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Analyzing Syntactic Complexity : A Comparative Study
Between Didactic and Civilization Master's Abstracts.

The Case of EFL Students at Larbi Ben M'hidi University

Department of English

A Dissertation Submitted in Partial Fulfillment of the Requirements for Degree of Master
of Arts in Didactic of English as a Foreign Language

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DedicationI

In the name of Allah, the most Gracious and the most Merciful.

This humble work is dedicated to:

*...my family, my **Father** and my beloved **Mother** for their unconditional love and support they kept giving to me in every step of my life.*

*...my siblings, my sweet, funny and amazing brother **Hicham**, my guardian angel, my favourite person and the one person I know always gets my back **Sabrina**, my partner in crime **Sara**, the smart and talented **Sihem**, the sweet and lovely **Sonia**, and my source of happiness my beautiful niece **Layan**.*

*...my beloved friends, **Mimi**, **Amina**, **Massika**, **Rayane**, **Khaoula**, **Hala**, **Amir**, **Ramzi**, **Rahmi**, and **Aymen**, who were my comfort and the ones who bring out the best of me.*

*... but most importantly, this work is dedicated to my childhood friend **Manal** who passed away last year, I am sure she would have been super proud of me, I really wish she were here to celebrate my graduation with me but I am sure she is happy for me where ever she is.*

Dedication2

This thesis is dedicated to :

*...both my parents, **my father** Djamal' allh yerhmou' who was my source of motivation even when he is absent, I really miss you and your wise advices, I wish you were here.*

*Also I want to thank **my mother** Abla for always being there for me; she is my source of strength during moments of despair and discouragement.*

*...My beloved family **Yasmina, Karima, Nabil, Yazid and Samira.***

*And a big thanks to **my best friend**, my sister and my partner **Linda**, thank you for everything, for being such a good friend, my support system, and for being in my life.*

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Abstract

The diversity and sophistication of the grammatical structures utilized in language formation is characterized as syntactic complexity. The latter is clearly apparent when learners use distinct genres, for different purposes, in their writings. The goal of this study is to examine and compare the syntactic complexity of dissertations' abstracts written by master two students (25 from the didactics branch and 25 from the civilisation branch) at the English department of Larbi Ben M'hidi University of the academic year 2020/2021. Coh-Metrix (version 3.0), a powerful automated writing assessment tool, was used to analyze the corpus, which yielded 106 indices, 41 of which were verified and grouped into three banks of linguistic characteristics. However, only the syntactic complexity has been explored in this work. The findings of the statistical analysis of the data reveal that syntactic complexity successfully distinguishes didactics from civilizations' writings. . Results showed that syntactic complexity varied significantly between master two civilization students' abstracts and didactics ones. The former appeared to achieve a higher level of sophistication and to use more complex and prestigious syntax. A variety of instructional implications have been attributed to these findings.

List of Abbreviation

- C:** Clause.
- C/S:** Clause per Sentence.
- C/T:** Clause per T-Unit.
- CP/C:** Coordinate Phrase per Clause.
- CP/T:** Coordinate Phrase per T-Unit.
- CT/T:** Complex T-Unit per T-Unit.
- CN/C:** Complex Nominal per Clause.
- CN/T:** Complex Nominal per T-Unit.
- DC/C:** Dependant Clause per Clause.
- DC/T:** Dependent Clause per T-Unit.
- EFI:** English as a Foreign Language.
- ESP:** English for Specific Purposes.
- L1:** First Language.
- L2:** Second Language.
- MLC:** Mean Length of Clause.
- MLT:** Mean Length of T-Unit.
- NNS:** Non Native Speakers.
- S:** Sentence.
- SCM:** Syntactic Complexity Measures.
- T:** T-Unit.
- T/S:** T-Unit per Sentence.
- VP:** Verb Phrase.
- VP/T:** Verb Phrase per T-Unit.
- W:** Word.

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General Introduction

Language is more than a way of expression; it is what distinguishes human beings from other creatures. Furthermore, language helps people form relationships and know how to interact in different social contexts. Stern (1983) states that foreign language means the language used outside the country. Therefore, learning a foreign language serves purposes such as tourism, communicating with native speakers, reading foreign journals and so on. While the world is trying to keep up with the drastic change caused by globalization, English has conquered the globe with its dominance; it has taken a new status as the world's new currency. Hence, learning and teaching English as a foreign language has become a mandatory and fundamental procedure to be adopted by all governments, so as to provide international skills for their people. English can be used as a core tool to establish progress in different domains such as professional, social, and educational.

In the past three decades, English has witnessed a grand leap in the field of the foreign language teaching and learning (Richards et al, 2002). This leap aims at improving the quality of both teaching and learning English by shedding more light on learners' needs, motivation, and strategies they may use in their learning process. These scholars also focused on the importance of teachers' role being the curriculum designers and implementers, as well, through the methods, techniques, and materials they depend on to make the learning process more feasible. Teaching English as a foreign language aims at developing students' skills and sharpening their abilities via providing multiple guidelines. For starters, learning English as a foreign language opens doors towards international business activities such as participating in latest discoveries' seminars and obtaining information about events all over the world. McKay states in her book "Teaching English overseas" that a further reason why English is going viral is because it provides social

and economic gains for its learners. EFL learners have the ability to engage themselves in world-wide projects as well as reach their predetermined targets whether they are entertaining ones or professional ones.

EFL learners, throughout their learning process, aspire to achieve high language proficiency both in writing and in speaking. According to Stern, teaching English is a set of activities which aims at developing mainly four skills: reading, writing, speaking, and listening (1983). For Canale and Swan (1980-1981), to be competent means to acquire three dimensions. The first dimension is to be communicatively qualified; in other words, having knowledge about grammatical rules and vocabulary. The second dimension is presented by the sociolinguistic one which deals with knowledge about socio-cultural rules of the language. Finally, the ability to utilize compensation strategies during speech breaks is also a vital competence that any EFL learner needs to attain.

In the process of seeking international recognition and being a part of globalization, Algeria polished its policies with updated decisions; and education was no exception. The Algerian government gave teaching and learning English a prestigious position. This progress necessitated some innovations at the level of higher education, as well; it sought new curricula built on foreign grounds yet holding to traditional beliefs.

English, in the Algerian higher education context, stands upon some major grounds, and writing is on the top of the list. According to Harmer (2004), “writing is a basic language skill, as important as speaking, listening and reading” (p. 79-80). Furthermore; Nunan argues that writing is based upon inventing ideas, thinking about how to express them, and finally organizing them into comprehensive statements and paragraphs (2003,p.88). Through writing, people are able to

express who they are; it makes their learning and thinking visible and permanent. This skill stands upon a set of principles. It should first be constructed by academic words, for the choice of vocabulary is of a massive importance while writing. Other criteria that writing depends on are the consistency, coherence, and objectivity that make a good piece of writing. Moreover, writing in EFL teaching and learning goes hand in hand with a set of linguistic features that guarantee its credibility

In linguistics, a feature is any characteristic utilized to classify a phenomenon or a word, and since writing depends on linguistic features; it is a fundamental step to define what the latter mean. White (2019) describes language features as a set of characteristics that help comprehend what a piece of writing is about. In other words, linguistic features can be summarized in the grammatical, lexical, phonological, and syntactic parts that govern the structure of writing.

Statement of the Problem

The writing process depends on a set of criteria where the syntactic complexity occupies a massive position. While students aim at producing professional and highly-polished pieces of writings, they often tend to use elaborate and sophisticated terms thinking that it is the best way to produce an appealing and refined writing. In fact, teachers, while assessing, take into account several aspects such as punctuation, sentence structure, relevance of ideas among many other features. Varner et al (2013) found that teachers, while rating the quality of writing, focus on the linguistic features in general and the syntactic complexity in specific used on both levels: the surface and the deep one. However, teachers usually find it difficult to measure and assess all the linguistic features, so they tend to highlight particular aspects over others according to their

contribution to the quality of writing, mainly they tend to assess the syntactic complexity of the pieces of writing .

Master two students of the English department at Larbi Ben M'Hidi University are required to conduct research as a part of their graduation. However, students right from the beginning are divided into two sub-branches: didactics and civilization/ literature. This categorization dictates on each group to adopt a distinct style of writing. This distinction mainly lays on the different use of the syntactic complexity features.

Aim of the Study

This research paper will investigate the major differences between didactic and civilization dissertation abstracts produced by Master two students of the English department at Larbi Ben M'Hidi University. It will examine the syntactic complexity of both abstracts.

Research Questions

- Do didactics master two students' dissertation abstracts differ in terms of the syntactic complexity features from civilization master two students' dissertation abstracts?
- If so, are the syntactic complexity features of the didactics abstracts more prestigious or vice versa?

Research Hypothesis

- There is no significant difference in the syntactic complexity within the abstracts written by didactic and civilization students.
- There is a difference in the syntactic complexity within the abstracts written by didactic and civilization students and the abstracts of the didactic branch are more prestigious.

Research Design

The Sample

The target population is Algerian post graduate students of English at Larbi Ben M'Hidi University. This study will deal with a total number of fifty dissertations of the academic year 2020/ 2021. The sample will be equally divided; it will compare between twenty five dissertations of the didactics field, as well as twenty five from the civilization one.

Methodology

This research paper will gather sample dissertations from the Dspace website of Larbi Ben M'Hidi University. The following study will rely on Coh-Matrix software which will analyze the gathered dissertations. The findings will be compared and contrasted according to their syntactic complexity feature. Therefore, this paper will fall into the quantitative method of inquiry because it will rely on -numerical analyses of data.

Structure of the Study

The study will be organized into two chapters. The first one will explore what previous researchers have found and concluded about the field being understudy. It will be completely devoted to viewing literature. It will subsequently dive into the definitions of good writing quality. The second section of this chapter will be about the definition of the term syntactic complexity and its following features.

The second chapter will be devoted to the application of what has been discussed earlier. It will analyze and interpret the gathered data. Finally, the chapter will come to an end with a conclusion and a discussion of the results.

The Significance of the Study

The presented study will take into account the relationship between both didactic and civilization fields and the syntactic complexity features being used. The finding will guide and instruct master two students in conducting academic and professional dissertations.

Operational Definition of the Variables

Didactics: it is the field of teaching English as a foreign language; it deals with teaching and learning process. It stands upon the delivery of how to decide on materials, how to modify them using various strategies, or how to design courses from scratch. It also administers students' psychology in the learning process. However, this branch does not neglect the importance of culture, for each language has to be taught in its cultural context.

Civilization and Literature: it is the field which deals with different attributes such as: history, culture, politics, agriculture, economy, etc. in fact, this branch relies on transmitting culture using the English language to the EFL learners.

Linguistic Features are the components of the language that support and validate the meaning; for instance, they can be syntactic complexity, lexical diversity and word characteristics.

- Syntactic complexity: it is concerned with the language rules and the sentence structure. The latter may affect the meaning to be conveyed
- Lexical diversity: it is a measure of the number and type of words that appear in a text. Lexical diversity is an important factor in making a piece of writing both comprehensive and meaningful.

- Word characteristics: qualities of words in terms of their correctness and level of difficulty.

Chapter One: Theoretical Part

Introduction

Notwithstanding its extensive reach, it has been postulated that applied linguistics evolved from foreign language teaching practice. This may explain why research on foreign/second language learning (also known as acquisition/development) has remained at the forefront of practical linguistics (de Bot 2017, as cited in Rosmawati, 2019). The development of writing abilities is one of the key foci in studies on second language acquisition. Writing has long been regarded as the most difficult talent to master, even in the first language (L1) setting), and many people have struggled with it (Biber & Gray, 2016). Academic writing in a second language (L2) provides another level of difficulty, and as a result, applied linguistic studies have focused on it. As a consequence, research on L2 academic writing, particularly in English as a second language, has blossomed – and will most likely continue to do so – in unison with the expanding trend of international education and English's growing dominance.

L2 writing research has been exploring the multi-faceted characteristics of L2 writing performance and growth from numerous viewpoints and across different contexts for the past four or five decades (Manchón, 2012). Many research examined how L2 writing and/or writers evolved at various levels of skill, with a particular focus on the development of linguistic complexity in L2 writing. Syntactic complexity and its evolution has long been one of the more important research areas among them. There is a lot of research that has looked into syntactic complexity as either a dependent variable that is affected by proficiency levels or as a key indicator of L2 performance. Also Given to its importance, a vast number of academics (e.g. Ansarifar et al, Housen and Simoens, Larsen Freeman, and Ortega.) have focused on syntactic

complexity, not just in the field of second language acquisition but also in a range of other language-related fields. Though the construct of syntactic complexity as explored can be utilized for a variety of reasons in L2 writing research, it is most commonly employed to index L2 development and/or to evaluate L2 competency.

1.1.Section One: Features of L1 and L2 Writings

1.1.1. Definition of Writing

The term "writing" can be defined in a variety of ways. To begin, Fischer (2001) defined writing as “the sequence of standardized symbols (characters, signs, or sign components) in a broad sense (p. 11-12). He went on to say that it is one way to transmit human speech and communicate abstract notions that are visually recorded, and that it is the outcome of humans' urge to save information to communicate to themselves or others through time and distance. In other words, writing is linked to speaking since the former is a graphic representation of the latter, and it is a means of preserving what has already been uttered, with the overall goal of communication.

Furthermore, Albright and Langan (2020) believed that “writing is a skill, not a “natural gift.” It is a skill like driving, typing, or cooking; and, like any skill, it can be learned if you have the determination to learn” (p. 12). In fact, writing is one of the language learning skills that can be learnt through constant practice. In addition to the previous definition, the following is also a highly-used one: "Words spoken are symbols of affections or impressions of the soul; written words are symbols of words spoken," according to Aristotle (1938, p. 115). To put it another way, writing is a way to convey sentiments, and written words and thoughts have a strong relationship, therefore this is a more particular aim of writing.

Furthermore, the person's brain will be busy before, during, and after writing, and anyone who writes knows how much cognitive energy it takes to generate ideas and connect them with correct spelling and syntax. Bell and Burnaby 2001 agreed that "writing is a highly complicated, cognitive activity in which the writer is needed to exhibit control of a number of factors at the

same time" (p. 36). This emphasizes that writing is a cognitive process that necessitates the ability to reflect on ideas.

It should be remembered that there is no single stable definition of writing because each researcher defined it based on his or her unique perspective, experience, and domain. Moreover, as a medium of technical, educational, and economic transfer, it is always changing in response to improvements in these and other sectors, as well as the society's increasing complexity and demands.

In sum, writing is a complex and difficult task, particularly for EFL students, but it may be improved with practice. As a result, it is necessary to have a variety of abilities in order to meet and collaborate in order to generate a strong piece of writing that successfully communicates what the writer wishes to convey to the readers.

1.1.2 Components of Writing

As previously said, the visual activity is rather sophisticated and time-consuming, and it entails more than simply getting words onto the page. In order to conceptualize writing ability, Raimes (1983, p.6) proposed the following eight-way model:

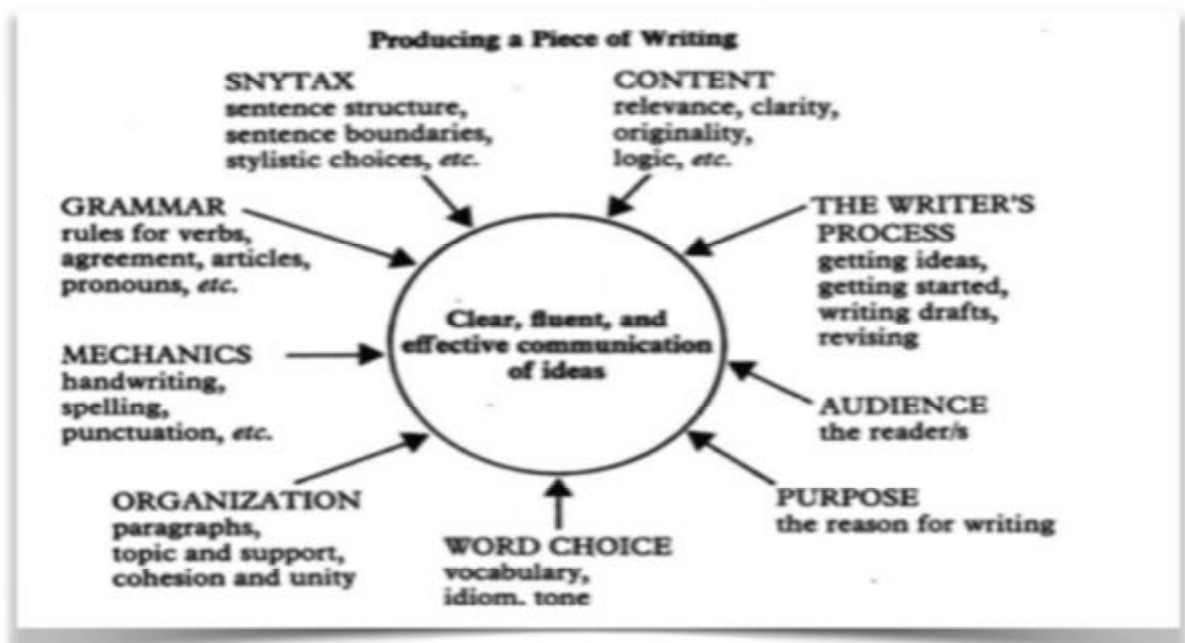


Figure 1.1.1. Producing a Piece of Writing Raimes (1983)

As seen in Raimes' diagram, authors must acquire a number of micro skills in order to build a piece of writing that expresses ideas effectively and fluently. First, in addition to knowing proper verb forms, nouns, adjectives, articles, etc., as well as spelling and punctuation, a command of higher level grammar is required, which includes knowing how to compose effective sentences. Skilled writers can combine fragments of language to build longer units, and they can use vivid sentence component shapes to create a variety of sentence forms (complex, compound, and compound-complex sentences).

The capacity to incorporate clauses also implies that the writer can gracefully explain complex ideas, giving the reader a sense of fluidity in the discourse. Knowledge of lexis is also vital; skilled writers use a diverse and sophisticated range of vocabulary items, as well as appropriate word choice; word choice is influenced by a variety of factors, including theme and audience. The composing process involves not only the use of form and language resources, but also the selection of material and the structure of the text. Experienced writers brainstorm to

develop as many ideas as possible, then select the ones that are most relevant to the topic and the goal for which they are writing. Writers attempt to blend these selected concepts after structuring them in order to create a unified and comprehensible composition. Although these components appear to be independent groups at first glance, they are interrelated and equally necessary in writing. Therefore, Writing is a dynamic process in which the final product of the writer is dependent on the constant interplay of a variety of sub-competences.

1.1.3 The Importance of Writing

Writing, whether in one's first or second language, plays a critical function in today's fast-paced world; it is a means of preserving meaning over space and time. Hosseini et al. (2013) argue that writing is at the center of any academic life, and that mastering it is an unquestionable condition for academic success. Being able to write in English as a second or foreign language, on the other hand, has become an inevitable objective for learners in view of the important position that the English language now enjoys. For some second language practitioners, proponent of writing to learn approach, writing is not just a skill that learners develop as an extension of other language skills, listening, speaking or reading but a skill that greatly contributes to the development of language proficiency in general.

In this respect, Raimes (1985) posited that Writing is a form of learning, not just a way to show what you've learned. That also is, it can serve as both a standalone aim and a vehicle for achieving additional objectives. Writing tasks, for example, reinforce much of the grammar and vocabulary that learners create when learning the language. That is, even if learners expand their grammatical and lexical knowledge by extensive reading or classroom instruction, the proper application of this linguistic knowledge can only be achieved through consistent writing. Writing

facilitates language development; it is a channel for learning rather than a skill that learners acquire last, as proponents of the learning to write strategy asserted.

1.1.4. Views of Writing

Due to the numerous definitions of writing, knowing where one's viewpoint and where one will operate is quite important. In order to accomplish this, theoretical perspectives on writing must be identified. The majority of the literature on writing research has been done using these theoretical frameworks Beard et al (2009). According to previous study, there are three theoretical frameworks for writing: psychological, social, and linguistic Beard et al (2009).

According to Byrne (1979), writing is “transforming our thought into language; therefore, it is a complex skill that requires physical and mental activity on the part of the writer” (p. 5). Byrne views writing as a psychological endeavor in which the writer engages, as an individual, in transcribe his complex mental processes; thus, skilled writing is a “goal directed and self-sustained cognitive activity requiring the skilful management of: (a) the writing environment; (b) the constraints imposed by the writing topic; (c) the intentions of the writer(s), and (d) the processes, knowledge, and skills involved in composing” (Zimmerman & Risemberg, 1997, as cited in Graham et al., 2013, p. 4).

Writing may also be seen as a socially oriented act of social practice, a kind of connection and communication with others, with classrooms serving as socially driven communities of practice that affect both written texts and writing processes. Changes in the writer and changes in the context in which he operates, according to this perspective of writing, are clearly fuelled by changes in the writer and shifts in which he functions. According to Schultz and Fecho (2000), writing is a social activity that involves an implicit or explicit dialogue between the writer(s) and

the reader(s), which is shaped by the audience, objective, culture, community, and history.

More importantly, it is said that writers' linguistic experiences and language resources, which they can call on as authors, underpin the cognitive and social demands of writing (Beard et al., 2009, p. 19). Writing can also be viewed from this perspective as the use of linguistic components and qualities to create a complex piece of writing. This study will be conducted within the context of a linguistic theoretical framework for writing in order to identify the function of linguistic elements in determining the quality of writing.

1.1.5. L1 versus L2 Writing

It became conventional that writing is a very important skill that needs to be given much attention. Before delving into the linguistic features of writing, a distinction needs to be drawn between first and second language writing. Research in this area has a long history and has shown some significant differences and similarities resulting in conflicting views.

For starters, Silva (1993) states that L1 and L2 writing are supposed to be very similar; he claims that;

In recent years, L1 writing practitioners have frequently recommended ESL writing practitioners to adopt L1 writing approaches. This recommendation appears to be based on the premise that L1 and L2 writing are nearly identical, or at least quite comparable. On the surface, such an assumption appears to be reasonable (Silva, 1993, p. 657).

L1 writing practitioners have repeatedly advised ESL writing practitioners to embrace L1 writing practices in recent years. This advice appears to be founded on the assumption that L1 and L2

writing are virtually equal, if not identical. On the surface, such a hypothesis appears reasonable.

Second language writing, according to Silva (1993), appears to be a special case when comparing L1 and L2 writing because it differs from L1 writing in terms of both composing processes, such as planning, transcribing, and reviewing, as well as written text features such as quality, fluency, structure and accuracy.

1.1.6 Abstracts

1.1.6.2. Definition of an Abstract

An abstract is a brief piece of literature that provides a description of the work to the reader. It is within it that the person determines whether or not to complete reading the entire work, i.e., whether or not the activity meets his or her demands. A decent abstract is one that includes details about the investigation. An abstract, according to the American National Standard Institute quoted in Sapna, (2021, p. 3), is "an abbreviated, accurate representation of a document which should be published with it." The abstract is essential in academic works such as dissertations, research papers, reports, theses,, and , among others. It appears at the start of these academic achievements; it is normally recommended that the abstract be written after the student has completed his dissertation because it is a condensed version of the academic achievement. "The Word abstract comes from the Latin abstractum, which means a condensed form of a longer piece of writing as stated previously (Writing an Abstract 2014, p. 1).

1.1.6.2. Types of Abstracts

There are many different forms of abstracts, however there are two primary categories: descriptive and instructive, as noted in (Writing an Abstract 2014, p. 2) "Descriptive abstracts are generally used for humanities and social science papers or psychology essays. This type of

abstract is usually very short (50-100 words”. Background, goal, particular interest, and an overview of the material are some of the essential aspects that descriptive abstracts introduce (Writing an Abstract, 2014). In this form of abstract, the findings and conclusion are not mentioned. The second type, the informative is a miniature version of the original document that includes the purpose, numerical data, techniques, formula, results, and suggestions. The informative abstract is longer than the descriptive abstract (indicative) and is typically used for research projects (Sapna, 202).

1.2 Section Two: Syntactic Complexity in Language Writing and Research

1.2.1. Definition of Complexity

Among others, Pallotti (2009) claimed that the definition of complexity is unquestionably the most open to controversy, maybe because the construct itself has multiple interpretations. Ortega and Norris (2009) proposed that the construct of complexity is made up of numerous layers. Bulté and Housen constructed the following taxonomy model to reflect the multidimensionality of the complexity construct (2012).

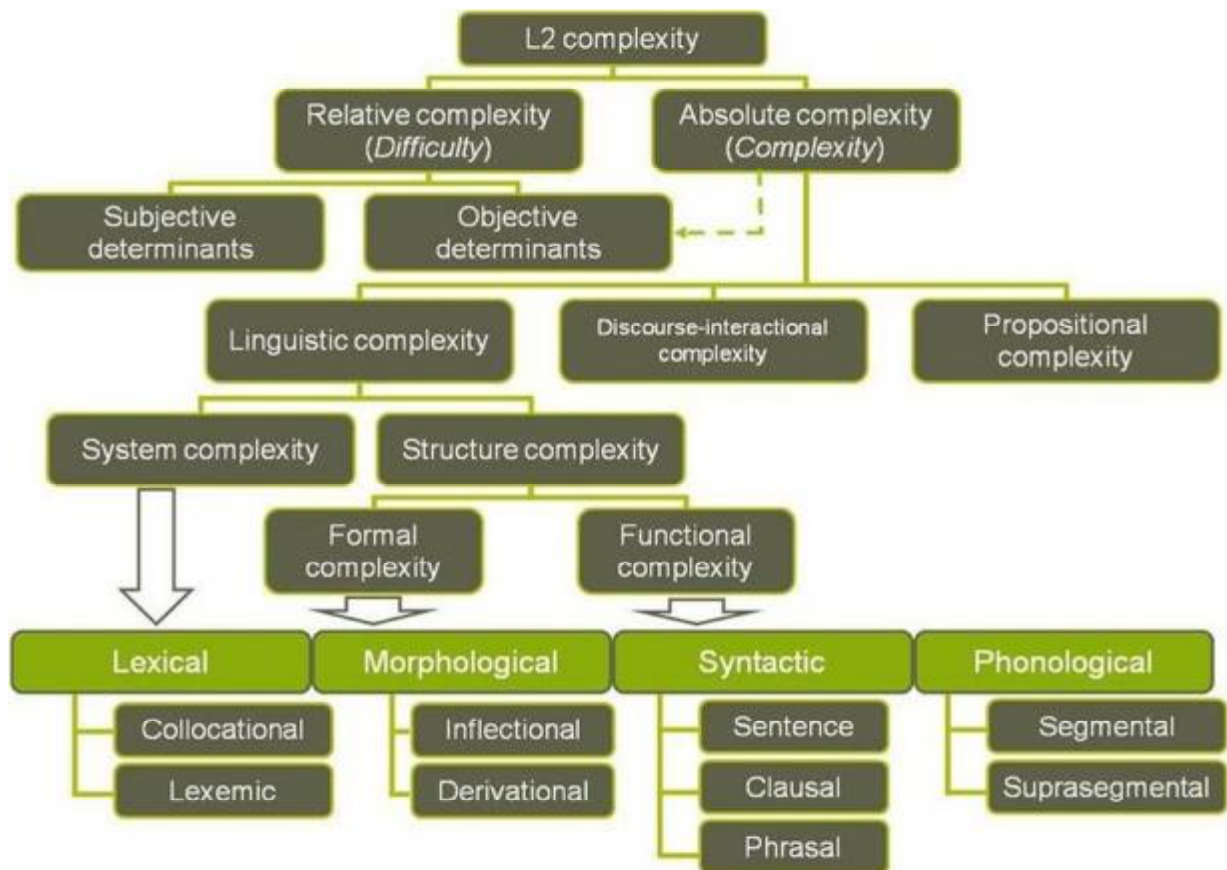


Figure 1.2.2: Taxonomic Model of L2 Complexity (Bulté & Housen, 2012)

The first distinction is made between absolute and relative complexity, as demonstrated in the above paradigm. Skehan (2007) defined the former as 'objective difficulty,' which refers to the task's characteristics, and the latter as 'subjective difficulty,' which refers to the learner's inability to complete a task as cited in Pallotti,(2009). This means that the term "complexity" can be used to describe both task and language performance qualities. Furthermore, there are three categories of complexity that fall under the umbrella of absolute complexity: propositional complexity, discourse-interactional complexity, and linguistic complexity. The term complexity, on the other hand, shall only be used in this study to refer to the complexity inherent in linguistic units, i.e. linguistic complexity.

The Merriam Webster dictionary defined linguistic complexity a "composition of two or more parts" as cited in Pallotti, (2009, p. 593). This definition simply denotes the number of transformational rules that are used to generate various structural surfaces (e.g. complex, simple sentences, compound ...etc). To put it another way, as the number of nodes grows, the language becomes more complex, and thus more cognitively demanding or challenging. "[i]n linguistics, complexity refers to both the [. . .] Internal structuring of linguistic units and to the psychological difficulty in using or learning them" Crystal (1997) remarked as cited in Bult & Housen,(2014, p.43).

Another connotation typically connected with linguistic complexity is diversity, specifically variation of the vocabulary. Linguistic complexity can thus be measured not only in terms of syntax and the structure of linguistic units, but also in terms of lexis and the variety of vocabulary used, referred to as syntactic (grammatical) and lexical complexity, respectively. The former is the subject of the current research.

Because of its interrelationships with other extremely complex ideas, the construct of complexity as it relates to linguistic units has been characterized variously across research. The diagram below depicts a number of constructs that have been muddled by complexity.

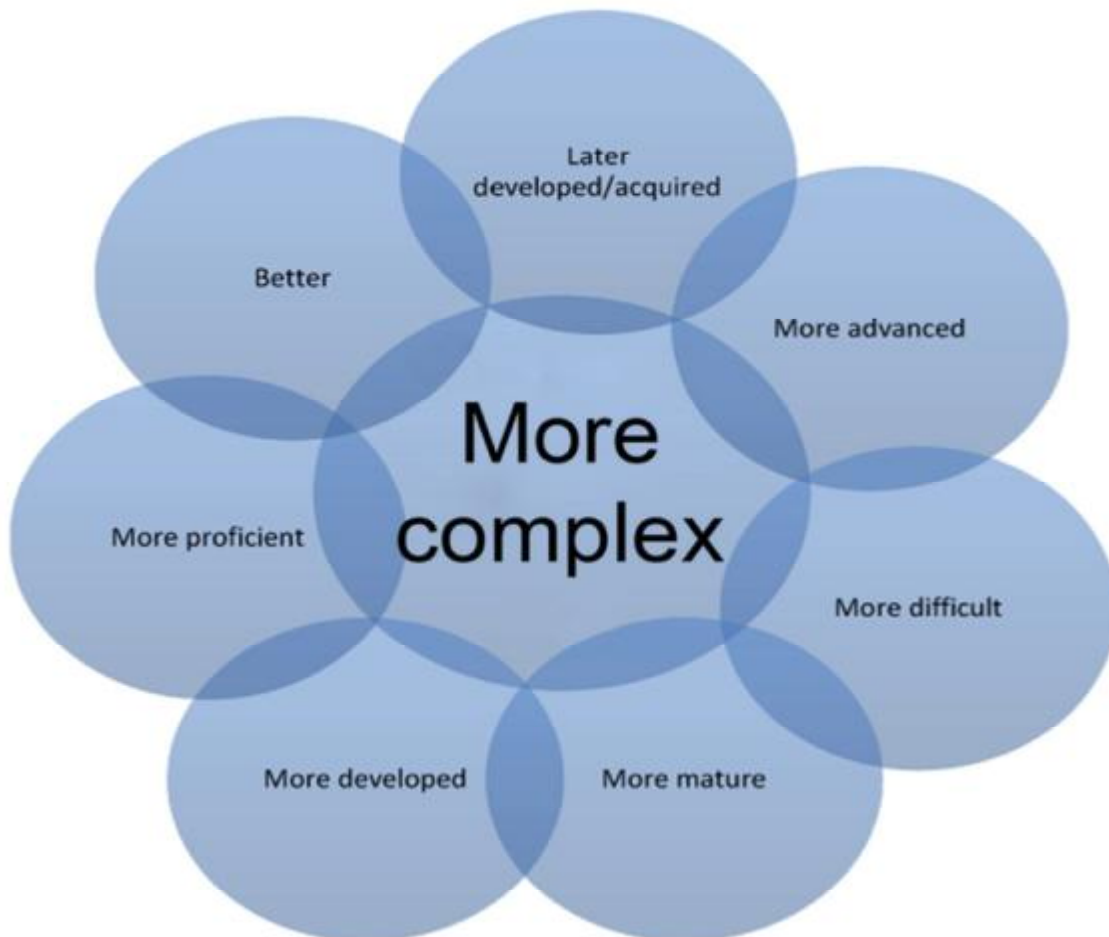


Figure 1.2.3: L2 Complexity and Related Constructs (Bulté and Housen, 2014)

L2 studies frequently interpret complexity in terms of at least one of the constructs described above: 'late acquired', 'mature', 'advanced', 'proficient', and 'better.' According to Bulté and Housen (2014), more complex structures are intrinsically difficult to understand, and their creation necessitates extra cognitive work; as a result, they are typically acquired later. Late-

developed structures are therefore assumed to be more mature, skilled, and thus superior. Palotti (2009), on the other hand, rejected this assumption, saying that some structures are acquired later because they are less encountered or communicatively unimportant, not because they are cognitively more complicated.

Furthermore, Palotti claimed categorically that complexity and progress are two distinct concepts that should not be conflated, and that certain forms are acquired late, regardless of their complexity. Bulté and Housen went on to say that most studies' circular thinking is misleading, and they advocated for a conceptual distinction between these notions, claiming that several of them (proficiency and development) are multi-componential themselves.

1.2.2. Definition of Syntax

Importantly, Radford (2004) described syntax as the study of how words are combined to form phrases and sentences, which is why it asks questions like "What is the structure of a sentence like what is the president doing?" And what are the grammatical rules that are utilized to form sentences by combining words? Syntax is a branch of linguistics that investigates the many structures of sentences and the grammar that governs them. As Chomsky (2002) put it, syntax is "the study of the principles and process by which sentences are constructed in particular languages" (p. 11)

Furthermore, syntax plays a part in gaining a better grasp of language, its norms, and how individuals construct sentences that can reveal a lot about people. As a result, Carnie (2013) revealed that syntax is critical in understanding how humans communicate with one another.

1.2.3. Definition of Syntactic Complexity

Syntactic complexity (also known as syntactic maturity) is defined as the variety and sophistication of the grammatical structures used in language creation (Ortega, 2003). Variety relates to the range of syntactic resources used, whereas sophistication refers to the degree to which these grammatical aspects are elaborated, according to Lu (2011). To put it another way, if a writer uses a variety of well-crafted production units, such as a wide range of phrases (e.g. nominal, verbal, and prepositional), a wide range of sentences (e.g. complex, compound, and compound complex sentences), and a variety of clause types, his or her writing is set to be syntactically complex (e.g. relative, adverbial, complement).

Overall, syntactic complexity has gotten more attention in recent years as a very important measure for language progress, specifically written language development, despite the fact that it lacks a standardized definition. As Lu (2017) pointed out, researchers disagree about what syntactic complexity stands for precisely due to the many ways it is used in writing assessment and research.

1.2.4. Definition of Relevant Production Unites

According to Lu (2011), understanding how each of these units of analysis is defined is critical to comprehending the number of measures that quantify them. Furthermore, the results of different research that looked at these metrics differed significantly due to variances in the definitions they used.

1.2.4.1 Sentence

A sentence, according to Lu, is "a group of words punctuated with a sentence-final punctuation mark, usually a period, exclamation mark, or question mark, and in some cases elliptical marks or closing quotation marks," (2011, p.4). In other words, a sentence is a group of words that together make sense or represent a full notion; it usually consists of a subject and a predicate, both of which include a finite verb. A sentence is made up of a main clause and one or two subordinate clauses, and it can be either a statement or a query.

1.2.4.3. Clause

The definition of clause is likely to be the most difficult, because researchers vary on what constitutes a clause. While some scholars (e.g. Hunt, 1965; Lu, 2011; Lu & Ai 2013; Lu & Ai 2015) count only finite elements, such as independent, nominal, and adverbial sentences as clauses, others (e.g. Bardovi-Harlig & Bofman, 1989) count non-finite elements, such as verb phrases.

1.2.4.3. Dependent Clause

It is also known as a subordinate clause, and it's a set of words that includes a subject and a finite verb. A subordinate clause, unlike an independent clause, does not transmit all of the information; as a result, it cannot stand alone and must be attached to the main clause it changes. In a sentence, dependent clauses normally function as a noun, adjective, or adverb (Lu, 2011).

1.2.4.4. T-unit and Complex T-unit

The T-unit is one of the most commonly used syntactic complexity assessments in many researches, and it is generally a main sentence and/or a main clause with a subordinate clause,

according to Jagaiah (2017). Simply said, a T-unit is an independent clause that may or may not have a dependent clause. According to Lu (2011), a T-unit is a main sentence that is accompanied by one or more dependent clauses, and a T-unit with at least one dependent clause is termed a complex T-unit. In more detail, a T-unit can have many dependent clauses; thus, a complex T-unit is a T-unit plus one or more dependent clauses.

1.2.4.5. Coordinate Phrase, Complex Nominal, and Verb Phrase

To begin, coordinate phrases are adjective, adverb, noun, and verb phrases that are used together. Finite and nonfinite verb phrases are both possible (Lu, 2011).

Second, complex nominals include (1) nouns with an adjective, possessive, prepositional phrase, adjective clause, participle, or appositive; (2) nominal phrases; and (3) gerunds and infinitives in subject positions rather than as objects Cooper, as cited in Lu,(2011). Finally, a verb phrase (VP) is a phrase formed from a verb that denotes an activity or a state of being. It doesn't matter if the verb is in the present or past tense. Complements are optional pieces that must be included in some VPs (Gelderen, 2017).

1.2.5. Traditional Indices and Syntactic Complexity Measures

The goal of most prior syntactic complexity studies has always been to determine the most trustworthy, valid, and relevant syntactic complexity measures that make it easier to spot syntactically complicated phrases, hence various SCMs have been investigated. Researchers are still debating whether measures best reflect syntactic complexity and whether to utilize them or all of the available SCMs while conducting research.

To commence, since SCMs are such an essential part of the overall of syntactic

complexity, let's define what they are. SCMs are "measurable sentence elements (e.g., sentence length, clause length, number of clauses, and number of phrases) that are used to operationalize the construct of syntactic complexity," according to Jagaiah (2017). (p. 15). In other words, SCMs are structure components that can signal syntactic complexity, such as the length of the constituent, which was previously valued in the old method of determining syntactic complexity.

Second, there are conventional indices and others that have only recently become popular. Kyle and Crossely (2018), for example, pointed out that, for nearly half a century, researchers in L2 writing have mostly quantified syntactic complexity using large-grained or length-based indices, such as Ortega's (2003). Traditional indices measure the length of sentences and clauses, and the longer and more diversified the structure is, the more skilled the creator is. Furthermore, according to Lu (2011), several syntactic complexity indices quantify one or more of the following: length of production unit, amount of subordination or coordination, range of syntactic structures, and degree of sophistication of certain syntactic structures. That is, syntactic complexity is determined by length, elaboration, and variety, resulting in various and many indexes for each. The units of analysis and the group of indices that represent each of them are depicted in detail in the diagram below.

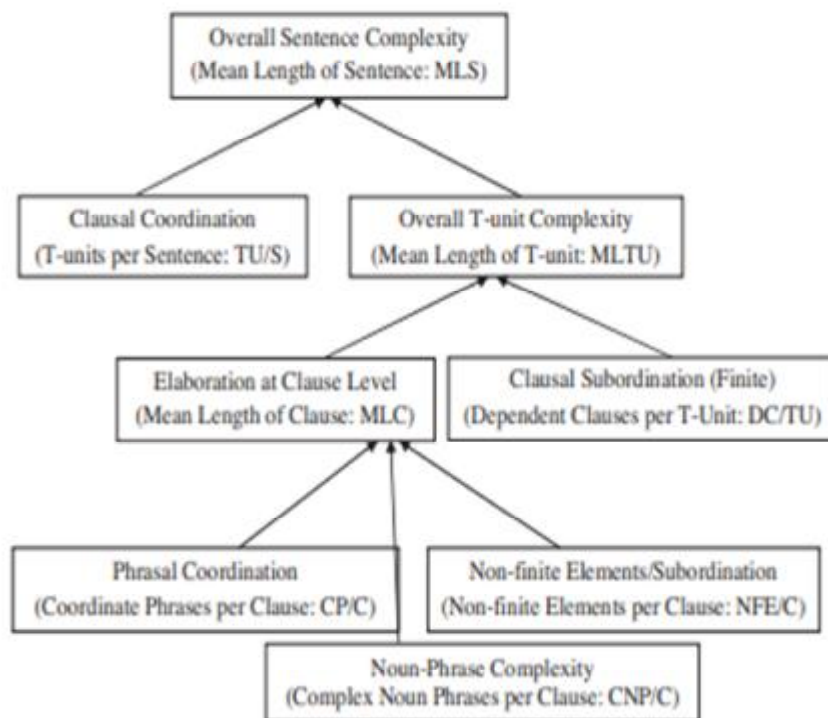


Figure 1.2.4: A multi-dimensional representation of syntactic complexity(Yang, Lu, and Wigle 2015)

As previously said, SCMs are a contentious topic since academics try to find the most trustworthy ones; as a result, the phrasal and clausal indices are believed to be the most accurate indicators of language skill. In this regard, Biber and Gray (2016) stated that grammatical complexity is related to the embedding of clauses and phrases in linguistic theory, and that this complexity is the result of any structural addition to a 'simple' clause or a 'simple' noun; however, phrasal complexity features, particularly noun phrase modifiers, are more important because they characterize academic writing more than clausal features, and they are the cause of a significant change in academic writing. In other words, any elaboration of the clausal and phrasal structures indicates syntactic complexity, which indicates a high proficiency level in the language; phrasal measures are better indicators than clausal measures because only professional writers use them;

and subordination measures are more intellectually challenging than other types of syntactic joining measures, as Lord (2002) explained. As a result, the clausal and phrasal measures have become the most important for determining language proficiency and are commonly utilized to do so.

1.2.6. Syntactic Properties of Text Quality

T-units are large-grained, length-based syntactic indexes that have traditionally been used to assess syntactic complexity Hunt (1965). The shortest grammatical unit punctuated at the sentence level is called a T-unit. A T-unit can thus be made up of a primary sentence with extra, embedded subordinated clauses, but not of two independent clauses connected together. T-units were first utilized in L1 writing development research Hunt, (1965) and were later expanded to L2 research for the same reason (Lu, 2011; Ortega, 2003, as cited in Crossley, 2020). T-units for writing analyses are arguably more widespread in L2 writing. For example, Ortega (2003) found that over 90% of prior studies operationalised syntactic complexity as the mean length of T-unit in a synthesis of L2 writing studies. T-unit characteristics, while prevalent, are troublesome since they frequently give contradictory results across research (Bardovi-Harlig, 1992; Ortega, 2003; Stockwell & Harrington, 2003, as cited in Crossley, 2020) and are difficult to interpret Norris & Ortega,(2009).

The feature mean length of T-units provides an accurate illustration of the interpretation challenge. While the mean length of the T-unit provides a broad picture of the amount of elaboration linked to a major sentence, it gives no indication of how the clause is developed in detail, making fine-grained calculations of syntactic complexity impossible Kyle and Crossley (2018), point out that the two following statements are related:

- a. The athletic man in the jersey kicked the ball over the fence.
- b. Because he wanted to score a goal, the man kicked the ball.

Both would return a T-unit count with a mean length of L2 units. However, the first sentence's complexity is based on phrasal elaboration, whereas the second sentence's complexity is based on clausal elaboration. According to Biber, Gray, and Poonpon(2011), phrasal complexity is more prevalent in academic writing, but clausal complexity is more prevalent in speech. Using coarse-grained clausal complexity indices like T-units, on the other hand, would fail to distinguish between these two types of difficulty.

As a result, a number of scholars have created indices that measure more fine-grained indices of syntactic complexity, such as the number of clauses per T-unit and the number of dependent clauses per clause, both of which assess clausal subordination Ortega,(2003); Lu,(2011). Syntactic complexity indexes that aren't based on T-units have also been produced. Agentless passives, by-passives, that-verb and that-adjective complements, incidence of infinitives, phrasal and independent clause coordination, and a number of relative clause properties are all tagged by the Biber tagger (Biber, 1988, as cited in Crossley, 2020). The Coh-Metrix tool (Graesser, McNamara, Louwerse, & Cai, 2004 as cited in Crossley, 2020) contains a range of syntactic complexity aspects including indices linked to the number of constituents in a phrase, the number of words preceding the tense, and syntactic likeness among sentences. Lastly, the technique for the Automatic Analysis of Syntactic Complexity and Complexity (TAASSC, Kyle, 2016,) assesses phrasal and clausal complexity, as well as variables linked to verb argument construction frequency patterns.

1.2.7. Text Quality and Syntactic Complexity

Both L1 and L2 writing quality is determined by syntactic features. In addition, similar to lexical aspects, the majority of syntactic complexity study has been carried on L2 writers. In terms of L1 text excellence, research has shown that more syntactic complexity in written texts correlate with improved writing scores in youngsters (Benson & Campbell, 2009; Klecan-Aker & Hendrick, 1985, as cited in Crossley, 2020). For example, according to Myhill 2008, as cited in Crossley, 2020), better writers employed less finite verbs, finite subordinate clauses, and coordinated clauses.

For L1 adult authors, similar findings have been discovered.(McNamara et al. 2010, as cited in Crossley, 2020), for example, found that better writers utilized more syntactic complexity (i.e., more words preceding the primary verb). Similar studies found that the usage of simple declarative sentences was negatively associated with essay quality, although the length of noun phrases and the number of words preceding the main verb were positively associated (Crossley et al., 2011; McNamara et al., 2013, as cited in Crossley, 2020). However, not all researchers have discovered a correlation between essay quality and grammatical complexity. McNamara et al. (2013), and Perin et al (2016), for example, found no evidence of a link.

Although studies of the relationship between syntactic complexity features and L2 writing quality are more common than studies of the relationship between syntactic complexity features and L1 writing quality, the findings are close in that higher-quality composing contains more complex syntactic features. Lu, 2011; Ortega,(2003) revealed that more experienced L2 authors construct longer and more diversified syntactic structures based on T-units (e.g. complex nominals per clause, length of T-units, and complex nominals per T-unit). Larger scored L2

essays have been found to feature more clausal subordination (Grant & Ginther, 2000, as cited in Crossley, 2020) and an increased incidence of passive elements (Connor, 1990; Ferris, 1994; Grant & Ginther, 2000 as cited in Crossley, 2020). Further research suggests that the production of dependent clause features including infinitives or 'that' verb complements Crossley & McNamara(,2009) and a higher proportion of complex syntactic structures, including syntactic structures related to clause complexity, are indicators of higher quality L2 essays that clauses and to clauses, (Friginal & Weigle, 2014 as cited in Crossley, 2020).

Furthermore, Taguchi, et al (2013) found a correlation between improved writing proficiency and enhanced phrasal complexity in writing. . For example,(Guo, Crossley, & McNamara 2013 , as cited in Crossley, 2020)) found a link between mean length of noun phrases and drafting quality, while Kyle and Crossley (2018) , found that six phrasal features (related to nominal subject, direct object, and prepositional object modifiers) make up a substantial portion of the variance in dissertation scores. Kyle and Crossley (2018) , investigated differences between T-unit features and usage-based syntactic complexity features that assess lexical grammatical features (e.g., average main verb lemma frequency, verb-argument frequency) to estimate L2 writing quality and discovered that fine-grained features projected over than double the portion of the variance in writing quality in a direct comparison between large-grain and fine-grain syntactic complexity indices.

1.2.8. Syntactic Complexity in Language Writing and Research

Syntactic complexity is a basic measure of linguistic proficiency, whether in writing or research. In this approach, Ortega (2003) claimed that syntactic complexity is an important component in L2 writing education and research since the growth of learners' syntactic repertoire

and how to employ it aids their development in the target language. Similarly, Lu (2011) found that syntactic complexity is a significant determinant of L2 writing skill. As a consequence, syntactic complexity is employed in learning and research for a variety of objectives, including evaluating writing assignments (Lu, 2017), assessing writing quality and proficiency (Ortega, 2003; Shadloo, 2019), and language development (Lu 2010; Biber & Gray, 2011).

However, several of these and other studies about syntactic maturity have a research gap in that they employ distinct matrices, making it difficult to compare the results of different studies. Furthermore, Gustin (2019) discovered that when using all of the current SCMs and studies conducted on students with varied L1 backgrounds, some researchers employed irrelevant, unreliable, and invalid indices (Lu & Ai, 2015).

The list of measures taken by Lu is shown in the table below.

Table 1.2.1. Measures of syntactic complexity (adapted from Lu, 2017, p. 503).

Measure	Code	Formula
<i>Length of production</i>		
Mean length of sentence	MLS	number of words/ number of sentence
Mean length of T-units	MLT	number of words/ number of T-units
Mean length of clause	MLC	number of words/ number of clauses
<i>Sentence complexity</i>		
Clause per sentence	C/S	number of clauses/ number of sentences
<i>Amount of subordination</i>		
Clause per T-unit	C/T	number of clause/ number of T-units
Complex T-unit per T-unit	CT/T	number of complex T-units/ number of T-units
Dependent clause per clause	DC/C	number of dependent clauses/ number of clauses
Dependent clause per T-unit	DC/T	number of dependent clauses/ number of T-units
<i>Amount of coordination</i>		
Coordinate phrase per clause	CP/C	number of coordinate phrases/ number of clauses
Coordinate phrases per T-unit	CP/T	number of phrases/ number of T-units
T-unit per sentence	T/S	number of T-units/ number of sentences
<i>Particular structure</i>		
Complex nominals per clause	CN/C	number of complex nominals/ number of clauses
Complex nominals per T-units	CN/T	number of complex nominals /number of T-units
Verb phrase per T-unit	VP/T	number of verb phrase/ number of T-units

The metrics provided in the table above can be divided into two types: The first considers the length of production units and calculates it by calculating the amount of words and dividing it by the number of production units chosen (sentence, clause or T-unit). The second type, on the other hand, is mostly focused on frequency counts or ratios, and it evaluates the relationship between those units of analysis. For instance, the complexity of a sentence can be measured by

dividing the number of clauses by the number of sentences (C/S); this also holds true for the rest of these metrics, such as those describing subordination, coordination, and specific structures. In addition, there are varied degrees of connections between these syntactic complexity measures and (writing) proficiency in this table. MLT had the highest connection with proficiency among the three length measures, according to four studies.

Two subordination measures, C/T and DC/C, were found to have a good connection with performance in one study. Only five studies found that the other two length measures (MLS and MLC) have a moderate correlation with proficiency. Only two subordination measures have a moderate correlation with proficiency: C/T and DC/T. C/T has a moderate correlation with proficiency in six studies, while DC/T has a moderate correlation in only one study. In one study, a moderate correlation was found between coordination measures and specific structure measures for T/S and CN/T, respectively. With the exception of CN/C, CN/T, and VP/T (specific structural measurements), most of these measures showed weak to no connection in a number of investigations, with one length measure (MLT) appearing in more than ten.

1.2.9. Distinct vs. Redundant Measures

L2 researchers, according to Ortega and Norris (2009), should be cautious while selecting SCMs if they want to get accurate results. L2 researchers frequently use measures that are assumed to tap the same quality of language production, which, according to Ortega and Norris, unmistakably leads to measurement redundancy. They went on to add that if one wants to measure the amount of subordination, one simply needs to use one metric, such as C/T, CT/T, DC/T, or DC/C. . Despite the fact that the denominators of these measures differ, they are all members of the same family since they all represent subordinate or dependent clauses in the

numerator.

Including all of these variables in a single research is not only pointless, but also problematic; collinearity among the measures violates one of multivariate methods' key principles. Since L2 scholars who use SCMs rely on variance comparisons, they should avoid measures that have a lot of overlap. Some measurements, however, are unable to capture the complexity of the syntax when used alone and require be supplemented with others. Norris and Ortega provide a good example: while generic measures such as (MLS, MLT, and MLC) can determine the length of sentences, clauses, and T-units, they do not specify what type of constructions may have caused a given production unit to be relatively long or short; thus, it would be more convenient to pair length measures with more specific measures such as those defining coordination or subordination.

1.2.10. Factors Affecting Syntactic Complexity in L2 Production

The complexity of learners' syntax in L2 writing was demonstrated to be influenced by a number of factors. There are three categories of factors: learner-related factors, task-related factors, and context-related factors.

1.2.10.1. Learner-associated Factors

Learners' L1 background and gender have been proven to have a substantial impact on the amount of syntactic complexity in their writings among the other learner-related variables. When Lu and Ai (2013) compared the SCMs of non native speakers (NNS) from various L1 backgrounds (English, German, Bulgarian, French, Russian Tswana, Japanese, and Chinese) to the SCMs of native speakers (NS), they found significant differences in most of the SCMs when each of these NNS groups was compared separately. A number of L2 research compared the

means of the SCMs 'examined' across gender, and their findings revealed significant gender disparities. Male students, for example, were shown to have higher syntactic complexity than female students in Aperocho's (2016) study; they outperformed their female counterparts in all of the measures used.

Martinez' recent study (2018), in contrast to Aperocho's findings, found that females' write-ups had higher syntactic complexity than males. Longer sentences, more compound-complex sentences, more coordinate clauses, and more dependent clauses were created by women. As a result, differences in L2 production (in this example, syntax difficulty) can be attributed in significant part to these learner-related variables, such as "Native language" and "Gender."

1.2.10.2 Task –related Factors

Numerous task-related variables, including as time, genre, and, most crucially, task complexity, were discovered to have a considerable and direct impact on the syntactic complexity of second or foreign language students' writing through empirical inquiry.

1.2.10.3. Time Conditioning

The amount of time students spend on a specific writing job has been demonstrated to have a significant impact on their linguistic performance in general and syntactic complexity in particular. Lu (2011) discovered that untimed essays had higher syntactic complexity than timed essays in his corpus-based examination of syntactic complexity among four college level students' writing. This discrepancy is due to the time spent on distinct cognitive processes such as planning, transcribing, and reviewing. .

Despite being found to be influenced by skill, learners' syntactic complexity is substantially influenced by planning time. Students who went through the planning stage created more complicated syntactic structures than those who directly penned their compositions, according to Ellis and Yuan (2004). The positive impact of preparation on learners' syntactic complexity and overall writing quality was addressed in a well-founded theoretical model, the so-called 'Overload hypothesis,' proposed by (Kellogg, 1990). Kellogg (1990) asserted that throughout the writing process, a lot of cognitive demands are imposed on the writer, and that only by planning can these demands be lowered to a level that allows some free space in the working memory (as referenced in Ong, 2014).

1.2.10.4. Genre

Researchers in both first and second languages have paid close attention to the effect of genre on syntactic complexity. In the context of L2 writing research, Lu (2011) discovered that argumentative essays had higher syntactic complexity than narrative essays in his attempt to assess the effect of genre on the relationship of syntactic complexity measures to L2 proficiency. He came to the conclusion that other factors, including 'genre,' determine or at least influence the relationship between any given metric and L2 proficiency.

1.2.10.5. Topic

In terms of task complexity, a large number of task-based education researchers focused on the topic of whether learners' language complexity varies as a result of varied task demands, and therefore determining the validity of task complexity manipulation and its relevance to L2 pedagogy. Skehan's Trad-off model (1998) and Robinson's Cognition hypothesis are two theoretical models of task complexity that have been explored in the SLA literature (2001).

Skehan stated that the learner's attentional resources are finite, and that in difficult activities requiring higher thinking, the learner is more concerned with content than with form. Increasing task complexity, he claims, leads to a prioritizing of complexity, correctness, and fluency. In other terms, the task's complexity causes the learner to concentrate on only one of the aforementioned aspects of performance, implying that the output will be complicated, correct, or fluent but not all at the same time.

Robinson challenged the limited capacity concept, claiming that learners can attend to both meaning and form during production without having to choose between the two. Complex activities, according to Robinson, do not degrade linguistic output; rather, they draw the learner's attention to complex language resources; hence, when it comes to written performance, form and substance are complementary rather than competing. As a result, in higher-reasoning activities, the learner's language becomes more complicated than in lower-reasoning tasks (as cited in Salimi & Dadashpour 2012).

1.2.10.6. Context Effect

The complexity of learners' writing was also found to be affected by the context in which they received instruction, such as an ESL vs. an EFL setting. Ortega (2003) explored the role of context on the link of SCMs to L2 proficiency in her research synthesis, and her findings were noteworthy. ESL students had a higher level of syntactic complexity than EFL students, with the difference being especially noticeable in length measures (MLS). Ortega concluded that the instructional setting has a significant impact on SCMs in L2 writing, implying that scholars investigating SCMs in L2 writing should be aware of the potential context effect.

Chapter two: The Practical Part

Introduction

We went over the concepts that will be addressed in this research in length in the first chapter. Specifically, we have presented a comprehensive overview of historical and recent studies in the scientific community on writing assessment and syntactic complexity aspects. However, in this chapter, we shall empirically apply the previously indicated body of information and theoretical concepts. It discusses the precise methodologies used to conduct the research and analyses, defines the data gathering approach, and summarizes the results of the analysis.

2.1. Corpus Linguistics

The corpus study is a type of research that has lately gained popularity since it intersects with various academic fields and makes use of several corpus-analytic techniques that allow linguists to analyze vast corpora of texts in a short amount of time. The corpus study is a type of research that has lately gained popularity since it intersects with various academic fields and makes use of several corpus-analytic techniques that allow linguists to analyze vast corpora of texts in a short amount of time. According to Park and Nam (2017), a corpus study is the collection of a body of texts and recordings that provide the data for linguistics analysis and assessment. The latter is a portion of a naturally occurring witnessed language that can be documented or recorded, which the researcher gathers in order to analyse and describe it manually or with the aid of software programs. Thus, corpus evaluations seek to uncover patterns in phrase structure, semantics, and lexical units.

The objective of a corpus analysis, according to Romes (2006), is to uncover language patterns such as word frequencies, collocations, lexical samples, and objective views to examine

language. Corpus linguistics is interestingly important for academic study since it provides a great deal of information to the linguistic and academic libraries.

2.2. Research Methodology

2.2.1. Sample

The sample population was Algerian postgraduate students at Larbi Ben M'Hidi University's English Department. This research focused on fifty dissertations from the academic year 2020/2021 which were selected randomly. The sample was evenly divided with twenty five dissertation from the didactics field and twenty five from the civilisation field being compared, which is more than enough to undertake an analysis that would yield credible results.

2.2.2. Method

2.2.2.1. Corpus Collection

This research paper collected sample dissertations from Larbi Ben M'Hidi University's Dspace website; the corpus data for this study was a collection of abstracts derived from the selected dissertations, which would be divided into two texts. The first document was a compilation of all didactic abstracts, while the second text was a compilation of all extracted civilisation abstracts, giving us only two texts to examine and analyze.

2.2.2.2. Corpora Compilation and Analysis:

For the sake of addressing research questions and testing the hypotheses, a Descriptive analysis was carried out, The descriptive analysis provided a basic overview of the statistical features of the syntactic complexity measures utilized in the abstracts of didactic and civilisation postgraduate students, allowing comparisons and contrasts to be made this, of course, was after

analysing the data using the Coh-Metrix online software. The Coh-Metrix indices are vulnerable to errors in spelling and punctuation that signal sentence boundaries. As a result, final punctuation marks had been added, and spelling errors had been removed (knowing that it has no influence on the writers' word choice or meaning). After that, both texts were analysed simultaneously emphasizing on the three following syntactic complexity measures: coordinate phrases per clause CPC, which indicated the amount of coordination in the texts; complex T-Unit ratio CTT, which was responsible of showing the amount of the subordination in the two compositions; and complex nominals per clause CNC, which was responsible on revealing the degree of phrasal sophistication in the texts. The following table will further explain what is meant by: coordinate phrases, clause, t-unite, and complex nominals.

Table 2.2. A Description of Syntactic Structures Counted by SCA (Kyle & Crossley, 2018, p. 338)

Structure	Description	Examples
Word	a sequence of letters that are bounded by whitespace	<i>I</i> <i>Ate</i>
Verb phrase	a finite or nonfinite verb phrase that is dominated by a clause marker	<i>ate pizza</i> <i>was hungry</i>
Complex nominal	d) nouns with modifiers e) nominal clauses f) gerunds and infinitives that function as	d) <i>red car</i> e) <i>I know that she is hungry</i> f) <i>Running is invigorating</i>
Coordinate phrase	adjective, adverb, noun and verb phrases connected by a coordinating conjunction	<i>She eats pizza and smiles</i>
Clause	a syntactic structure with a subject and a finite verb	<i>I ate pizza</i> <i>because I was hungry</i>
Dependent clause	a finite clause that is a nominal, adverbial, or adjective clause	<i>I ate pizza because I was hungry</i>
T-unit	an independent clause and any clauses dependent on it	<i>I ate pizza because I was hungry</i>
Complex T-unit	a T-unit that includes a dependent clause	<i>I ate pizza because I was hungry</i>
Sentence	a group of words bounded by sentence-ending punctuation (., ?,	<i>I went running today.</i>

2.3. Results

Following the analysis of the abstracts, the results were compared between didactic and civilisation students to see if there were any differences. The following conclusions were drawn from the study of the assembled data set.

2.3.1. Analysis of the Results

2.3.1.1. Descriptive Statistics

The primary descriptive results from the data analysis are presented in this section, as mentioned before. Text1 will be referring to the collection of the didactic abstracts, whereas text2 will be the gathering of the civilisation abstracts.

The following table shows us the final results after analyzing the texts with the Coh-Metrix software.

Table 2.3. the numerical results of the analysis of the data

Measurements	W	S	VP	C	T	DC	CT	CP	CN	MLS	MLT
text1	143	40	42	56	40	35	30	38	72	41,7	41,7
	4										
text2	145	33	56	46	37	31	30	31	82	54,923	46,705
	4									1	9

MLC	C/S	VP/T	C/T	DC/C	DC/T	T/S	CT/T	CP/T	CP/C	CN/T	CN/C
32,05	23,	24,1	23,8	20,41	20,75	31	0,5	40,9	0.5	22,6	1,44
56	8			67							44
37,46	22	42,11	21,52	20,42	20,64	21,30	0,58	20,64	0.42	29,64	2,38
15		76	94	31	71	77	82	71	3	71	46

There was a substantial variation in the amount of sentences (S) between the civilisation and the didactic abstracts, as seen in the table, and the latter came out on top (S1=40, S2=33).

2.3.1.2. Length of Production Unites

There was also a major difference in the length of the production unites, which was indicated by the tree following measures: mean length of sentence (MLS), mean length of T-unite (MLT) and mean length of Clause (MLC). These indices quantified the syntax's complexity in terms of the length of production units, but this time the civilisation abstracts had the higher score (MLS2=54,9231,MLT2=46,7059,MLC2=37,4615). First, by scoring higher in the MLS measure civilisation students proved that they had written longer sentences than the didactic students. Second, in terms of MLT, the civilisation students outscored the didactic students once more, indicating that they authored longer T units as didactics. Both of their values, however, were substantially divergent from and slightly distributed around the mean. Third, when it came to civilisation abstracts, they stood out once more with MLC measurement, which meant that civilisation students' clauses were longer than didactic students' clauses, but the difference was only moderately significant, and both groups had values that were close to the medium.

2.3.1.3. Sentence Complexity

Concerning the complexity of the sentences measurement, clause per sentence has been analysed (C/S), there was a minor difference between the two compositions (C/S1=23,8, C/S2=22) which entailed that the didactic students produced more clauses in sentences than the civilisation students

2.3.1.4. The Amount of Coordination

2.3.1.4.1. Results of the Coordinate Phrases per Clause CPC in the Corpora

Analysing the coordinate phrases per clause allowed us to detect the amount to the coordination used in the texts. The reason we choose this measurement is that Coordination, which is the number of coordination phrases/ number of clauses, can help a writer maintain a piece's pace, rhythm, and flow by allowing them to thread together a complicated thought without interruption by periods and their consequent linguistic pauses therefore, it indicates the style of the pieces of writing.

The following bar chart demonstrated the fact that there was a significant difference in the two texts concerning this measurement.

Measures	Text #1	Text #2
CP_C	0.5	0.423

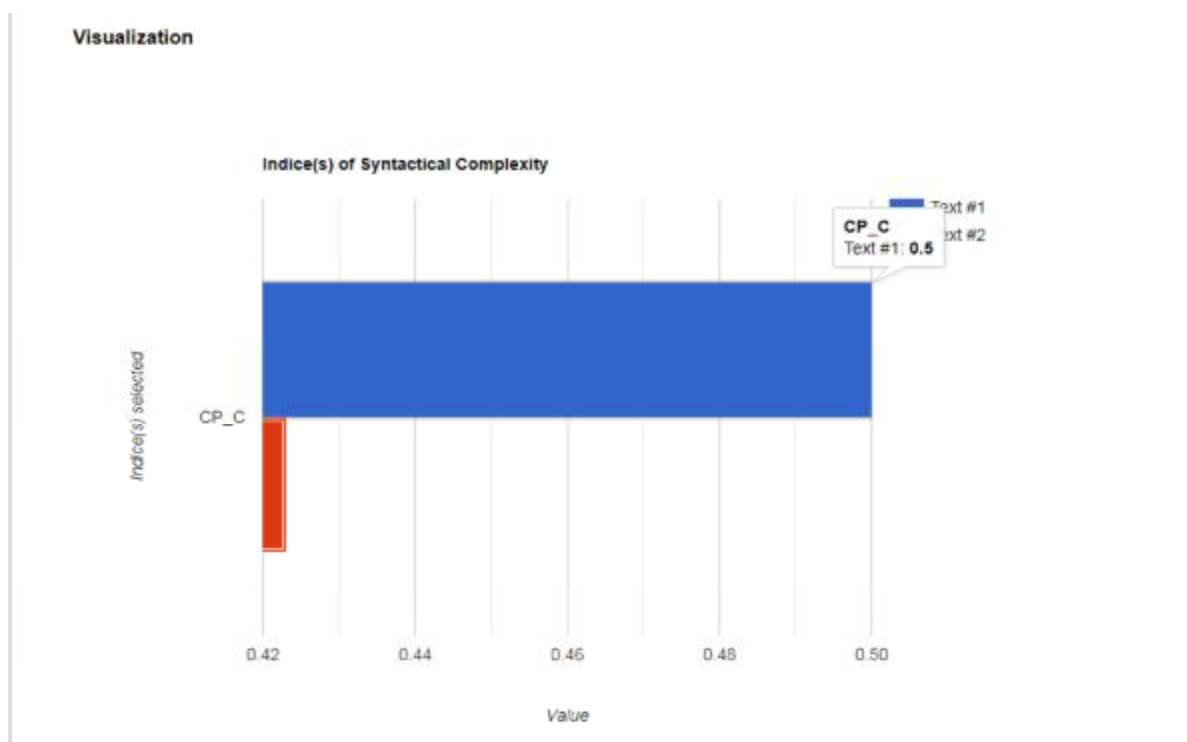


Figure 2.1. A bar chart of the results of the Coordinate Phrases per Clause CPC..

There was a significant difference between the two texts, with didactic authors using more coordinate phrases per clause than civilisation writers, In other words, the didactic students used slightly more coordinate phrases in their clauses than the civilisation ones.

2.3.1.4.2. Other Measurements related to the Amount of Coordination

Coordinate phrases per T-unit (CP/T), and sentence coordination ratio (T/S) are also reliable measurement in analysing the amount of coordination in the texts. The table above also

showed that the didactic students scored higher than the civilisation students when it came to the previous measurements , for the didactic students scored (CP/T=40,9 , TS=31), while the civilisation students scored (CP/T=20,64 , T/S=21,30)

2.3.1.5. The Amount of Subordination:

2.3.1.5.1. Results of Complex T-Unit ratio CTT in the Corpora:

The level of subordination employed in the texts can be determined by analyzing the complex t-unite ratio. This measurement was chosen because it reflects the degree of subordination in the texts, and the reason we choose to focus on the amount of subordination in the compilations is that; Subordination emphasizes a main notion in one independent clause while placing smaller ideas in subordinate, or dependent, phrases, resulting in unequal emphasis between ideas. Subordinating conjunctions, often known as dependent words, are used to identify dependent clauses. In other words, within a sentence, subordination allows you to convey differences in importance between details. You can use the technique to combine two or more smaller sentences in a single sentence. The most crucial notion should always be presented in a separate sentence. The use of subordination gives a clear image on the writer's style of writing.

The following bare chart showed that there is a substantial disparity between the two texts when it came to this parameter.

Measures	Text #1	Text #2
CT_T	0.5	0.588

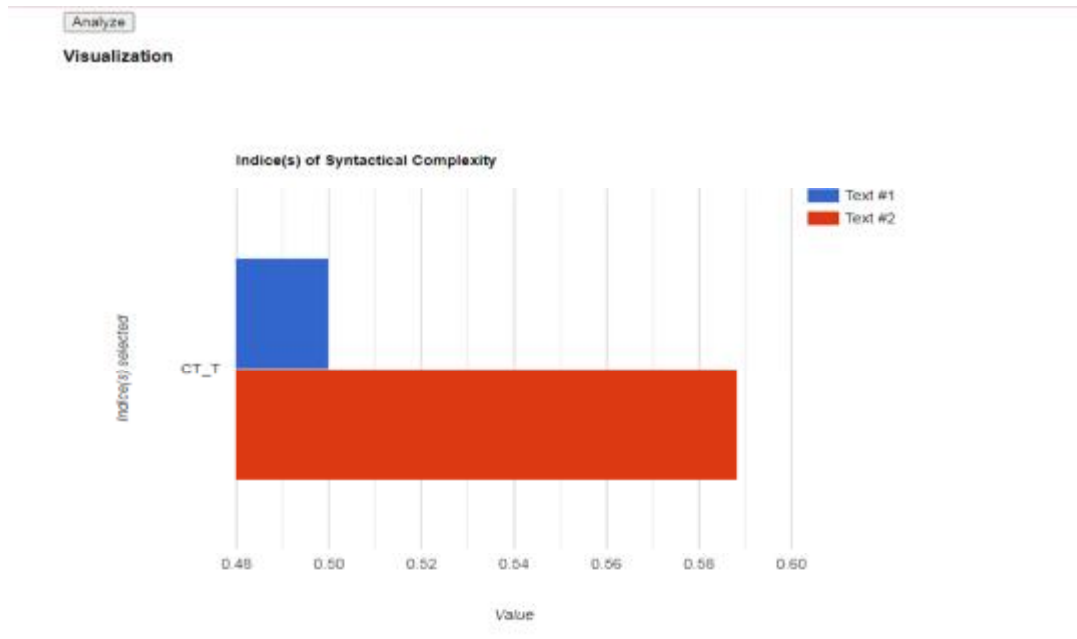


Figure 2.2. A bar chart of the results of Complex T-Unit ratio CTT

The two works differed significantly, with civilisation authors employing a more complex t-unite ratio than didactic writers, meaning they employed more subordination in their compositions.

2.3.1.5.2. Other Measurements related to the Amount of Subordination

Other indices used in the writings to quantify the level of subordination include the complex t-unite ratio CTT, as well as three others included in the previous table. First we have T-unite complexity ratio C/T, the didactic writings scored slightly higher than the civilisation ones with $C/T_1 = 23, 8$ to $C/T_2 = 21, 52$. Next there is the dependent clause ratio DC/C, both students had approximately the same results with $DC/C_1 = 20, 41$, $DC/C_2 = 20, 42$ this indicated that both

students used the same amount of the dependent clauses. Finally there is dependent clauses per T-unit DC/T, both students achieved almost the same outcome with the score of DC/T1= 20, 75 and DC/T2=20, 64.

2.3.1.6. The Degree of Sophistication

A sophisticated writing style is one that is vivid and convincing on a constant basis. As a result, writing elaborate and complicated words that genuinely strengthen their argument is one way students might gain the sophistication point.

2.3.1.6.1. Results of Complex Nominals per Clause CNC in the Corpora

The degree of sophistication engaged in the texts can be measured by analysing the level of complex nominals per clause in the two texts. Because they allow lexical components to be densely packed into a clause, complex nominal groups are prevalent in technical English (i.e. English for Specific Purposes, ESP). As a result, lexical density and syntactic ambiguity rise.

When it came to this metric, the following bare chart demonstrated that there is a significant difference between the two texts.

Measures	Text #1	Text #2
CN_C	1.444	2.385

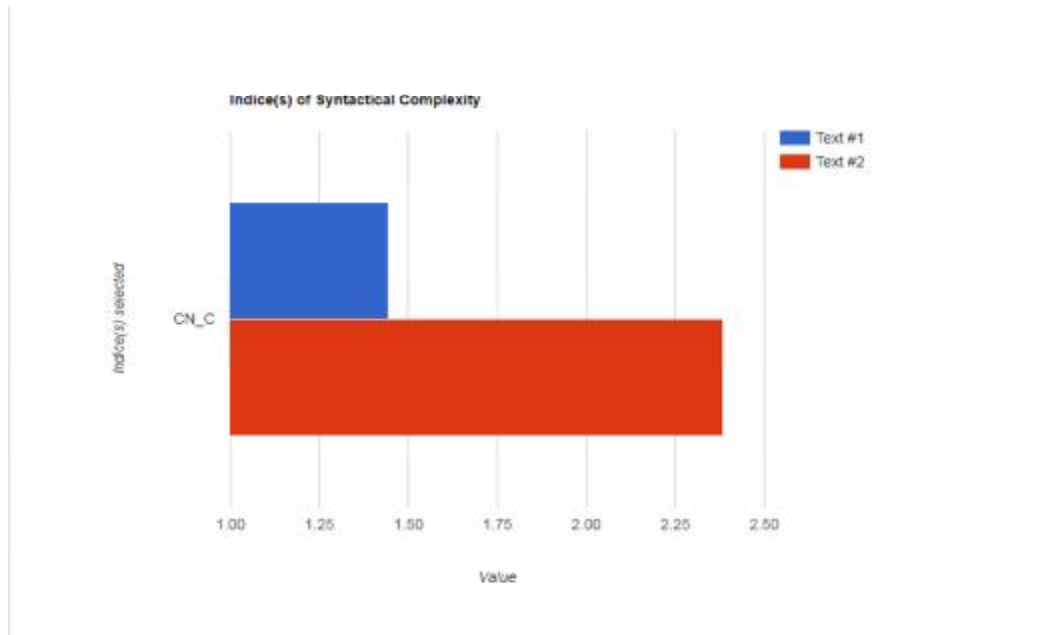


Figure 2.3. A bar chart of the results of Complex Nominals per Clause CNC

According to the bar chart Civilisation authors used more complex nominals per clause than didactic writers, implying that their writings were more sophisticated than didactic students' writings.

2.3.1.6.2. Other Measurements related to the Level of Sophistication

Complex nominals per T-unite (CN/T) and verbal phrases per T-unite (VP/T) are two further indices employed in the literature to assess the amount of sophistication. Concerning the first measurement, the table above showed that the civilisation completion achieved higher score with CN/T2=29, 64 to CN/T1=22, 6. According to the same table, the second measurement also

showed that the civilisation students scored higher than the didactic ones with the score of VP/T2=42, 11 to VP/T1=24, 1.

2.4. Discussion of the Research Findings

Writing, as noted in the literature study, is a difficult act that involves extensive training, language proficiency, and linguistic understanding. Several studies have indicated that high writing quality is related to linguistic elements, particularly the writer's use of syntactic complexity; yet, others have considered for the piece's understandability, implying that the writer is obligated to guide the reader through his work. The goal of this research is to have a better understanding of writing quality and different writing styles. The goal of this research was to find answers to two questions. The first question is: "Do didactics master two students' dissertation abstracts differ from civilisation master two students' dissertation abstracts in terms of syntactic complexity features?" The second question is, "If so, are the didactic abstracts' syntactic complexity traits more prestigious or vice versa?"

The syntactic complexity features will be discussed in order to answer the research questions in an appropriate manner and to confirm the correct hypotheses. The statistical descriptive procedure revealed numerous disparities in the SCMs, clausal and phrasal complexity, and didactic and civilization students' use of them. To begin, civilisation t students used lengthier sentences, T-units, and clauses, whereas didactic students utilized short sentences with no embedded structures. Furthermore, due to the near numbers in the (DC/C) and MLC indices, the abstracts of civilization and didactic students have approximately the same clausal complexity. Next, by analysing the sentence complexity of the compositions C/S, it was discovered that didactic students created more clauses in sentences than civilization students. Then, Civilisation

authors had a more complex t-unite ratio C/TT than didactic writers, implying that their writings had greater subordination.

When it comes to the number of coordination phrases/ number of clauses utilized in both writings, we found that there is a noticeable difference between the two kinds of abstracts with the didactic students using more coordination in their writings. All of the above findings answer the first research question by demonstrating that there is a significant difference in syntactic complexity between didactic and civilisation abstracts, implying that the first hypothesis must be rejected because it is incompatible with the findings, and which posit that there is no significant difference between the two when it comes to the syntactic complexity. Similarly, we must concentrate on the investigation of the level of sophistication measure to answer the second study question, according to the results of the analysis of the complex nominals per clause CNC we came to the conclusion that the abstracts of the civilisation branch are more sophisticated, therefore more prestige. In this case the results are quite the opposite from what was mentioned in the second part of the second hypotheses, namely that the abstracts of the didactic branch are more prestigious but it also confirms the first part of the same hypotheses.

2.5. Conclusion

The results of fifty abstracts derived from prior dissertations authored by civilisation and didactic students at Larbi Ben M'Hidi University's English department were the topic of this chapter. It described the process of analyzing two sets of corpora, as well as the methodology and statistical tools used to get and compare the results. This gave a notion of how different genres influenced syntactic complexity.

General conclusion

In academic and professional settings, writing is undoubtedly the most crucial talent. It's also the most difficult, particularly in the context of L2. Every language student aspires to be able to write well; therefore any step toward knowing what that requires is regarded as beneficial. During the academic year 2020/2021, this research looked at the syntactic complexity of abstracts written by English students from two different branches of civilisation and didactics at Larbi Ben M'Hidi University's English department. To automate syntactic complexity, the corpora were analyzed with the coh-metrix software, and the findings were statistically processed and compared. The data revealed a considerable difference in syntactic complexity between the civilization and didactics students, In all of the SCMs employed in the study, as well as in the phrasal and clausal syntactic complexity. After comparing the two corpora both research questions were answered in a specific and precise, as mentioned before in the first chapter the style of writing differs due to numerous factors among which we have the effect of genre on syntactic complexity, in this case the civilization and the didactic genres.

This research paper has reached a conclusion indicating that master two civilisation students produce more prestigious and elaborated pieces of writing than the branch of didactics. It is a vital step to examine some of the entailing reasons behind such disequilibrium, for both students undertook similar courses in the three first years.

First, the field of civilisation serves students with more freedom. Research opens doors toward vaster and larger areas when it comes to the field civilisation. They can rub different topics, at different width, and with different scopes.

Furthermore, didactic students often find themselves restricted and burdened with unchanged methodologies. In other words, didactic grounds limit students at so many levels including word choice and topics. Another factor contributing to why didactic students use less diversified vocabulary is the fact that the field is considered to be more scientific in nature. Most of researchers approach their topics using predetermined measures and bound themselves with fixed conventions.

Finally, as the field of civilisation and didactics are related to distinct genre, they, with no doubt, dictate not only different writing styles but also varied areas to be excavated. However, the field of civilisation is known to be wider as the world gives birth to millions of interesting topics each and every moment passing. Hence, students can create their own *mélange* just by linking what has occurred to what is actually occurring.

The fact that this research's results indicate that civilization dissertations are of higher quality than the didactic ones does not necessarily mean that the latter is of no use or importance. Didactic students also contribute greatly to science by their valuable researches and conclusions.

Pedagogical Implications

The findings of this study suggest few options for foreign language teachers to consider. Teachers in the didactics branch are advised to include syntactic complexity as a criterion in writing assessment in order to achieve a higher level of sophistication and to create a balance between the two styles of writing now that the reliability of syntactic complexity measures in differentiating between the civilisation and didactics branch has been validated. It is hoped that by evaluating learners' syntactic complexity on a frequent basis, teachers would be able to close the gap and reduce variability among students, at least to some extent. Teachers are also encouraged to conduct intense sentence-combining techniques with beginning and intermediate students to assist them construct more complex structures at a young age.

Limitations of the Study

As any investigation, some difficulties and setbacks were encountered at some points in this study. Perhaps the most important obstacle was the fact that the coh-metrix software was difficult to work with because it frequently shut down and there were a lot of versions of the software. Therefore, we had to test them all in order to find the one that works best for our study. The selection of the measures was quite tricky and challenging, for there was a huge number of them. Furthermore, the lack of experience when it comes to how to analyse data was a technical obstacle that withdrew the progress of completing the study's purpose.

Suggestions for Future Research

There are many suggestions for further researchers investigating the relationship between syntactic complexity and students' writings in general:

- Examine other independent variables that can have an effect on syntactic complexity, such as gender.
- Use other kinds of SCMs to investigate syntactic complexity.
- Use the native writing style as a criterion of comparison for better description of EFL learners' syntactic complexity.
- Work on a more representative sample by enlarging the sample size, for a larger sample size would allow for the employment of more powerful statistical analyses such as “discriminate function analysis”.

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