***Furthermore***, you wouldn't want to miss visiting the parks and museums, where you can go to relax and clear your mind.

Example (43) below shows how the SAMuLCAT author used the additive conjunction *furthermore*:

- (43) Children are expected to become creative during their learning process and this depend on a type of environment that the learning takes place. ***Furthermore*** researches have shown that, learners who learn in a good environment are likely to perform effectively than those who are learning in a poor environment. (SAMuLCAT: 3811Setswana).

With the extending additive adversative conjunctions, the adversative conjunctions *yet*, *on the other hand*, and *however*, were identified. Notably, the adversative conjunction *yet* required disambiguation because it can function as both an extending adversative conjunction and an enhancing causal-conditional conjunction. Previous studies by Meisuo (2000), Dastjerdi and Samian (2012), Yang and Sun (2012) and Adeyemi (2017) identified the use of *however*, although it was reported to be less frequently used in the Chinese student writings and the NELC. Similarly, Meisuo (2000) also noted the use of *on the other hand* in Chinese student writings. In this study, both the TLEC and the SAMuLCAT authors used *on the other hand* as an extending adversative conjunction. However, neither corpus included the correlative *on the one hand*.

Table 4.2.6.1 shows that the adversative conjunctions *yet* and *however* were used more frequently by the SAMuLCAT student writers compared to the TLEC student writers, while *on the other hand* was used more frequently in the TLEC corpus. Statistical analysis revealed a significant difference in the use of *yet* between the two corpora ($G^2 = 7.71$; $p=0.005$), as well as in the use of *however* ($G^2 = 72.43$; $p = 1.72675 \times 10^{-17}$). Conversely, there was no significant difference in use of *on the other hand* ($G^2=0.63$; $p=0.426$). Examples illustrating the use of *however* by the TLEC authors (example 44) and the SAMuLCAT authors (example 45) follow below.

(44) There is also further benefit of being seen by European talent scouts and being pouched to their clubs. **However**, this should not be their "no-matter-what" thought of playing soccer. (TLEC: TSNO1019)

(45) People kill rhinos so that they can sell their horns. **However**, in South Africa rhino poaching is illegal so people who continue killing rhinos gets arrested or killed. (SAMuLCAT: 6494Setswana)

Following is a discussion of the results of the analysis of the elaborating conjunctions.

4.3.2 A discussion of the elaborating conjunctions

Figure 4.3.2.1 below visually demonstrates the frequency distribution of elaborating conjunctions per 1 000 words across both corpora. The median frequency of elaborating conjunctions is 0 per

1 000 words in both the TLEC and the SAMuLCAT. However, the range is notably larger in the TLEC (1.36) than in the SAMuLCAT (1.01).

A Shapiro-Wilk normality test confirms that the data are not normally distributed for either corpus (TLEC: $W = 0.73$, $p < 2.2 \times 10^{-16}$; SAMuLCAT: $W = 0.62$, $p < 2.2 \times 10^{-16}$). Given this, a Wilcoxon test was employed to determine whether the difference between the two corpora is statistically significant. The results indicate a statistically significant difference ($W = 45734$, $p = 0.003909$).

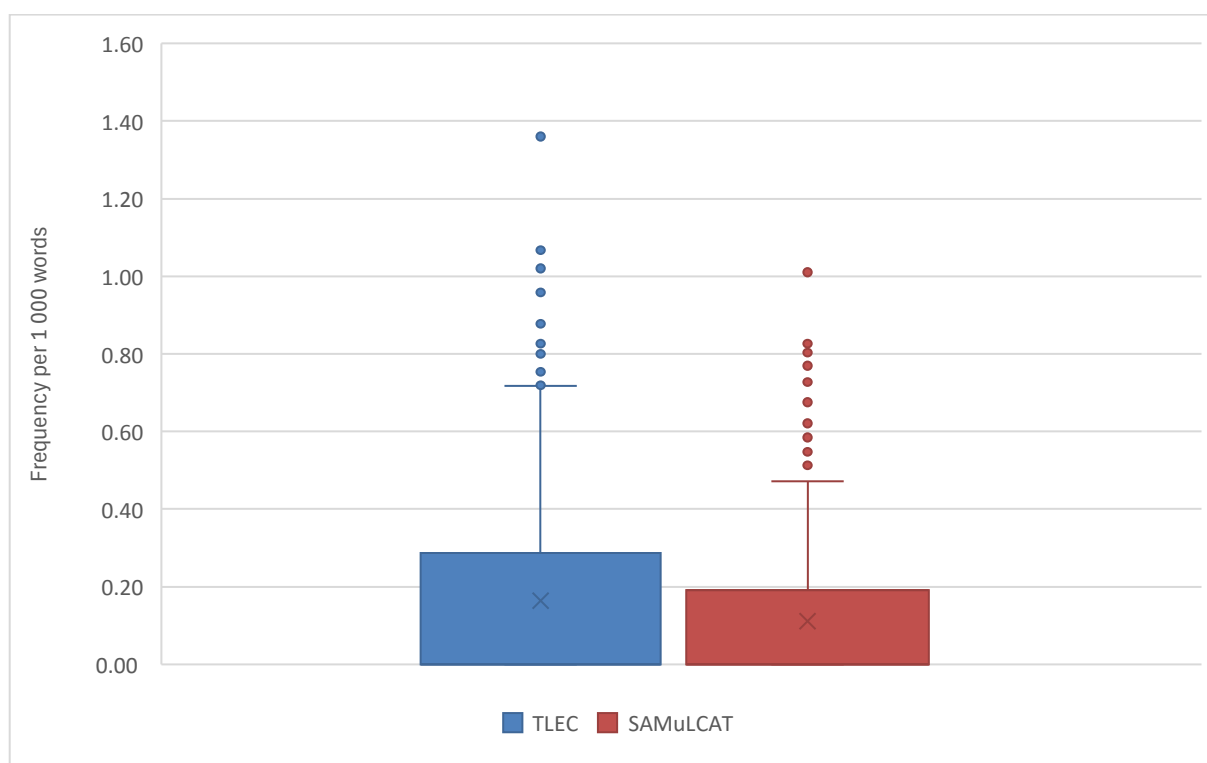


Figure 4.3.2.1: Distribution of the elaborating conjunctions based on their relative frequency per 1 000 words in the TLEC and the SAMuLCAT

The elaborating conjunctions identified in this study fulfil either an appositive expository role (e.g. *in other words*, *that is*) or an exemplifying function (e.g. *for example*, and *for instance*). As shown in Table 4.2.6.1, the analysis revealed no significant difference in the use of *in other words* between the two corpora ($G^2 = 0.46$; $p = 0.469$) or in the use of *for instance* ($G^2 = 0.61$; $p = 0.434$). However, significant differences were observed for *that is* ($G^2 = 23.35$; $p = 1.35 \times 10^{-06}$) and *for example* ($G^2 = 5.65$; $p = 0.017$), with these conjunctions used more frequently by the TLEC student writers than by the SAMuLCAT student writers.

Dastjerdi and Samian (2011) noted frequent use of *for example* in the Iranian EFL student writings, while Adeyemi (2017) noticed overuse of *for instance* in the NELC student writings. A

similar overuse pattern was observed among the TLEC student writers, aligning their behaviour with that of other non-L1 English learners. Conversely, the SAMuLCAT student writers' more restrained use of these conjunctions suggests a shift towards patterns observed among L1 English writers.

Illustrative examples from the corpora further highlight these patterns. Examples (46) and (47) demonstrate how the TLEC student writers used *that is*, while example (48) shows its use in the SAMuLCAT. Similarly, the use of *for example* is shown in example (49) from the TLEC and example (50) from the SAMuLCAT.

- (46) They are counselled and taught different skills. Rehabilitation centres can make a person to be productive in future .i.e. rehabilitation centres do not demoralise people like as it is the case in prisons where people are overworked. (TLEC: TSNO1416)
- (47) At the end it encourages prostitution. **That is** selling ones body in big hotels where there are some foreigners with money. (TLEC: TSNO1208)
- (48) Evidence shows that the illegal trade can reduce the poaching if the laundering of illegal products into the legal system is prevented (Jakins, 2018:174). **That is to say** the legal trade is expensive more that the illegal trade. (SAMuLCAT: 7493Setswana)
- (49) Problem can be solved if the universities limit the number of people which can be employed for the same year. **Eg** broadcasting wanted 70 people so every year a university must take only 70 people of broadcasting per year. (TLEC: TSNO1479)
- (50) However, there are few ways in which creativity in classroom can be increased. **For example**, instead of limiting the student to the writing assignment, they can create a podcast, video, role playing, poem, and composing songs. (SAMuLCAT 7764Setswana)

In example (46), the TLEC author used an abbreviation *i.e.*, which was not used by the SAMuLCAT authors. The next section focuses on the results of the analysis of the enhancing conjunctions.

4.3.3 A discussion of the enhancing conjunctions

Figure 4.3.3.1 below visually represents the distribution of enhancing conjunctions according to their frequency per 1 000 words in both corpora. In the TLEC, enhancing conjunctions occur with a median frequency of 2.00 per 1 000 words, compared to 0.98 per 1 000 words in the SAMuLCAT. The range of these conjunctions is notably greater in the TLEC (6.57) than in the SAMuLCAT (4.98). A Shapiro-Wilk normality test indicated that the data are normally not distributed in either corpus (TLEC: $W = 0.96$, $p = 4.28 \times 10^{-08}$; SAMuLCAT: $W = 0.91$, $p = 7.686 \times 10^{-09}$). Consequently, a Wilcoxon test was utilised to assess the difference between the two corpora. The results of this test confirmed a statistically significant difference ($W=65\,329$, $p=2.2 \times 10^{-16}$).

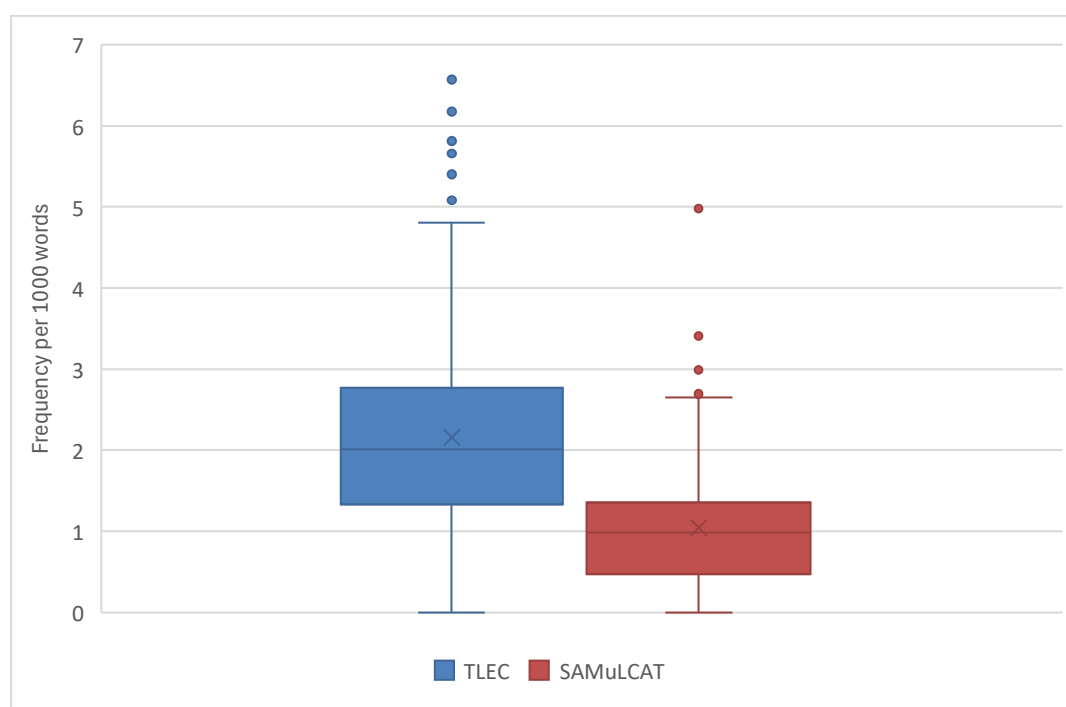


Figure 4.3.3.1: Distribution of the enhancing conjunctions based on their relative frequency per 1 000 words in the texts of the TLEC and the SAMuLCAT

A detailed discussion of enhancing conjunctions is provided in Chapter 2. Among these, the identified enhancing conjunction in the category of manner that fulfils a comparative function is *similarly*. The analysis of the use of *similarly* in the TLEC and the SAMuLCAT corpora revealed no significant difference in its usage between the two groups of student writers ($G^2 = 3.09$; $p = 0.79$), as shown in Table 4.2.61. In the simple spatio-temporal category, the identified enhancing conjunctions include *firstly*, *secondly* and *lastly*. Analysis indicates significant differences in the use of these conjunctions between the two corpora, with *firstly* ($G^2=6.14$;

$p=0.013$), *secondly* ($G^2=17.24$; $p=3.2883 \times 10^{-05}$) and *lastly* ($G^2=11.054$; $p=0.001$) being used more frequently in the SAMuLCAT corpus. Previous studies, such as Meisuo (2000) and Dastjerdi and Samian (2012), also identified the use of *secondly* in Chinese and Iranian student writings, respectively, while Meisuo (2000) noted the use of *first* in Chinese student writings.

Examples (51) and (52) illustrate how *firstly* was used by the TLEC and the SAMuLCAT authors, respectively. Additionally, example (52) from the SAMuLCAT demonstrates the use of *secondly* and *lastly*. Example (53) from the TLEC highlights the use of *secondly*, while example (54) from the SAMuLCAT showcases the use of *first*, *secondly*, and *lastly*. Lastly, example (55) illustrates the use of *lastly* in the TLEC essays, and example (56) from the SAMuLCAT demonstrates the combined use of *firstly*, *secondly*, and *lastly*.

- (51) **Firstly** they are going to fall in love with truck drivers. Young or ladies stand on the road hiking trucks, even the truck is going to Mpumalanga, she go with truck drivers. They sleep with them, and they going to increase money according to how long they sleep with other men. (TLEC: TSNO1228)

- (52) **Firstly** it was mentioned that harvesting will take place through de-horning process and rhinos will survive. **Secondly** it was mentioned that both the harvesters and African countries would benefit financially from the international trade of rhino horn. **Lastly**, the country of china will also be able to trade rhino horns legally in order to produce medicine, although other people disagree to this proposal of legalisation of rhino horn trade because they believe that it will only lead to an increase in demand for rhino horns. (SAMuLCAT: 7207Setswana)

- (53) Most of the players are playing in Europe which is a true reflection of their worth. **Secondly**, they play outside the country to earn a better salary. (TLEC: TSNO1385)

- (54) In this essay the connotation of citizen science will be discussed **first**, the impact of it in societies will be discussed **secondly** and **lastly** the society's understanding of science will be discussed. (SAMuLCAT:77Sesotho)

- (55) The other thing is the problem of inflation. The economists and other experts should investigate the downfall of rand. **Lastly**, it is the case of too early to

work on these problems, to ensure that South African players are paid more.
(TLEC: TSNO1385)

- (56) In this argument **firstly** will define citizen science. **Secondly** the impacts and goals of citizen science will be discussed and **lastly** the significance of citizen science will be outlined. (SAMuLCAT: 78Sesotho)

Example (51) illustrates the use of the spatio-temporal conjunction firstly by the TLEC student writers. However, it is not followed by any sentence that begins with or contains secondly, which would signal the sequential order of events. Similarly, in example (53), secondly appears without following a preceding firstly to signal the beginning of events, nor is it followed by lastly to mark the end of events. Example (55) illustrates the use of lastly to indicate the conclusion of events, but it does not reference prior occurrences to establish a clear sequence. In contrast, examples (52), (54), and (56) effectively showcase the spatio-temporal conjunctions first(ly), secondly and lastly, highlighting their intended function to indicate the chronological order of events.

The identified causal-conditional conjunctions include *so*, *hence*, *as a result*, *consequently*, *therefore*, *because*, *although* and *though*. The coordinating conjunctions *so*, *as a result*, and *though* were disambiguated because they serve more than one linguistic function. The analysis revealed no significant differences in the usage of *hence* ($G^2 = 0.53$; $p=0.465$), *as a result* ($G^2 = 0.41$; $p=0.524$), *consequently* ($G^2 = 0.53$; $p=0.467$), *nevertheless* ($G^2 = 3.09$; $p=0.079$) and *though* ($LL=1.59$; $p=0.207$) between the two corpora. However, significant differences were observed in the use of *so* ($G^2 = 151.56$; $p=1.76310 \times 10^{-34}$), *therefore* ($G^2=33.98$; $p=5.56639 \times 10^{-09}$) and *because* ($G^2 = 293.11$; 1.04412×10^{-65}).

The causal-conditional conjunction *so* was used more frequently by the TLEC student writers, while *therefore* appeared more frequently in the SAMuLCAT corpus. Similar trends have been observed in other research, such as Meisuo's (2000) study on Chinese student writing and Adeyemi's (2017) findings on the overuse of *so* and *because*, alongside the underuse of *therefore* in the NELC.

Examples (57) to (61) illustrate these differences, with examples (57), and (58) demonstrating the conversational use of *so* by student writers in both corpora. In example (58), the redundancy of using both *so* and *this means* highlights an area for improvement in academic writing style.

(57) When soldiers come from the fightings they will find out that there is no food available **so** they will be taking their women as their food. (TLEC: TSNO1003).

(58) Also educators who use this artistic technique do not suffer from stress frequently because their learners get excellent marks **so** this means everybody benefits. (SAMuLCAT: 7765Sesotho)

The conjunction *therefore* was used significantly more frequently in the SAMuLCAT than in the TLEC. This finding aligns with previous studies, such as Meisuo's (2000) analysis of Chinese undergraduate student writing and Adeyemi's (2017) investigation of NELC student writings, where the use of *therefore* was similarly noted. The observed contrast in usage suggests a distinction in formality between the two corpora: while the TLEC student writers relied more heavily on the causal conjunction *so*, the SAMuLCAT student writers preferred *therefore*. The frequent use of *therefore* in the SAMuLCAT indicates a more formal writing style compared to the conversational tone reflected in the TLEC.

Examples (59) and (60) illustrate how the SAMuLCAT student writers employed *therefore* in their essays.

(59) Politicians are liars, **therefore** if you study politics you study a lie. (TLEC: TSNO1480_SE)

(60) Creative teaching aims to inspire and motivate learners, different ways to teach a something makes the subject or topic much more interesting **therefore** increasing learning. (SAMuLCAT:7767Setswana)

As indicated in Table 4.2.6.1, the student writers in the TLEC use the causal conjunction *so* more frequently than the student writers in the SAMuLCAT, while the student writers in the SAMuLCAT use the causal conjunction *therefore* more frequently than the student writers in the TLEC. This suggests that the writing in the SAMuLCAT is more formal than the writing in the TLEC.

The conjunction *because* was used significantly more in the TLEC corpus than in the SAMuLCAT corpus. Example (61) illustrates how the TLEC author used it to link elements in a sentence.

- (61) Now, in our school or institute the lead is a women which is okay, **because** sometimes we need to give them a chance to prove themselves. (TLEC: TSNO1498)

The conjunction *although* was also used significantly more in the SAMuLCAT corpus than in the TLEC. Example (62) illustrates how the SAMuLCAT author used it to link sentences.

- (62) Fake news can be used to blame, persuading, winning arguments, exerting **although** people know that is wrong but still choose to publish these fake news. (SAMuLCAT: 734Setswana)

Based on the findings and the discussion above, the conjunctions were generally used more frequently in the TLEC than the SAMuLCAT. To illustrate this difference, the comparison below highlights how some of the extending additive conjunctions were employed in each corpus.

Prototypically, *on the other hand* is used to express a varying or adversative meaning. However, in example (63) below, *on the other hand* is used to express a durative spatio-temporal meaning that is usually expressed by a word such as *while*.

- (63) When coming to this point of laziness, many lecturers sit down in their offices during their lecture period ignoring us. **On the other hand** that we want to be taught and go further more than they did. (TLEC: TSNO1442)

The conjunction *on the other hand* is used to express the prototypical adversative meaning in example (64) below:

- (64) Also many people think this could endanger rhino lives while **on the other hand** other people see it as the best way to reduce the risks of poaching crisis (SAMuLCAT: 3126Setswana)

The varying conjunction *alternatively* is used in example (65).

- (65) Majority of community members require insight on specific research so that they know what it is based on. **Alternatively**, inaccurate information can be misleading to the public. (SAMuLCAT: 3794 Sesotho)

Example (65) illustrates the correct use of the varying conjunction *alternatively*. However, it was used infrequently, appearing only twice in the SAMuLCAT corpus. This limited usage may indicate that student writers are not fully familiar with a broader range of conjunctions, potentially limiting their ability to employ more varied and precise cohesive devices in their writing.

4.4 Text analysis

In this section, randomly selected texts from both the TLEC and the SAMuLCAT are analysed to determine whether the differences observed in the use of conjunctions between the TLEC and the SAMuLCAT influence text cohesion. Detailed analyses can be found in Addendum A. The discussion begins with an examination of the extending conjunctions identified in both corpora, followed by elaborating conjunctions, and concludes with enhancing conjunctions.

In terms of the extending conjunctions, student writers in both the TLEC and the SAMuLCAT frequently used the additive conjunctions *and* and *also*. However, the conjunction *furthermore* was absent in all of the five TLEC texts analysed but appeared four times in the five SAMuLCAT texts. This corresponds with the findings in Section 4.3 that the conjunction *furthermore* is used significantly more frequently by the SAMuLCAT student writers than by those in the TLEC.

The SAMuLCAT student writers also used adversative conjunctions *but*, *yet*, *on the other hand*, and *however* more frequently than their TLEC counterparts. Previous studies have documented that L2 learner writers tend to underuse adversative conjunctions (see Adeyemi, 2017:230; Granger & Tyson, 1996:20, Dastjerdi & Samian, 2011:72). These findings suggest that, over time, L2 learners are increasingly incorporating adversative conjunctions into their writing.

Regarding the elaborating conjunctions, it is interesting to note that the TLEC student writers frequently use clarifying and particularising conjunctions, such as *especially* and *in particular*, while the SAMuLCAT student writers did not use them in the texts that were analysed. This finding aligns with the frequency analysis results in Section 4.3. Furthermore, the TLEC student writers use the clarifying conjunction *or* more frequently than the SAMuLCAT student writers. Similarly, the appositive conjunction *for example* was used by the TLEC student writers but not by the SAMuLCAT student writers. Section 4.3 corroborates this finding, revealing that appositive conjunctions are significantly more prevalent in the TLEC writing than the SAMuLCAT. Granger and Tyson (1996:20) have previously observed that student writers often overuse appositive conjunctions such as *for example* and *for instance*.

In terms of the enhancing conjunctions, both the TLEC and the SAMuLCAT student writers used causal conjunctions *so*, *because*, *although*, and *therefore*. However, *spatio-temporal* conjunctions, including *even now*, *then*, *at the end* and causal conjunctions such as *so that*, *though* and *since*, were only used by the TLEC student writers. Conversely, the SAMuLCAT student writers used causal conjunctions such as *consequently*, and *as a result* and the spatio-temporal conjunction *firstly*, which were absent in the TLEC texts.

The causal conjunction *because* was employed more frequently by the TLEC student writers than by their SAMuLCAT counterparts. This pattern reflects Adeyemi's (2017:162) findings, which identified overuse of causal conjunctions like *because*, *so*, *therefore* and *since*, alongside underuse of the conditional conjunction *though*. Adeyemi also noted that the conditional conjunction *although* tends to be overused. These observations suggest a decline in the use of enhancing conjunctions in the SAMuLCAT texts, as highlighted in Table 4.3.1.

While analysing the texts, a few instances were observed in both the TLEC and the SAMuLCAT where the student writers used conjunctions that belong to the same category in the same clause. An example of this can be seen in example (66) where two particularising conjunctions (*especially* and *in particular*) are used in the same clause:

- (66) Now **especially** ladies **inparticular** they want to be seen in posh cars with well known men. (TLEC: TSNO1001)

Another example of this can be seen in example (67) where two adversative conjunctions (*but* and *however*) are used in the same clause:

- (67) he furthermore explains that legal trade can reduce the incentive of poaching if regulators can prevent the laundering of a threatening level of illegal supply under the cover of a legal trade **but** Ferreira et al (2014:91) **however** argues that nature of that relationship may differ substantially depending on the specific use.

In the literature, scholars refer to this as explicitation (cf. Kruger and Van Rooy, 2016:26, 30) or hyperclarity (Williams, 1987:178). It is posited that when language production is constrained in some way (e.g. when writing in one's second language), language users want to avoid ambiguity and make sure that their messages are communicated clearly. Ozono and Ito (2003:293), for example, have stated that learners find it cognitively more difficult to process adversative

conjunctions (such as *but* and *however* used in example (67)) than exemplifying conjunctions such as *for example*. The repeated use of the adversative conjunctions in example (67) could point to the fact that the student writer finds it difficult to process the adversative conjunctions. There were not many instances where conjunctions were used with meanings other than their prototypical meanings. Examples (68) below, illustrates such usage.

- (68) Medical Aid is very important for soccer players **because** this game is very dangers, they are lot of injures. It shouldn't be like the players are just playing at their own risks **even though** they are some people who benefit at their own expenses. (TLEC: TSNO1174)

The use of *because* expresses a causal relationship between the clause 'medical aid is very important for soccer players' and the clause 'this game is very dangerous'. The conjunction *even though* expresses a concessive meaning. At first glance in example (68), it does not seem as if a concessive meaning is appropriate. Upon closer inspection, one realises that the sentence construction is not prototypical and that this may cause some confusion with the reader. The concessive meaning becomes clear when the sentence is reformulated:

- (68a) Medical aid is very important for soccer players because this game is very dangerous and there are many injuries. The players should not be expected to play at their own risk even though they can afford to cover their own medical expenses.

This observation is confirmed by Henning's (2006:106) observation: "In most cases where linking adverbials seem to fit into an error category it is the sentence structure and not the choice of linking adverbial that seems to be at fault – in other words, the linking adverbial is correct for the context of the sentence, but the sentence structure makes the linking adverbial seem like the incorrect choice".

4.5 Conclusion

The focus of the above section was on the analysis of the conjunctives identified in the TLEC and the SAMuLCAT. Table 4.3.1 presented the raw and the relative frequencies of extending, elaborating and enhancing conjunctions, categorised according to Halliday and Matthiessen's (2014:612) system of conjunctions, as discussed in Chapter 2. The table detailed the raw and relative frequencies per 10 000 words, the log-likelihood and the p-value of each of the

conjunctive adjuncts. Examples of how the TLEC and the SAMuLCAT used these conjunctions to link elements of a sentence were presented and discussed.

In Section 4.2 the coordinating conjunctions were analysed. The analysis revealed that the student writers in the SAMuLCAT used the coordinating conjunction *and* significantly more frequently than the student writers in the TLEC. Although this finding might seem counterintuitive, Biber *et al.* (1999:82, 1031) point out that *and* is used more frequently in conversation than in written academic texts, attributing this to the high frequency of verbs in conversation. Scholars such as Partridge (2011:5), Terblanche (2009:47-48) and Van Rooy and Terblanche, (2006) have noted that the language in the TLEC is more characteristic of conversation than written language. This change in the frequency of the use of *and* suggests that the language of the learners is becoming more characteristic of written language. Supporting this, while *and* is used more frequently to coordinated clauses in the TLEC, it is used more frequently to coordinate phrases in the SAMuLCAT. Furthermore, the more informal nature of the language in the TLEC is reflected in the presence of pseudo-coordination, which is largely absent from the SAMuLCAT.

The coordinating conjunction *but*, which expresses an adversative meaning, is used more frequently in the TLEC than in the SAMuLCAT. When the other adversative conjunctions are considered, it is observed that the adversative conjunction *however* is used significantly more frequently in the SAMuLCAT than in the TLEC. This implies that students are increasingly relying on *however* rather than *but* to express adversative meanings. Dastjerdi and Samian (2011) observe that students prefer to use simple conjunctions such as *or*, and *but*. For example, the Iranian student writers in their study preferred *but*, whereas Chinese student writers underused it (Meisuo, 2000). Adeyemi (2017) noted an overuse of *or* in the NELC. In this study, the TLEC authors used *but* more frequently than the SAMuLCAT authors, indicating that its frequency has declined in the learner language over time.

Among the extending conjunctions, an increase in the use of the additive conjunctions of *moreover*, *furthermore*, *in addition*, and the varying *however* can be observed in the SAMuLCAT, which suggests proficiency in the use of adversative conjunctions. Adeyemi (2017) and Granger and Tyson (1996:20) noted the overuse of additive conjunctions like *also* and *furthermore* indicating a shift towards more formal language use by the SAMuLCAT student writers.

Regarding elaborating conjunctions, a decline can be observed in the use of the appositive conjunction *that is (to say)*, in particular, but also to a lesser extent in the use of *for example*. In the literature, scholars such as Granger and Tyson (1996:20) have observed an overuse of

appositive conjunctions in the writing of L2 learners. For clarifying conjunctions, a decline is noted in the use of *especially*, supported by its absence in the analysed texts. This suggests that the SAMuLCAT student writers can convey their ideas effectively without emphasising specific points.

In enhancing conjunctions, there is a decline in the use of the spatio-temporal *firstly*, *lastly*, *after*, and the causal-conditional *so*, *hence*, *since*, *as a result*, *because*, *still* and *then* in the SAMuLCAT. However, there is an increase in the use of *although*. Halliday and Matthiessen (2014:617) state that spatio-temporal conjunctions are vital in registers requiring temporal or event sequencing, such as narrative texts or biographies. Literature, such as Dastjerdi and Samian (2012:74), has noted the overuse of *because* and *because of*. Granger and Tyson (1996:20) and Adeyemi (2017:174) observed an underuse of conditional conjunctions *though* and *still* and an overuse of causal conjunctions like *so* and *because*.

The decline in the use of these conjunctions by the SAMuLCAT student writers may be attributed to the academic nature of their writing, which requires constructing arguments rather than narrating events.

In summary, the analysis reveals an increase in the use of extending conjunctions between the two corpora, a decrease in the use of the elaborating conjunctions, and an increase in the use of enhancing conjunctions, except for a decline in the use of *so* and *because*.

L2 English student writers are not yet employing a wider variety of conjunctions, such as *put it another way*, *incidentally*, or *leaving that aside*. These students should be exposed to a broader range of conjunctions to enhance the readability and coherence of their texts.

The next chapter presents the conclusions which can be drawn from this study as well as recommendations for further studies.

CHAPTER 5 CONCLUSION

5.1 Introduction

This study aimed to compare the use of conjunctive devices in two different corpora, the TLEC and the SAMuLCAT, to determine whether there has been a change in the use of conjunctive devices and how these changes affect cohesion. To achieve this, Halliday and Matthiessen's (2014:612) system of conjunctions was employed to compile a list of conjunctive devices, and the corpus analysis tool WordSmith 8.0 was used to extract the conjunctions from the corpora. Halliday and Matthiessen's (2014:612) system of conjunctions was discussed in Chapter 2, which focused on the theoretical framework. The methodology used to conduct the analysis was detailed in Chapter 3. The focus of Chapter 4 was on the analysis of the conjunctive devices and the discussion thereof.

The conjunctive devices were categorised into extending, elaborating and enhancing conjunctions. However, due to their high frequency, the prototypical coordinating conjunctions *and*, *but* and *or* were analysed first, followed by the other conjunctive adjuncts. The results of the analysis and their discussion were presented in Chapter 4. This chapter (Chapter 5) focuses on the findings of the study and the recommendations derived from them. The findings are discussed in relation to the research questions. Section 5.2 presents the objectives and the findings of this study. Section 5.3 addresses the limitations of the study. Section 5.4 explores the implications of the study, while Section 5.5 provides the recommendations. Finally, the concluding remarks are presented in Section 5.6.

5.2 Findings

The first research objective of the study was to identify the conjunctive devices that are used by undergraduate students in the TLEC and in the SAMuLCAT. The coordinating conjunctions *and*, *or* and *but* were identified in both the TLEC and the SAMuLCAT. Regarding the extending conjunctions, the additive conjunctions *moreover*, *furthermore*, *nor*, *also*, and *in addition* were identified in both corpora. The varying conjunction *except* was identified only in the TLEC, while the adversative conjunctions *yet*, *on the other hand*, and *however* were present in both corpora.

In terms of the elaborating conjunctions, the appositive conjunctions *in other words*, *that is*, *at least*, *for example*, *for instance*, and *anyway* were identified in both corpora. However, the conjunctions *I mean* and *by the way* were identified only in the TLEC. The clarifying conjunctions

especially, in particular, actually, and to sum up were found in both corpora, whereas *in short, and to be specific* were unique to the TLEC.

Regarding the enhancing conjunctions, *similarly* and *likewise* were identified in the TLEC and the SAMuLCAT. The spatio-temporal conjunctions *firstly, secondly, lastly, then, finally, first, now, after, meanwhile, next, and since* were present in both corpora, while *afterwards, meantime and at that time* were found only in the TLEC.

The causal conjunctions *so, hence, as a result, consequently, therefore, and because*, along with the conditional conjunctions *otherwise, nevertheless, still, if not, although, and though in that case*, were identified in both corpora. However, the conjunction *if not* was found exclusively in the TLEC.

The second objective was to determine whether any differences can be observed in the use of conjunctive devices between the two corpora. The coordinating conjunction *and* was used more frequently by the student writers in the SAMuLCAT than by those in the TLEC. This suggests that the essays written by the SAMuLCAT student writers are more formal than those written by the TLEC student writers (cf. Biber, *et al.*, 1999:84). Conversely, the coordinating conjunctions *or* and *but* were used more frequently by the TLEC student writers than by those in the SAMuLCAT. Previous research by Dastjerdi and Samian (2011) highlights that L2 learners prefer using simple conjunctions such as *or* and *but*. Notably, the adversative conjunction *however* was used significantly more frequently by the SAMuLCAT student writers compared to their TLEC counterparts. This observation further implies that the writing in the SAMuLCAT exhibits greater formality than the writing in the TLEC.

An analysis of how the coordinators *and, but* and *or* are used to conjoin syntactic elements reveals that the SAMuLCAT student writers employed these coordinators more frequently to link phrases than the TLEC student writers, while the latter used them more often to link clauses. Since coordinators are typically used to link clauses rather than phrases in conversation (Biber, *et al.*, 1999:84), these findings suggest that the language in the TLEC resembles conversational language, whereas the language in the SAMuLCAT resembles written academic language. This indicates a shift over time in the use of coordinators to conjoin syntactic elements, reflecting a more formal writing style in the SAMuLCAT student texts.

Halliday and Matthiessen (2014:10) note that various types of meaning are combined and organised into a unified grammatical structure within a clause. The increased use of coordinators to link phrases by the SAMuLCAT student writers suggests a stronger grasp of grammatical

structures and an ability to link these structures effectively using coordinators compared to the TLEC student writers.

In the extending conjunctions, *moreover*, *furthermore*, *nor*, *in addition*, *yet*, and *however*, were used more frequently in the SAMuLCAT corpus than in the TLEC. Conversely, the conjunctions *also*, *on the other hand* appeared more frequently in the TLEC than in the SAMuLCAT. The conjunction *except* was identified exclusively in the TLEC corpus.

Regarding elaborating conjunctions, *in other words*, *that is*, *for example*, *for instance*, *anyway*, *especially*, and *to sum up*, were used more frequently in the TLEC corpus than in the SAMuLCAT. Additionally, the conjunctions *I mean*, *by the way*, *in short*, *to be specific* were found only in the TLEC corpus. In contrast, *at least* was identified exclusively in the SAMuLCAT corpus, while *in particular* was used more frequently in the SAMuLCAT than in the TLEC.

With the enhancing conjunctions, scholars such as Meisuo (2000:81) have reported an extensive use of spatio-temporal conjunctions such as *firstly*, *secondly* and *lastly* in Chinese student writing. Similarly, a significant increase in the use of the conjunctions *secondly* and *lastly* is observed from the TLEC to the SAMuLCAT, indicating that students have become more proficient in the use of more advanced discourse markers.

In the literature, causal-conditional conjunctions such as *therefore*, *nevertheless* and *although* have been reported as underused in learner writing (Granger & Tyson, 1996; Dastjerdi & Samian, 2011). However, an increase in the use of *nevertheless*, *although*, and *therefore* is observed in the SAMuLCAT, indicating an advanced grammatical understanding and a better grasp of conjunction usage. Ozono and Ito (2003:293) point out that these conjunctions are more difficult to process, yet they occur more frequently in the SAMuLCAT than in the TLEC. This suggests an expanded vocabulary and greater exposure to academic English.

Dastjerdi and Samian (2012:74) noted the overuse of *because* and *because of*. A decline in the use of *because* is observed in the SAMuLCAT compared to the TLEC. Similarly, Granger and Tyson (1996:20) and Adeyemi (2017:174) noted the underuse of conditional conjunctions such as *though* and *still*, as well as causal conjunctions such as *though*, *although* and *nevertheless*, alongside the overuse of *so* and *because*. A decline in the use of *so*, *as a result*, *though*, and *then* is also observed in the SAMuLCAT compared to the TLEC. These changes suggest a more proficient and nuanced use of enhancing conjunctions in the SAMuLCAT student writing.

A change over time is evident in the increased use of extending conjunctions between the two corpora, a decreased use of elaborating conjunctions, and an increased use of enhancing conjunctions, except for a decline in the use of *so* and *because*.

One notable change is the frequency in the use of coordinating conjunctions. The use of *and* is higher in the SAMuLCAT than in the TLEC, while *or* and *but* are used more frequently in the TLEC than in the SAMuLCAT. This shift occurred over a span of 20 years.

As discussed in Chapter 4, the SAMuLCAT authors employed a wider variety of conjunctions and demonstrated a preference for formal language, whereas the TLEC authors relied on a limited set of conjunctions, often repeated, and used more informal language.

The third objective was to determine to which factors differences between the corpora can be attributed and whether this has a positive effect on cohesion in the more recent data. The student writers in the TLEC used conjunctions in a more conversational manner, whereas the student writers in the SAMuLCAT used conjunctions in a more formal manner. The conversational nature of the writing in the TLEC is reflected in the student writers' use of pseudo-coordination and intensifying coordination, which is mostly absent in the SAMuLCAT essays. This finding coincides with Van Rooy and Terblanche's (2006) observation that the writing in the TLEC is more colloquial.

A key observation is that students in both corpora tend to use the conjunctions appropriately. In the instances where it seems as if students do not use specific conjunctions appropriately, it becomes clear upon closer inspection that the conjunctions are in fact used to express the meaning they prototypically express, but that the sentence constructions are not prototypical. This point is supported by Henning's (2006) observation:

In most cases where linking adverbials seem to fit into an error category it is the sentence structure and not the choice of linking adverbial that seems to be at fault – in other words, the linking adverbial is correct for the context of the sentence, but the sentence structure makes the linking adverbial seem like the incorrect choice.
(p. 106)

Both the TLEC and the SAMuLCAT student writers used conjunctions to establish cohesion in their essays. The SAMuLCAT authors employed conjunctions more formally, opting for terms like *therefore* to express causal relationships, whereas the TLEC authors often used more informal

conjunctions such as *so*. Some conjunctions used by the SAMuLCAT student writers did not appear in the TLEC essays. This discrepancy could be attributed to students in the TLEC achieving their Basic Interpersonal Communication Skills (BICS) but not yet fully developing their Cognitive Academic Language Proficiency (CALP), as suggested by Cummins (1981:24). The use of conjunctions by the SAMuLCAT student writers facilitated clearer relationships between ideas, enhancing textual cohesion and making the essays easier to read and understand

5.3 Limitations of the study

A limitation of this study is that the component of the SAMuLCAT corpus analysed is relatively small compared to the component of the TLEC corpus analysed in this research.

A second limitation is that further investigation is needed into the different methods of teaching conjunctions across the periods under review, as these methods could have influenced the students' use of the conjunctions. While this study employed a corpus linguistic approach, future research could compare the teaching materials used to teach conjunctions twenty years ago with those currently in use. Such a comparison could provide insights into whether changes in teaching materials impact the frequency and type of conjunctions students use.

Furthermore, digital tools such as spelling and grammar checkers as well as other artificial intelligence-based tools, are now available to students, whereas these tools were not accessible twenty years ago. Students today often rely on these tools to suggest conjunctions or correct sentence structures, which has an impact on their independent grammar and writing skills. Comparing the writing skills of students who wrote essays before the advent of such technology with those who wrote essays using these tools highlights how these advancements may influence the findings.

Changes in the methods of data collection over time, such as transitioning from handwritten to typed essays, can introduce inconsistencies that affect comparisons. Analysing handwritten data typically involves transcription, which can introduce errors or inconsistencies, especially if multiple researchers are involved. In contrast, typed essays are directly analysable with text-processing software, allowing for greater consistency and precision. This discrepancy could lead to skewed results, as earlier handwritten data might be less accurate, adding a layer of error that complicates comparison with more recent, precisely transcribed typed data. It is important to note that the students who contributed essays to the TLEC wrote essays without any reference tools (such as

dictionaries or grammars), whereas the students who contributed essays to the SAMuLCAT could make use of reference tools.

5.4 Implications of the study

The findings of this study indicate a change in the use of conjunctive devices by undergraduate students. This change may be attributed to the L2 English students' ability to apply CALP in academic writing. It is also likely influenced by the time gap between the years when the data was collected. The change in the use of conjunctive devices in the SAMuLCAT suggests a better understanding of their functions and a more reader-driven use of conjunctive devices compared to the TLEC. This improvement indicates that Academic Literacy modules are helping students in using conjunctions more effectively. However, certain conjunctions, such as *incidentally*, *to put it another way*, and *for that purpose*, are still not being used by student writers. The Academic Literacy module could place greater emphasis on encouraging students to incorporate such conjunctions in their writing.

5.5 Recommendations

Although the literature provides evidence of comparative studies on the use of conjunctive devices by undergraduate students, there is limited evidence of such studies involving texts written by undergraduate students enrolled at the same tertiary institution with datasets collected 20 years apart. Comparative studies focusing on the use of conjunctive devices by undergraduate students from similar backgrounds should be conducted at other institutions and among speakers of other South African official languages to determine if changes occur and identify their causes.

Further research should investigate the use of conjunctive devices in the texts written by undergraduate students before and after being taught their importance and functions in forming cohesive texts.

Additionally, other areas of study, such as the use of conjunctive devices in spoken and written discourse, the role of conjunctions in digital communication, and the impact of sociocultural factors on the use of conjunctive devices, should be explored.

5.6 Conclusion

The study aimed to conduct a comparative analysis of the use of conjunctions by undergraduate students in the TLEC and the SAMuLCAT, focusing on academic essays written approximately

20 years apart. The research demonstrates that there has been a notable change in the frequency and variety of conjunctive devices used in the texts written by authors in the TLEC and the SAMuLCAT corpora. This change has positively affected cohesion, as the use of a broader range of conjunctions has contributed to creating logically connected and well-organised texts, making them easier to read and understand.

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ADDENDUM A

Table A1: Text analysis of TSNO1001

	Elaborating	Extending	Enhancing
According to my understanding (FM) of this topic I do take that ¹¹ poverty is where by when the people are poor.			
And ¹ and ² by this AIDS epidemic is that dreaded disease which kills millions of people everyday.		additive (positive) ¹ additive (positive) ²	
A lot of people are dying everyday because of ³ Aids although ⁴ it does not appoit or select who ever to kill			causal (general) ³ conditional (concessive) ⁴
i think according to how I look at things it seems to be killing mostly the needy.			
Well poverty might be one of the cause of this monster.			
Nowdays especially ⁵ the youth they want to own everything they want like	clarifying (particularising) ⁵		

¹¹ In this study, grammatical conjunctions such as *that* were not analysed.

	Elaborating	Extending	Enhancing
for example ⁶ if she/he sees someone having an expensive thing she/he also ⁷ want to have it forgetting that she/he can not afford to buy that.	appositive (exemplifying) ⁶	additive (positive) ⁷	
This end up a person trying by all the means to get that costly thing.			
Now ⁸ especially ⁹ ladies inparticular ¹⁰ they want to be seen in posh cars with well known men.	clarifying (particularising) ⁹ clarifying (particularising) ¹⁰		spatio-temporal (simple) ⁸
And ¹¹ one thing that I know is that this men they do not love them what they want is only sex then ¹² they vanish.		additive (positive) ¹¹	spatio-temporal (simple) ¹²
The most thing which spread AIDS in Africa is through sex			
So ¹³ when expensive tell lies about how they will spend on those women.			causal (general) ¹³
The women forget that there is AIDS.			
It does not mean that these poverty stricken people get AIDS because ¹⁴ they like it.			causal (general) ¹⁴
no!			
Its because ¹⁵ having sex is another way of how they earn their living.			causal (general) ¹⁵

	Elaborating	Extending	Enhancing
You find that some of them are prostitutes, I can not blame them for what they are but ¹⁶ the thing they sleep around with people they do not know.		adversative ¹⁶	
Most of the people in Africa are very poor and ¹⁷ lazy,		additive (positive) ¹⁷	
instead of ¹⁸ working in their fields they rush to towns where they think they can afford the expensive lives there.		varying (replacive) ¹⁸	
And ¹⁹ at the end ²⁰ they end up living in squatters.		additive (positive) ¹⁹	spatio-temporal (simple, conclusive) ²⁰
Where they stay is not healthy and ²¹ also you find that most of these poor people they do not bother themselves to use a condom.		additive (positive) ²¹	
And ²² I think these people should always be supplied with condoms.		additive (positive) ²²	
They should always be visited by the social workers where thy squat time and ²³ again so that ²⁴ they teach them about aids since ²⁵ they seem to be lacking knowledge about this disease.		additive (positive) ²³	causal (specific purpose) ²⁴ causal (general) ²⁵
Also ²⁶ they should use conraceptives to reduce the number of pregnancies, since ²⁷ when you are pregnant the virus multiplies very rapidly.		additive (positive) ²⁶	causal (general) ²⁷

	Elaborating	Extending	Enhancing
With these few words I strongly agree that Poverty is the cause of the HIV/AIDS epidemic in Africa.			

Table A2: Text analysis of TSNO1087

	Elaborating	Extending	Enhancing
We as the people living in this world have to stand up and ¹ fight against this disease because ² we are gone.		additive (positive) ¹	causal (general) ²
Almost 65% of the pregnant women in the whole Africa are the victims of Aids/HIV.			
Leteraly meaning that more than 10.000 of unborn children, we have got nothing to do with them becouse ³ their lives are already in danger			causal (general) ³
When coming to our youths, also their lives are in danger because ⁴ most of them are HIV career and ⁵ they have got nothing to do with themself because ⁶ they cant get jobs anywhere because ⁷ of their conditions.		additive (positive) ⁵	causal (general) ⁴ causal (general) ^{6&7}
This affect our country becaues ⁸ the whole country depends on the youths, they are the eyes of the country.			causal (general) ⁸

	Elaborating	Extending	Enhancing
When youths died because of ⁹ this serial killer this means that after 10 years the will be no workers in the country because of ¹⁰ this disease.			causal (general) ^{9&10}
Most of the people whom are victims of Aids or ¹¹ Hiv their parents and ¹² relatives leave them as they are		additive (positive) ¹¹ alternative ¹²	
Only the Government will take care of them till the end of their lives.			
Also ¹³ the government will take that responsibilities at their funeral because they cant go anywhere else.		additive (positive) ¹³	

Table A3: Text analysis of TSNO1174

	Elaborating	Extending	Enhancing
South African soccer players should be paid enough to ensure that they play in south Africa			
Money should not be the only benefit to be considered to motivate players.			
There are other benefit like good accomodation, Medical Aid, Soccer kit and ¹ good training facilities.		additive (positive) ¹	

	Elaborating	Extending	Enhancing
Most of player who left South African teams to look for greener pastures in european Countries we alluded by good money that the european players get.			
They should get money which could met their basic need of life, Food, shelter and ² clothes.		additive (positive) ²	
Food is very important as far as physical fitnees is concerned.			
Player should get enough money Which could be enough to buy balance diet			
Player should be given good accomodation to encourage them to play for national teams.			
Most of the player who play for outside teams they live in good houses.			
For player to be physical and ³ metal fit he should be in good house to relax.		additive (positive) ³	
Medical Aid is very important for soccer players because ⁴ this game is very dangers, they are lot of injures.			causal (general) ⁴
It shouldn't be like the players are just playing at their own risks even though ⁵ they are some people who benefit at their own expenses.			conditional (concessive) ⁵
Soccer kit and ⁶ football boots should be the responsibility of the teams because ⁷ at the end they are the one who benefit.		additive (positive) ⁶	causal (general) ⁷

	Elaborating	Extending	Enhancing
Players should be provided with football boots for practices.			
Good training facilities should be constructed in order for this sports to encourage more players to get attracted by local teams,			
Most of the players live for foreign countries where they will get good coaches and ⁸ good facilities to improve their standard of play.		additive (positive) ⁸	
All these things if they could be considered they would attract the influx of local players to foreign countries.			

Table A4: Text analysis of TSNO1279

	Elaborating	Extending	Enhancing
Poverty is the cause of HIV/AIDS epidemic in Africa because ¹ if you study the causes of poverty you will find that AIDS is included.			causal (general) ¹
Most of the affected are people who did not have sufficient income to obtain basic needs such as shelter, food, and ² health services.		additive (positive) ²	
Therefore ³ they end up selling their bodies to get things they are in need of then ⁴ they ended up being contracting AIDS.			causal (general) ^{3&4}

	Elaborating	Extending	Enhancing
Some of the people who are the bread winners in their families are the ones who are the victims of AIDS and ⁵ they would end dead, and ⁶ their families would be poverty stricken.		additive (positive) ^{5&6}	
Families who are the victims of AIDS they spend lots of money buying special diet for their patients which are very expensive and ⁷ looking for medicines that can heal them and ⁸ they would use these money to hunt for doctors who claim that that they can heal the disease and ⁹ after all ¹⁰ they do not find any difference on their patient wherelse the money is gone.		additive (positive) ^{7,8&9}	causal (general) ¹⁰
These would positively contribute a lot to poverty.			
In Most countries lots of money is spend in buying medicines from far countries eg ¹¹ Europe.	appositive (exemplifying) ¹¹		
the money which would have been used in some developments within a country and ¹² this netarti finance in a country.		additive (positive) ¹²	
And ¹³ they will be shortage of money to carry out development and ¹⁴ the country would be poor.		additive (positive) ^{13&14}	
The solution to these problem is that more money should be spend on Educating people about AIDS so that ¹⁵ they can be aware of it and ¹⁶ get rid of contacting the virus and ¹⁷ these would the spread of the disease and ¹⁸ poverty would be prevented.		additive (positive) ^{16,17&18} additive (positive) ^{17&18}	causal (specific purpose) ¹⁵
Every one should contribute on solving the problem of poverty and ¹⁹ AID world wide.		additive (positive) ¹⁹	

Table A5: Text analysis of TSNO1431_SE

	Elaborating	Extending	Enhancing
I am very much for the idea that the world has been so technolized so much that there is no room for conventionalism.			
It is sad so see that the younger generation is so hooked onto these man-made devices,			
they have become dependent on modern technology such as TV games, computers, calculators, telephones etc. to such an extend that if you asked them to perform certain tasks using basic tools they would not be able to finish those tasks.			
Socially, people used to communicate by letters and ¹ word of mouth. whereas these have been replaced by telephones, computers and ² most recently electronic mail and ³ cellular phones.		additive (positive) ^{1,2&3}	
Youngsters are now unable to utter a simple English phrase without slopping in some slang words or ⁴ township lingo.		varying (alternative) ⁴	
It is my opinion that when, in the days old, people practiced languages by writing letters and ⁵ so forth they improved their language skills considerably more compared to today.		additive (positive) ⁵	
I believe that these inventions have spoilt the human race because ⁶ we are so dependent on them we cannot see ourselves doing manual things such as ⁷ washing the dishes, we have to have a dishwasher to survive.	appositive (exemplifying) ⁷		causal (specific reason) ⁶
This is pathetic of us, we are simply and ⁸ purely becoming lazier and ⁹ lazier by the day.		additive (positive) ^{8&9}	

	Elaborating	Extending	Enhancing
Educationally, when I was growing up it was my parents' duty to teach me about the world.			
They had time for me.			
Even after coming back from strenuous work situations my father would sit down with me and ¹⁰ teach me basic Arithmetic using butter beans or ¹¹ seeds of some fruit or ¹² sorts.		additive (positive) ¹⁰ varying ^{11&12}	
When I began my Grade 1 in 1984 I could count, add, subtract and ¹³ even write my name, never mind the writing of an ancient Egyptian but ¹⁴ at least I knew what letters of the alphabet constituted my name.		additive (positive) ¹³ adversative ¹⁴	
Today's generation need only one tool in mind, the calculator!			
They just punch away their little index fingers on the keys and ¹⁵ out comes the answer.		additive (positive) ¹⁵	
This affects them because they hardly exercise their brain cells, therefore ¹⁶ their brains become dormant.			causal (general) ¹⁶
This makes it difficult for them in future because ¹⁷ even if they knew the answer they would not how to present it because ¹⁸ their brains have been inactive for a good part of their lives.			causal (specific reason) ^{17&18}

	Elaborating	Extending	Enhancing
In the days of old kids learned by playing together in the street but ¹⁹ today they just stare at their TV sets and ²⁰ instead of learning things of value, those that build character and ²¹ instil good morals,		additive (positive) ^{19&20} adversative ²¹	
they watch violent cartoons which do more harm than falling while playing outside.			
They don't have people who would teach by story-telling -			
this helped children to exercise their brains and ²² intelligence by providing a platform for dreaming and ²³ imagining the characters in the stories told.		additive (positive) ^{22&23}	
They don't even practice the culture of reading books for entertainment,			
they only read a book if it's prescribed for their curriculum or ²⁴ when they need to research for an assignment.		varying (alternative) ²⁴	
One American study proved that about nine (9) out of ten (10) teenagers consume more electronic media than their counterparts ten years earlier and ²⁵ this proved detrimental as 60% of them ended up with offences ranging from violent outbreaks and ²⁶ unacceptable social behaviour.		additive (positive) ^{25&26}	
Some went as far as becoming juvenile delinquents.			
I understand, with the invention of modernised devices, technology was meant to play a vital role in our lives, a role that would benefit the human race positively.			

	Elaborating	Extending	Enhancing
But ²⁷ seeing that it is doing more harm than good I think we should abolish it.		adversative ²⁷	
This is evident in the events of September 11, 2001 when the world remained static simply because of ²⁸ what happened in the USA.			causal (specific) ²⁸
South Africans were affected by witnessing the downfall of their currency.			
I believe that we should pack up all these man-made machines and ²⁹ go back to conventionalism.		additive (positive) ²⁹	
In conclusion man can no more be called the human race, but ³⁰ the 'techno race' or ³¹ 'the thumb race' as one Chinese documentary puts it!	clarifying ³¹	adversative ³⁰	

Table A6: Text Analysis of 784Setswana

	Elaborating	Extending	Enhancing
Fake news can be defined as falsely written news that are not accurate and ¹ in the same way, are mainly used to deceive the readers.		additive (positive) ¹	
In addition, fake new are spread by the use of online social media platforms or ² other news media.		varying (alternative) ²	

	Elaborating	Extending	Enhancing
According to Lazer et al (2018:1095) fake news intentionally seeks to misinform the readers, by making the news to seem as accurate as possible.			
The purpose of the following essay is to perceive ways to combat the widespread of fake news,			
this will be done by addressing and ³ by also finding solutions to end the spread of fake news in Africa.		additive (positive) ³	
Fake news widely circulates in today's online environment, and ⁴ many cannot tell the difference between fake news and ⁵ legitimate news.		additive (positive) ^{4&5}	
According to Mabuza (2018) In brief, fake news have the potential impact to cause unexpected as well as dire consequences,			
for instance ⁶ , on an article discovered online, there was allegedly a hearsay about religious leaders addressing citizens that the polio vaccine was designated to sterilise children, and ⁷ no medical support was needed,	appositive ⁶	additive (positive) ⁷	
consequently ⁸ this caused polio to spread massively in the country.			causal (general) ⁸
Although ⁹ distinguishing fake news from real news can be difficult, one of the easiest way to do so is by checking the credentials of the source, and ¹⁰ to look for biases, by distinguishing opinions from facts and ¹¹ also check the dates,		additive (positive) ^{10&11}	conditional (concessive) ⁹

	Elaborating	Extending	Enhancing
in many cases one must use up-to-date information that is available (Barclay, 2018:1096).			
Additionally , ¹² Lazer et al (2018:1096) claims that the spread of fake news can be reduced by government promoting news literacy and ¹³ professional journalism in society to further prevent the widespread of fake news.		additive (positive) ^{12&13}	
To conclude , ¹⁴ fake news is news that look real and legitimate but ¹⁵ its main aim is to falsely inform its readers.	clarifying (summative) ¹⁴	adversative ¹⁵	
Furthermore , ¹⁶ readers should be sceptical about the information they read as fake news appear as legible and ¹⁷ credible enough to trap readers into thinking its actual news.		additive (positive) ^{16&17}	

Table A7: Text analysis of 2743Setswana

	Elaborating	Extending	Enhancing
Should trade of rhino horn be legalised internationally, will that help curb the current extension event?			
Background information, problem statement, central argument.			
The is one of South Africa's big five, and ¹ it weighs 2 500kg with the average speed of 40km/h.		additive (positive) ¹	

	Elaborating	Extending	Enhancing
Rhinoceros may live up to 40 years, and ² eats tough, thick grass with lots of water to help them digest.		additive (positive) ²	
Rhinos are known for their great, menacing horn that is attached to their faces which they use to scratch, and ³ defend themselves when fighting.		additive (positive) ³	
The horn is made of keratin which is used to make hair and nails.			
This is the part of the reason why trade of rhino horn has increased since 2008.			
The possible solution to the problem includes legalising the trade of rhino horn, and ⁴ allowing traders to have a permit to trade.		additive (positive) ⁴	
Firstly ⁵ the discussion on whether should the trade be legalized or ⁶ not is necessary in order to know who will be permitted to trade.		varying (alternative) ⁶	spatio-temporal (simple) ⁵
In the following paragraph it states the main points in legalizing the trade of rhino horn internationally, which are less brutality on the rhinos as the dehorning will be done properly, and ⁸ this allows the horn to grow back within 3 years,		additive (positive) ⁸	
it can also ⁸ help the financial state of the country by bringing in the foreign currency as the horn are traded at a higher to counties that use them to make hair, nails, medicine, and ⁹ antidote to poison.		additive (positive) ⁸	causal (general) ⁹
As indicated in the introduction that there is a problem of trade in rhino horn as they are being illegally traded.			

	Elaborating	Extending	Enhancing
It therefore ¹⁰ makes sense to legalise the trade of horn to help curb the current extension event,			causal (general) ¹⁰
this may also ¹¹ reduce the brutal when dehorning the rhino, help the country with financial state and ¹² the population of rhinos will be saved.		additive (positive) ^{11&12}	

Table A8: Text analysis of 3628Setswana

	Elaborating	Extending	Enhancing
The term “Community” has been used to describe interactions among people in geographic terms.			
But ¹ it is now accepted that people living near one another do not necessarily constitute a community.		adversative ¹	
Community engagement is a complex concept.			
There is no universally accepted definition of community engagement.			
Engagement in research is more than community participation;			
it is the process of working together with people who share common goals and interests.			

	Elaborating	Extending	Enhancing
There is a general agreement about the benefits of involving broader society in scientific research, but ² aspects of this venture remain problematic and challenging.		adversative ²	
Researchers do not always perceive involving the community as a helpful notion.			
However ³ , engaging the community can assist the researches in making a success of the research, and ⁴ simultaneously bettering the community.		adversative ³ additive (positive) ⁴	
Citizen science is a research procedure that enlists the public in collecting scientific information (Battarcharjee,2005).			
Developing and ⁵ implementing public participation that produces scientific and ⁶ educational results need to be planned carefully.		additive (positive) ^{5&6}	
The movement to democratize science has been equated with citizen science (Irwin,1995).			
The aim of citizen science is to bring the public and ⁷ science together.		additive (positive) ⁷	
In doing so ⁸ , possibilities for active scientific citizenship will be considered.			manner ⁸
Therefore , ⁹ involving the public in decision-making about issues related to risk and ¹⁰ environmental threats.		additive (positive) ¹⁰	causal (general) ⁹

	Elaborating	Extending	Enhancing
Citizen science also ¹¹ relates to public participation.		additive (positive) ¹¹	
The concept of public engagement in decision making is not new.			
The recent trend of public participation in science and ¹² technology has a new facet and ¹³ is much more prevalent.		additive (positive) ^{12&13}	
New methods for including the public in science and ¹⁴ technology research have been developed and ¹⁵ tested worldwide.		additive (positive) ^{14&15}	
They have shown that citizen involvement results in better decisions and ¹⁶ builds citizens and community capacity		additive (positive) ¹⁶	
Participatory research has been expressed most generally as a process that combines three activities: research, education and ¹⁷ action (Hall, 1981).		additive (positive) ¹⁷	
Participatory research is a social action process that is biased in favour of dominated, exploited, poor or ¹⁸ otherwise ignored women and ¹⁹ men and ²⁰ groups.		varying (alternative) ¹⁸ additive (positive) ^{19&20}	
It sees no contradiction between the goals of joint empowerment and ²¹ the deepening of social knowledge.		additive (positive) ²¹	
The concern with power and ²² democracy and ²³ their interactions are central to participatory research.		additive (positive) ^{22&23}	

	Elaborating	Extending	Enhancing
Attention to gender, race, ethnicity, sexual orientation, physical and ²⁴ mental abilities, and ²⁵ other social factors are critical.		additive (positive) ^{24&25}	
The involvement of the community in research projects tackles South Africa's unemployment concern.			
Locals used to assist in the conducting of research get compensated for their obligations.			
In the field of actuarial studies, it is often being emphasized about the amount of risk which may arise from involving numerous individuals in research projects.			
But the good outweighs the bad.			
There is a higher possibility of the conduction being completed quicker than anticipated.			
Not only do locals get employed, but ²⁶ they acquire skills which they can use in other possible workplaces.		additive correlative (positive) ²⁶	
Better decisions will be made by the project managers because ²⁷ the community is aware of matters that may not be obvious to the managers			causal (specific reason) ²⁷
This eliminates unnecessary debates.			
Researchers may not be willing to engage the public, but ²⁸ it has been discussed that both the researchers and ²⁹ the community benefit from working together.		adversative ²⁸ additive (correlative, positive) ²⁹	

	Elaborating	Extending	Enhancing
Projects carried out by a group of people provide further opportunities for training.			
Citizen science has been democratized, meaning that anyone and ³⁰ everyone can assist in the conduction of research.		additive (positive) ³⁰	

Table A9: Text analysis of 4823Setswana

	Elaborating	Extending	Enhancing
Teaching has always been thought of as tedious and ¹ one dimensional, because of ² the scripted instruction that teachers must follow,		additive (positive) ¹	causal (specific reason) ²
the rigidity of the system deprives the teachers from being more creative (Sawyer,2004) and ³ “creativity has often been viewed as a somewhat mystical phenomenon (Gibson,2010).		additive (positive) ³	
Creative teaching aims to inspire and ⁴ motivate learners,		additive (positive) ⁴	
different ways to teach a something makes the subject or ⁵ topic much more interesting therefore ⁶ increasing learning.	clarifying ⁵		causal (general) ⁶
How many times have students been to lectures and ⁷ still struggle with certain topics in their field of study?		additive (positive) ⁷	

	Elaborating	Extending	Enhancing
Besides those students who do not apply themselves to their studies and ⁸ fail what about those who apply themselves and ⁹ attend classes but ¹⁰ still don't understand the work?		additive (positive) ^{8&9} adversative ¹⁰	
Well the scripted way of teaching is too dull for students nowadays			
with all the technological advancements the method is outdated,			
the concentration span of students has lessened as majority of students cannot go five minutes without looking through their phones.			
Creative Teaching can be used to reform the scripted instruction method that deny teachers creativity (Sawyer, 2004).			
Teachers have to put into aspect many factors when going about teaching because ¹¹ individuals learn differently so ¹² creative teaching helps the learner with motivation, provides context for exploration and ¹³ experiment and ¹⁴ it enhances learning (Craft et al,2001).		additive (positive) ^{13&14}	causal (specific reason) ¹¹ causal (general) ¹²
In instances whereby students don't understand certain topics if the teacher is only confined to one method of teaching the objectives of the teacher will not be achieved,			
Creative teaching encourages and ¹⁵ facilitates the growth of creativity in learners(Gibson,2010),		additive (positive) ¹⁵	

	Elaborating	Extending	Enhancing
Therefore ¹⁶ the various ways that come with being creative as a teacher and ¹⁷ being allowed to carry out your teaching creatively will result in learners not only hearing the work but also ¹⁸ understanding the work,		additive (positive) ¹⁷ adversative (correlative) ¹⁸	causal (general) ¹⁶
it gets so bad for students as they sometimes have assessments to submit they often don't understand what is required of them, but ¹⁹ with use of text, image and ²⁰ electronic component can help aid the students understand the work, not forgetting the fact that for teachers teaching can also be dull sometimes,		Adversative ¹⁹ additive (positive) ²⁰	
imagine teaching a specific subject for over 10 years it gets dull and ²¹ predictable,		additive (positive) ²¹	
So ²² when a teacher has to prepare a presentation it is also quite interesting because ²³ the teacher gets to explain the work the best possible way.			causal (general) ²² causal (specific) ²³
I am studying to be a qualified human movement scientist who deals with why sports injuries occur and ²⁴ how to reduce injuries, dealing with muscles if only I read in the book about where the muscles are, and ²⁵ how it moves it would much more but ²⁶ because of ²⁷ the visual presentations that are used it is a bit easier to understand the work.		additive (positive) ^{24&25} adversative ²⁶	causal (specific reason) ²⁷
it is quite useless to be using only books to educate people in a world thawed by technology			

	Elaborating	Extending	Enhancing
books only denies the teacher and ²⁸ learner to operate at their full potential,		additive (positive) ²⁸	
teaching should not be confined to one method and ²⁹ if I am an educator and ³⁰ I am not able to carry out my work the best way I know I would be the results required.		additive (positive) ^{29&30}	

Table A10: Text analysis of 7227Setswana

	Elaborating	Extending	Enhancing
Hundreds of South African rhinoceroses are killed or ¹ maimed each year by poachers collecting horn for various reasons,		varying (alternative) ¹	
South Africa is a home to more than 90% of the world's 20,000 white rhino and ² 40% of the 5000 remaining black rhino.		additive (positive) ²	
Yet ³ , poaching in South Africa has doubled each year over the past 5 years (Biggs et al, 2013:1038).		adversative ³	
According to Ferreira et al (2014:89) poaching of rhino in Africa has radically escalated from 2007 to 2012 by maiming over 807 rhinos.			
A significant matter of the legal trade of rhino horn internationally as a way to curb rhino poaching is concerned.			

	Elaborating	Extending	Enhancing
The following essay argues that rhino poaching is indeed bad and ⁴ should not be legalised internationally.		additive (positive) ⁴	
The topics of economic and ⁵ social difficulties will be addressed to substantiate this thesis.		additive (positive) ⁵	
Ayling (2013:57) outlines that historically rhino horn trade had two markets, the market for traditional daggers carried by Yemeni men as a sign of social status as well as ⁶ the market for Asian traditional medicine used mainly on hangover relief to palliation of fever, rheumatism, gout, and ⁷ stroke.		additive (positive) ^{6&7}	
Furthermore ⁸ , various cultural beliefs said that rhino horn possesses the ability to cure cancer which drastically led to the increased demand for rhino horn in Vietnam.		additive (positive) ⁸	
Not only ⁹ will this demand keep rising, Ø it may also speed up the extinction process of the rhino horn.		correlative (without <i>but</i>) ⁹	
Ferreira et al (2014:89) also indicated that this forever escalating demand for rhino horn led to increased protection costs and also ¹⁰ served as a liability to the government protection authorities and ¹¹ as a result ¹² private owners of rhinos tend to leave the conservation of this species.		additive (positive) ^{10&11}	causal (specific, result) ¹²
Ferreira et al (2014:89) argues that necessary measures need to be put into place as this may lead to a lower carrying capacity for surplus rhinos and ¹³ a reduction in the population growth.		additive (positive) ¹³	

	Elaborating	Extending	Enhancing
several authorities came up with various strategies as to address the issue of increased demand for rhino horn,			
strategies included law enforcement and ¹⁴ protection and ¹⁵ demand reduction approaches such as Asian awareness campaigns.		additive (positive) ^{14&15}	
Although ¹⁶ these strategies did not curb the poaching of the rhino completely, it minimised the forever increasing demand for the rhino horn.			conditional (concessive) ¹⁶
Ferreira et al (2014:89) furthermore ¹⁷ substantiates that this demand for rhino horn may essentially have an impact on the social and ¹⁸ economic growth as ¹⁹ the state and ²⁰ the other conservation authorities will experience increased costs of protection for these species,		additive (positive) ^{20,42,43&44}	causal (general) ¹⁹
this may slow down the process of social growth and ²¹ development as well as ²² general devaluing of the important wildlife industry.		additive (positive) ^{21&22}	
Ferreira et al (2014:90) explains that researchers participated in the risk-benefit analysis of various management strategies,			
results outlined that 37% of participants appreciated the need to explore alternative rhino conservation strategies, with 24% advocating the need for an integrated approach (increased protection, shoot-to-kill protection, increased demand reduction strategies and ²³ provision of horn),		additive (positive) ²³	
we can further ²⁴ tell that the need for alternative protection of rhinos is a major concern.		additive (positive) ²⁴	

	Elaborating	Extending	Enhancing
Biggs et al (2013:1039) argues that the legalisation of rhino horn could simultaneously supply horns, fund rhino protection, provide an incentive for rhino horn sustainable use and ²⁵ long-term survival,		additive (positive) ²⁵	
he furthermore ²⁶ explains that legal trade can reduce the incentive of poaching if regulators can prevent the laundering of a threatening level of illegal supply under the cover of a legal trade		additive (positive) ²⁶	
but ²⁷ Ferreira et al (2014:91) however ²⁸ argues that nature of that relationship may differ substantially depending on the specific use.		adversative ^{27&28}	
This essay was concerned with the question as to whether should trade in rhino horn be legalised internationally and ²⁹ economic as well as ³⁰ social issues were discussed.		additive (positive) ^{29&30}	
From the assignment it appears that rhino horn trade has many impacts including extinction, increased revenue for conservation authorities, and ³¹ a decaying value of wildlife industries,		additive (positive) ⁵¹	
although ³² it may provide more income to the economy, it has a lot of other controversial aspects.			conditional (concessive) ³²
From this can be deduced that rhino poaching is indeed bad and ³³ should not be legalised internationally.		additive (positive) ³³	