METİN TORLAK

# INVESTIGATING THE ROLE OF MULTI-WORD EXPRESSIONS IN WRITING PROFICIENCY AND OVERALL ENGLISH LANGUAGE PROFICIENCY OF EFL STUDENTS AT A TURKISH UNIVERSITY

A MASTER'S THESIS

BY

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TEACHING ENGLISH AS A FOREIGN LANGUAGE

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# Investigating the Role of Multi-word Expressions in Writing Proficiency and Overall English Language Proficiency of EFL Students at a Turkish University


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Metin Torlak


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**GRADUATE SCHOOL OF EDUCATION**

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Metin Torlak

August 2020

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Teaching English as a Foreign Language.

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Asst. Prof. Dr. Hilal Peker (Supervisor)

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Teaching English as a Foreign Language.

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ABSTRACT

INVESTIGATING THE ROLE OF MULTI-WORD EXPRESSIONS IN WRITING PROFICIENCY AND OVERALL ENGLISH LANGUAGE PROFICIENCY OF EFL STUDENTS AT A TURKISH UNIVERSITY

Metin Torlak

M.A. in Teaching English as a Foreign Language
Supervisor: Asst. Prof. Dr. Hilal Peker
September 2020

The purpose of the current study was to investigate the relationship between frequency values of multi-word expressions (MWEs) and the writing proficiency and overall proficiency of tertiary level English as a Foreign Language (EFL) students. The correlational study was conducted with 63 learners at the school of foreign languages of a state university in Ankara, Turkey. Having collected the essays written by the learners, the researcher applied a two-step item extraction method. After MWEs in the essays were tagged by two experienced raters, frequency-based association strength values were assigned to each phrase. The association strength values were obtained through a reference corpus to determine the MWEs accepted for regression analyses. The results indicated that proportion and mutual information scores of MWEs were significant predictors of the writing proficiency of the learners. Another finding of the study was that no relationship was found between proportion and mutual information scores of MWEs and the overall proficiency of the learners. As MWE frequency measures were predictive of writing proficiency, inclusion of MWEs thoroughly in EFL curricula might be suggested as an implication.


*Keywords*: Multi-word expressions, writing proficiency, language proficiency

# ÖZET

Çok Sözcüklü İfadelerin Türkiye'de Bir Üniversitede İngilizceyi Yabancı Dil Olarak Öğrenen Öğrencilerin İngilizce Genel Yeterlik ve Yazma Yeterlikleri Üzerindeki Rolünün İncelenmesi

Metin Torlak

Yüksek Lisans, Yabancı Dil Olarak İngilizce Öğretimi

Dr. Öğr. Üyesi Hilal Peker

Eylül 2020

Bu çalışmada, çok sözcüklü ifadelerin sıklık değerleri ile İngilizceyi yabancı dil olarak öğrenen öğrencilerinin yazma yeterlik ve genel yeterlik düzeyleri arasındaki ilişki araştırılmıştır. Mevcut korelasyon çalışması, Ankara, Türkiye'de bir devlet üniversitesinin yabancı dil okulundaki 63 öğrenciyle gerçekleştirilmiştir. Öğrenciler tarafından yazılan yazılar toplandıktan sonra, iki aşamalı bir çok sözcüklü ifade belirleme yöntemi uygulanmıştır. Yazılardaki çok sözcüklü ifadeler deneyimli iki değerlendirici tarafından belirlenmiştir ve her bir ifadenin sıklık profili çıkarılmıştır. Sıklık profili değerleri, regresyon analizi için kabul edilecek çok sözcüklü ifadeleri belirlemek için bir referans derlem aracılığıyla elde edilmiştir. Analiz, çok sözcüklü ifadelerin sayıları ve sıklık profillerinin öğrencilerin yazma yeterlik puanlarının anlamlı bir şekilde tahmin edebildiği ortaya koymuştur. Araştırmanın bir diğer bulgusu da çok sözcüklü ifadelerin frekansa dayalı değerleri ile öğrencilerin genel yeterlik puanları arasında herhangi bir ilişki bulunmadığıdır. Çok sözcüklü ifadelerin sıklık profilleriyle yazma yeterliği arasında ilişki gözlemlendiği için bu söz öbeklerinin, İngilizcenin yabancı dil olarak öğretiminde önemli bir rol oynayabileceği ve ders içeriklerine dahil edilmesi gerektiği söylenebilir.

*Anahtar Kelimeler*: Çok sözcüklü ifadeler, yazma yeterliği, dil yeterliği

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TABLE OF CONTENTS

# LIST OF TABLES

# LIST OF FIGURES

# CHAPTER 1: INTRODUCTION

## Introduction

Writing is a complex skill, which requires the ability to design, formulate, and monitor the language. Writing skill has been recognized as a key component for foreign language instruction (Weigle, 2002) and "[t]he close relationship between writing and thinking makes writing a valuable part of any language course" (Raimes, 1983, p. 3). The instruction of writing plays a crucial role in academia "as a problem-solving process in which writers employ a range of cognitive and linguistic skills to enable them to identify a purpose, to produce and shape ideas, and to refine expression" (White & Arndt, 1991, p. 3). As a means not only for communication but also for learning, building thought, transmitting knowledge, and building identity, writing has earned a significant role in the higher education curriculum. Writing is utilized not only as a learning objective but also as an assessment tool since "the best way to test people's writing ability is to get them to write" (Hughes, 1989, p. 75).

Although academic writing is closely related to academic success (Grabowski, 1996), even high achiever non-native speakers of English have serious problems and shortfalls when it comes to academic writing in English (Johns, 1997; Leki & Carson, 1997; Prior, 1998). It has been stated that learning to write in English is structurally different than learning to write in writer's first language (Hinkel, 2004; Weigle, 2002). The influence of the first language can be detected both in the selection of words (Wang, 2012) and in sentence building patterns (Hyland, 2007; Mohan & Lo, 1985; Noor, 2001). Also, adjusting their writing abilities to academic

writing in English might be a burden for the learners if the conventions of writing in their first language are disparate (Hyland, 2007).

The assessment of a written product in L2 might vary as a result of different approaches adopted by the assessor. Depending on the focus of the writing performance, the assessor can hold a holistic approach to score the performance or an analytic approach. Through holistic scales, a single score is assigned for the overall quality of the response (Hyland, 2002; White, 1984) while an analytic rubric enables the assessor to score separate traits of a response (Nitko & Brookhart, 2014). Holistic scales are considered as cost-effective, which makes them appropriate for large scale examinations (Cumming, 1990; Hamp-Lyons, 1990). An analytical scale, on the other hand, can provide more details and more comprehensive feedback, as it is easier to focus on discrete criteria (Hamp-Lyons, 1995; Nitko & Brookhart, 2014). Some of the criteria used to predict learner's proficiency can be content and organization, grammar, vocabulary, and rules of the written language.

Two key linguistic elements of language (i.e., grammar and vocabulary) have been considered to be misunderstood in the field of EFL (Lewis, 1993). Sinclair (1991) described the two ends of the discussion by the terms *the open choice principle* and *the idiom principle*. The open choice principle was built on Chomsky's (1957) previous argument on generative grammar which indicates that each word, phrase, or sentence reveals numerous choices only restrained by grammaticality. Through the slot-and-filler model, Sinclair acknowledged that syntactic rules define the language, and vocabulary units were just fillers to constitute a grammatical structure. However, he found the random nature of this principle inadequate to filter the opportunity for choice. Therefore, he proposed a second principle which enables a more elaborate model that suggests the existence of a great deal of pre-constructed

expressions. These expressions, also known as multi-word expressions (MWEs), are already stored in the minds of speakers as single units (Sinclair, 1991).

Adopting a similar approach, Lewis (1993) combined the concept of idiomacity with grammar in *The Lexical Approach*. Lewis considered collocations as the link between grammar and vocabulary by stating "language consists of grammaticalized lexis, not lexicalized grammar," (p. 9). Regarding fluency as "the result of acquisition of a large store of these fixed and semi-fixed pre-fabricated items," Lewis advocated the teaching of multi-word prefabricated chunks to facilitate language production as well as "linguistic novelty or creativity" (p. 15).

As Nattinger and Decarrico (1992) and Chan and Liou (2005) concluded, the utilization of collocations fails to be sufficient and the implementation of the lexical syllabus in the language classroom should be further explored and utilized. Raising learners' awareness of lexical items increases learners' language fluency and induces nativelike production (Shin & Nation, 2008).

The prevalence of creative construction over generative grammar has been found as a learning strategy used by children (Bohn, 1986; Weinert, 1995). MWEs have been considered as significant indicators of nativelike fluency (Pawley & Syder, 1983). Also, evidence on the relationship of MWEs with language proficiency has been found in recent studies (Chen & Baker, 2010; Kyle & Crossley, 2015; Paquot, 2019). Considering the effectiveness of the MWEs in language learning, the current study aims to explore the MWE use of EFL learners in their writing.

## Background of the Study

The field of language learning and teaching has undergone frequent and sometimes drastic changes in recent years. In the earlier methods of teaching languages, the main focus was the teaching of grammar or structure through either

explicit or implicit processes of language instruction. The common assumption was that learning a language was essentially about learning to master its linguistic system. Knowing the grammar rules meant communicating in the target language. With the shifting paradigms (Larsen-Freeman, 2000), alternative approaches to language teaching which focus on not only grammar, but also other aspects of language have been considered more practical and appropriate.

Akin to grammar, vocabulary is a linguistic system that forms the language. Lewis (1993) addressed the distinction between syntax and lexis by holding vocabulary over grammar. On the other hand, MWEs combines these two linguistic systems. In the past, vocabulary has been thought to be formed by single words. However, a number of studies suggested that MWEs are also stored in one's mind as single units and less effort would be made in the utterance of these lexical bundles (Lewis, 1993; Pawley & Syder, 1983: Sinclair, 1991; Wray, 2002). Therefore, single words are not the only components constituting one's knowledge of vocabulary; there are also MWEs that can form learners' lexicon (Omidian, Shahriari, & Ghonsooly, 2017). In this sense, lexicon refers to the collection of lexical items such as words, affixes, and prepositions, especially words (Timmis, 2015). MWEs are lexical units consisting of two or more words having different meanings from the separate items they are made up of (Portela, Mamede, & Baptista, 2011) or recurring sequencings such as *under the influence of alcohol* or *heavy rain* (Thomson, 2017). Academic discourse requires the use of MWEs including idioms, formulaic sequences, collocations, which might influence assessors to deem learners' academic proficiency as more proficient (Martinez, 2013).

A number of variables should be considered in understanding the use of MWEs. The first point to consider is frequency. Mere frequency has been used while

extracting MWEs from learner essays or corpora. Biber, Johansson, Leech, Conrad, and Finegan (1999) embraced mere frequency method and accepted MWEs that occur 40 times per million words. Frequency-based measures such as mutual information (MI) scores, and *t*-scores are commonly used while extracting and identifying MWEs as well. *T*-scores yield data about the high-frequency MWEs through reference corpus frequencies of each word that form the MWE. For example, a high frequency word such as *have* and *take* will usually have a high *t*-score regardless of the units they collocate. MI scores present information regarding exclusivity of the words within MWEs. For instance, low frequency words such as *pros* and *cons* have low *t*-scores, yet the combination *pros and cons* has a relatively high MI score since most of the time these individual words are used together. As these two measures of association complement each other, they are commonly used together (Bestgen, 2017). Also, the frequency-based measures and proportion of MWEs were found to be significant predictors of writing proficiency (Granger & Bestgen, 2014). A number of studies were conducted on the effect of MWEs on productive skills in the field of English as a Foreign Language (EFL). Some of the studies focused on speech (Thomson, 2017), while others concentrated on writing (Hoang & Boers, 2018).

However, even though previous studies focused on the relationship between oral and written production and overall language proficiency (Kılıç, 2015; O'Donnell, Römer, & Ellis, 2013; Öztürk & Köse, 2016; Üstünbaş, 2014), more research on formulaic language and MWE in writing is needed across the academy (Byrd & Coxhead, 2010). Also, increasing trend of employing frequency-based measures while identifying MWEs (Bestgen, 2017; Biber & Barbieri, 2007; Crossley, 2020; Wang, 2019; Yoon, 2017) might lead to significant results.

## Statement of the Problem

MWEs are considered to be the elements that unite syntactical structures with lexical items while holding vocabulary over grammar (Lewis, 1993). Some of the earlier studies on MWEs had native speakers as their focus and investigated learners' vocabulary knowledge (Lewis, 2000; Nation, 2001; Pawley & Syder, 1983). Another area of interest has been the effect of MWEs in different disciplines (Hyland, 2008). The positive influence of MWEs on productive skills has also been suggested in previous research in the field. A number of studies suggested MWEs' positive impact on oral proficiency (Bardovi-Harlig & Stringer, 2017; Boers, Eyckmans, Kappel, Stengers, & Demecheleer, 2006; De Cock, 2004; Javdani & Jadidi, 2016). The influence of MWEs on written production has also been suggested in a number of studies (Chen & Baker, 2010; Crossley & McNamara, 2012; Granger & Bestgen, 2014).

There are a number of studies that measured the relationship between fluency, proficiency, and formulaic phrases in the local context (Kılıç, 2015; Üstünbaş, 2014). The relationship between the use of MWEs in learners' oral performances and fluency scores of EFL learners along with their overall proficiency was investigated by Üstünbaş (2014). The MWEs in the study were extracted from Touchstone published in 2009 by Cambridge University Press. It is mentioned in the book that most frequent combinations of words were presented by the textbook, which indicates higher *t*-score. The types of MWEs targeted in the study were speech formulas and situation-bound utterances. The difference between these two types is that the first ones can be used anywhere in spoken language while the latter ones are used for specific situations. Also, the proportion of MWEs was the only dimension to be measured in the study. Kılıç (2015), on the other hand, investigated the

relationship between MWEs and both writing proficiency and overall proficiency. The researcher investigated the learners' use of meta-discourse markers that were included in the textbook, Language Leader published in 2011 by Pearson Education Limited (e.g., *however* and *on the other hand*). In other words, both studies concentrated on solely the proportion of high frequency MWEs. Schmitt (2010), however, stated that investigating the most frequent MWEs might pose the risk of excluding a large number of MWEs, mostly the expressions that are strongly related but less frequent. As MWEs that are more strongly associated are significant predictors of writing proficiency (Garner, Crossley, & Kyle, 2018; Granger & Bestgen, 2014), including MWEs of low frequency yet high exclusivity values might yield significant results. Consequently, in order to minimize the risk of excluding highly associated MWEs, current study employs two frequency-based measures in identifying and extracting MWEs.

## Research Questions

This non-experimental quantitative study adopted a correlational design in order to examine the relationship between two-, three-, and four-unit MWEs and writing proficiency of EFL learners at a state university in Ankara, Turkey. The participants were selected through convenience sampling. One purpose of this study was to understand the types and corpus frequency measures of MWEs used by selected students. While spotting the types of MWEs used by tertiary level EFL students in their writings, the corpus frequency of these MWEs are to be checked in the descriptive part of the study. Another point of interest in the current study is to investigate whether the reference corpus frequency, and the proportion of these MWEs can predict the overall writing proficiency and overall proficiency of these tertiary level students.

Specifically, this study aims to address the following research questions:

1. What types of MWEs are employed by tertiary level EFL students in their writings?
2. What are the frequency values of the MWEs employed by tertiary level EFL students in their writings?
3. To what extent can the variables below predict tertiary level EFL students' writing proficiency?
    a) the reference corpus frequency of MWEs
    b) the proportion of MWEs used in tertiary level EFL students' writings
4. To what extent can the variables below predict the overall proficiency of tertiary level EFL students?
    a) the reference corpus frequency of MWEs
    b) the proportion of MWEs used in tertiary level EFL students' writings

## Significance

Previous studies on MWE in the local context (Kılıç, 2015; Öztürk & Köse, 2016; Üstünbaş, 2014) have failed to consider the potential impact of frequency-based measure in predicting writing proficiency as well as overall proficiency of EFL learners. Earlier studies in the local context mainly concentrated on high frequency MWEs, generally extracted from textbooks (Kılıç, 2015; Üstünbaş, 2014) or through a frequency cut-off point (Öztürk & Köse, 2016). Both Kılıç (2015) and Üstünbaş (2014) concentrated on the most frequently used formulaic phrases in the textbooks used in their institutions. Öztürk and Köse (2016), on the other hand, extracted MWEs through a frequency cut-off point suggested by Biber and Barbieri (2007).

However, according to Schmitt (2010), when merely high frequency MWEs are included, low frequency MWEs which can predict writing proficiency of learners are usually excluded.

In an attempt to address the gap, this study focuses on the correlation between the use of high-frequency MWE and writing proficiency. Within the scope of this study, the MWEs from the essays of the EFL learners at the institution were extracted and examined through multiple frequency-based association strength measures which are mutual information values and *t*-scores, in order to overcome the issue regarding the exclusion of low frequency yet strongly associated MWEs. The findings from this study make several contributions to the current literature. First, it might lead future studies to examine MWEs through multiple frequency-based measures instead of investigating sole high-frequency MWEs. In addition, the study might guide institutions in integrating the use of MWEs in the curriculum.

## Definition of Key Terms

**Collocation:** Co-occurrence of two individual words (Firth, 1957). Also defined as bigrams, and two-word multi-word expressions in the current study.

**Corpus:** Corpora are collections of machine-readable spoken materials or written texts that linguistic analysis can be built on (O'Keeffe & McCarthy, 2010).

**English as a foreign language (EFL) learners:** Learners of English language that do not reside in an English-speaking country.

**Frequency-based measures:** Frequency-based measures in this study are association strength measures, MI score and *t*-score along with the proportion of MWEs.

**Multi-word expressions (MWEs):** Combinations of individual words that are stored as single units in the minds of language users (Wood, 2006). The criteria to identify

MWEs might differ greatly, therefore, the current study refers to MWEs as the combinations with minimum frequency scores of 2.0 for *t*-score, and 3.0 for MI score (Schmitt, 2010). MWEs are also, defined by terms lexical bundles, and formulaic sequences.

**Mutual Information (MI) score:** Mutual Information is an association strength measure that shows the dependency ratio of two or more words (Gablasova, Brezina, & Mcenery, 2017).

**Overall English Language Proficiency:** The term refers to the scores learners obtained at the second achievement test of their institution. The achievement test was conducted at the third quarter. The test included listening, use of English, reading and writing sections.

**N-grams:** N-grams are MWEs that are formed by different numbers of units. To identify each type of MWEs, different terms are used for MWEs that were formed by two, and three individual words. Bigrams are two-word MWEs while trigrams are three-unit MWEs.

***T*-score:** *T*-score refers to an association strength value that can be used to identify MWEs. It shows if the co-occurrence is random by measuring the expected co-occurrence and observed or actual count of the co-occurrence (Durrant & Doherty, 2010).

**Writing Proficiency:** Writing proficiency refers to the learners' essay scores. The learners obtained these scores as part of the second achievement test at the institution.

## Conclusion

In this chapter, first, the importance of writing was explained through a short introduction to the literature on writing and writing assessment. Next, the definitions

and limits of MWEs revealing their strong connection with grammar and vocabulary were provided. Furthermore, the review of the sections of the first chapter was presented. Providing the background of the study, the chapter depicted the gap in the local context and the research questions were listed. Then, by drawing on the existing literature, the significance of the current study was explained, and the glossary of the keywords was presented. The following chapter reviews the literature regarding the EFL writing and MWEs.

# CHAPTER 2: REVIEW OF LITERATURE

## Introduction

In order to understand the role of MWEs in writing proficiency, it is critical to comprehend the existing literature both on writing and multi-word expressions. For this reason, this chapter first provides a definition of writing and its features as a skill and explain writing instruction in language classrooms. Next, MWEs are presented as predictors of writing proficiency. The definition of MWEs is followed by the methods of identification and extraction of MWEs.

## Writing

Writing has been an essential tool aiding people throughout history both for communication and demonstrating the level of literacy. “Writing, together with reading, is an act of literacy: how we actually use language in our everyday lives” (Hyland, 2009, p. 48). The ability to read and write gave rise to historical phenomena such as the well-being of Greek city-states or the strong stance of the priesthood (Grabe & Kaplan, 1998). As it improved humanity in ancient times, “… writing intrudes into every cranny of our personal as well as our workplace and professional worlds” (Candlin & Hyland, 1999, p. 2). Writing serves as a frequently used means of communication in the professional world especially for people who live in environments that require them to use writing to interact with their colleagues or express the reality of their worlds. The prevalence of writing led to myriads of definitions although most convey similar meanings. To illustrate, writing is “an extremely complex, cognitive activity for all which the writer is required to demonstrate control of a number of variables simultaneously” to Nunan (1989, p. 36)

while Byrne (1979) described it as a combination of letters to express one's opinions and continued as "...writing is clearly much more than the production of sounds… The symbols have to be arranged, according to certain conventions, to form words, and words have to be arranged to form sentences" (p. 1). In line with the definitions above, White and Arndt (1991) also emphasized the complexity of writing by stating "writing is far from being a simple matter of transcribing language into written symbols. It is a thinking process and it demands conscious intellectual effort which usually has to be sustained over a considerable period of time" (p. 3). As there are multitudinous definitions of writing, there are many interpretations of the concepts, which proves the importance of the concept of writing for language.

**Writing as a Skill**

Four skills have been considered essential in the teaching of the English language (Brown, 2000; Nunan, 1989). Two modes of receptive performance and two forms of productive performance have been tailored by the language users (Brown, 2000). The receptive modes of performance are listening and reading since they are the means of receiving the language through texts and audio tracks. The productive modes of performance, writing and speaking, are, on the other hand, required when individuals express themselves.

Spoken and written language might be considered as reflections in comparison, yet that would not be quite correct. Although they coexist in numerous contexts, one ought to consider spoken and written language as separate means of communication, mainly because of their specific functions in interaction (Hyland, 2002). While spoken communication has its own natural atmosphere which determines the flow of interaction, written language need not have a context at the moment of producing. Conversely, it requires thorough planning and monitoring.

Another difference between spoken and written communication might be the audience; the audience might as well be present in spoken interaction, yet the author has to envision the future possibility of the situation while in the process of written interaction. To extend the distinction between written and spoken language, Raimes (1983), in her seminal work, points out a number of differences.

As shown in Table 1, spoken language and written language have a number of distinct features that keep them apart. Humans started speaking much earlier than they started writing, which also brings about the difference regarding the universal nature of speech. While, all over the world, we can come across spoken languages, there are still tribes that do not use a written form. Body language might assist speakers while expressing themselves, yet written language cannot have means as such. Many more dissimilarities can be named for these two ways of communication.

The dissimilarities between spoken and written language are not solely related to history or daily lives. In language learning and assessment, both are effective tools. Nevertheless, writing provides certain traits that spoken language would not be able to do so. Speaking occurs immediately and one cannot be as accurate while speaking as they can be while writing. While speaking has pauses and intonation, it cannot let people make enough corrections to convey the most accurate communication in terms of language learning and assessment. Unlike speaking, written language can be corrected until the writer is satisfied with the end product. It cannot be expected from learners to express their ideas orally for one hour within three-hundred words. Although speaking might also serve well in terms of language assessment, the methods and tools for assessing speaking are still quite different than the ones for assessing writing for the disparities Table 1 presents.

Table 1

*Differences between Speaking and Writing*

| Speaking | Writing |
|---|---|
| Universal & Acquired | Has to be learnt |
| Has dialects | Standard forms of grammar & syntax |
| A variety of options to convey meaning | Only the words that are written on the page |
| Pauses and intonation | Only punctuation |
| Spontaneous and fast | Planned and time-consuming |
| Receiver & response is present | No immediate response |
| Informal and repetitive | Formal and compact |
| Use of basic linkers | More complex linkers |

Writing is a separate skill and an effective communication tool especially while learning and assessing a foreign language. According to Brown and Yule (1983), for a long period of time in history, writing has been the main tool in teaching languages. It used to be the sole method to prove the proficiency of a learner before the development of voice recording tools to be affordable (White & Arndt, 1991). However, it is arguably the hardest macro skill for language users of both first language and second language (Nunan, 1989). White (1981) had parallel opinions on the complexity of writing, as it is not a naturally occurring ability as in the case of speaking ability. The complexity of writing has also been considered as closely related to the variables that a writer is supposed to demonstrate control over including format, content, vocabulary, spelling and letter formation, sentence structure, and punctuation (Bell & Burnaby, 1984). Bell and Burnaby (1984) also

suggested that writers, in addition to the sentence level control, should be able to form coherent and cohesive paragraphs leading to a longer text.

**Academic Writing**

Hogue (2008) has defined academic writing as the type of writing that is composed to provide information to one's teacher and classmates at the college level. As a field of study, academic writing has attracted significant attention among scholars with a wide range of different focal points from the scope of academic writing to teaching conventions of academic writing. Academic writing research used to be mainly reliant on the first language, yet the appropriateness of pedagogical implications of the tradition has been questioned in the field (Matsuda, 2003; Ramanathan & Atkinson, 1999). Moreover, the process approach has emerged against the tradition of the product approach in the teaching of academic writing (Gee, 1997). Hyland (2007) explained the factors for this interest by several recent developments. The first factor is that higher education has been available for diverse groups of class, age, and ethnicity. These once under-represented groups bring different identities or different educational backgrounds to the classroom. Thus, tutors cannot expect the same level of writing competency to meet the demands required from students in their courses. Another factor mentioned by Hyland (2007) is related to teaching quality audits. More attention is being devoted to teaching processes, which include student writings, as writing ability is of paramount importance for professional development programs. The last point is the prominence of the English language as the language of research all over the world. English has become a basic academic skill rather than a language to be learned. As more learners in the academy are required to proceed with their professional careers, the need for academic writing increases.

As the current study focuses on assessing academic writing, it is necessary to focus on the characteristics of academic writing. Academic writing should be separated from other kinds of writing such as literary, journalistic, or personal writing; and the traits that set academic writing apart are mainly its audience, tone, and purpose (Oshima & Hogue, 1999). The fact that the audience for this specific form of writing consists of instructors and professors in academic writing leads to alteration in the way communication is conveyed. The academic manner of expression involves a different selection of vocabulary and syntax, and academic writing is known to have a rather serious and formal tone (Oshima & Hogue, 1999). The last consideration that distinguishes academic writing from other forms is the purpose which sets the rhetorical form in the organizational style and form in writing. Swales and Feak (2012) also mention the considerations in academic writing and, in fact, enriches Oshima and Hogue's (1999) list by adding the concept of flow. Flow means the link between each statement in the text, and the characteristics of flow depend on the sort of writing. Due to instructive purposes, the flow of an academic piece of writing needs to be crafted through solid reasoning and critical thinking skills.

Along with the considerations that represent the differences between academic writing and other forms of writing, there are certain genres that conform to academic writing. However, it is essential to define the term genre before focusing on genres in academic writing. A thorough definition of genre stated by Bhatia (1993) is

> a recognisable communicative event characterised by a set of communicative purpose(s)identified and mutually understood by the members of the professional or academic community in which it regularly occurs. Most often it is highly structured and conventionalised with constraints on allowable contributions in terms of their intent, positioning, form and functional value. (p. 13)

To simplify the definition above, Hyland (2006) defined genre as “a term for grouping texts together, representing how writers typically use language to respond to recurring situations” (p. 46).

In the field of academic writing, Swales and Feak (2000) divided academic genres into two sections: open genres and supporting genres. Open genres are mainly direct academic ones that can be placed in one’s resume including theses, book chapters, conference papers, research articles, and technical reports. Supporting genres, on the other hand, are the ones that aid one’s academic career in a subsidiary manner such as curriculum vitae and submission letters. Hyland (2006) also had parallel opinions on genres in academic writing. As genres are rhetorical actions recurrently employed by the members of the community for a specific purpose, composed for a specific audience, and used in a specific context, practices including research articles, undergraduate essays, lectures, and dissertations are considered to be genres in academic writing (Hyland, 2006).

**Approaches to Teaching ESL/EFL Writing at Tertiary Level**

There are many details that a writer needs to consider before producing a piece of writing. The details that a writer should deem to be able to effectively express his/her ideas are; audience, purpose, word choice, organization, mechanics, grammar, syntax, content, and writer’s process as shown in Figure 1 (Raimes, 1983).

While teaching writing is a difficult task at every level, the expectations from students in relation to writing proficiency at the tertiary level vary significantly from the ones at pre-tertiary levels. Even though students reach a high level of grammar accuracy, their writings could still suffer from “repetitions, inappropriate organization of ideas, parallelism, short-length, lack of variation, use of vague words, lack of appropriate information” (Mustaque, 2014, p. 327). A single best way or


*Figure 1*. Details to be considered while writing

approach is not viable in teaching foreign language writing. Learners may have different needs while teachers have different priorities while teaching. The concepts listed in Figure 1 are considered as the whole picture that guides the teachers in teaching writing. Focusing on certain elements that the learners need to pay attention to, a variety of approaches emerged in the instruction of writing.

In order to tackle these difficulties, and to improve students' writing skills at the tertiary level, several different approaches, models in other words, have been applied to the instruction of writing over time. As the very first of these approaches, the product approach is based upon behaviorist ideology, which posits that foreign language learning is "basically a process of mechanical habit formation" (Richards & Rodgers, 2001, p. 57), since language is perceived to be a structured system of

elements. In this approach, students are expected to imitate the materials such as the model texts and the input provided by the teacher, and they are expected to reflect their linguistic knowledge and skills in their final product. Since the emphasis is on the final product, as Zamel (1987) stated, the teacher is given the primary role as the examiner. Under the category of the product approach, it is also possible to find out several sub-approaches called the controlled writing and the rhetorical approach. While the controlled writing refers to the emphasis on the grammatical accuracy and the imitation of the patterns (Kroll, Long, & Richards, 1990), the rhetorical approach refers to the focus on the rhetorical narrations such as "cause-effect, comparison-contrast, argumentation, etc., and took into account the cultural and linguistic background of the writer as possible" (Bacha, 2002, p. 165). Current-traditional rhetoric, however, is a more comprehensive approach involving learners' needs as a focus. Along with an awareness of learners' needs, the logical organization of the utterance was targeted. Starting with a paragraph, novice writers are presented with elements of organization, such as topic sentences, transitions, and concluding sentences. Although learners' needs are supposed to be essential in this approach, content and the form of the written product are the main focuses (Silva, 1990).

Raimes (1983) also discussed the sub-categories of the product approach with a different perspective based on the differences including whether the organization and the combination of the organization and grammar or the communicative features are assigned as the primary role in shaping the writing tasks. The controlled to free approach or from controlled to free composition is a method that involves teacher strictly monitoring the learner (Cave, 1972). The sequential nature of the audio-lingual approach was adopted in the process of teaching writing. The teacher allows the learners to move step by step until they reach a certain level of independence.

The learner or writer will grasp the basis of sentence-patterns and paragraphs gradually with a high level of accuracy, and then they can continue with the next step. The main concern in this method is to avoid making mistakes. Thus, teacher's feedback is vital and should be given as quickly as possible. The emphasis is on mechanics, syntax, and grammar although the end-product is expected to be accurate rather than being original.

The free writing approach, on the other hand, is exactly the opposite compared to the controlled to free approach. In this method, learners are supposed to write in the early stages of their development so that they can have more original ideas. Hence, the feedback does not involve error correction in its focus since the ideas and originality are paramount. Raimes (1983) stated that the learners might feel incompetent at the beginning of the process since they might not be familiar with the concepts. However, they are supposed to develop higher levels of critical thinking skills in time so the complaints will become scarce in time. In brief, the main concern is the content in this approach. Although these two approaches, the controlled to free approach and the free writing approach, seem to be contrasting, they might form a sound perspective together. Cave (1972) supported an eclectic perspective indicating that a combination of these two approaches might be employed while teaching writing. He implied that the learners' condition including their willingness, health condition, and abilities should be taken into consideration. In other words, the level of freedom to be assigned by teachers should be in line with learners' needs. While Raimes' (1983) paragraph-pattern approach focuses on the concept of organization and requires learners to understand how to organize their writings, the grammar-syntax-organization approach does not neglect the necessity of syntax and grammar as well as regarding the organization as a significant element

of the writing. Finally, the communicative approach concentrates on the audiences and makes the writing tasks more meaningful. Along with the meaning, the emphasis is on the purpose of the writing as well, mainly because the task is supposed to be based on real-life situations. Teachers might ask learners to pretend as they are writing to a friend of theirs living in a different country, or as they are writing a pledge for a certain issue. The instructor might also add more enthusiasm to the task by making real connections involving real pen pals from a distant location where the target language is spoken. Through the interaction that the communicative approach might provide, the benefits of the writing task can be enhanced through peer-assistance as well (Raimes, 1983).

The product approach has been criticized for many different reasons, which led to the spread of the process approach in the 1970s. The criticisms included the focus on the final product instead of the process, the undervaluation of the input from students such as their previous knowledge and experience, and the social context (Badger & White, 2000). As a response to these criticisms, the process approach, built upon the perception of writing as a "non-linear, exploratory, and generative process whereby writers discover and reformulate their ideas as they attempt to approximate meaning" has been put forward (Zamel, 1983, p.165). It focuses on writers and the writing process rather than the final product. In the application of this approach on the instruction of writing, students are expected to go through a journey where they are exposed to "writing activities which move learners from the generation of ideas and the collection of data through to the 'publication' of a finished text'" (Tribble, 1996, p. 37). This process can be divided into four steps: preliminary writing step consisting of brainstorming and outlining of the ideas, drafting the product including the revisions and reformulations, post-writing step

including editions and proof-readings, and the finalization of the product to be published or to be submitted to the audience (Kroll et al., 1990). One should also note that while progress is aimed at the end of the process, it is possible to experience several drawbacks, revisions, and recycling within the process (Krashen, 1984). Raimes (1983) gave a list of the features of this approach: Learners are not restricted by time or accuracy since the ideas and the actual process of the writing is paramount. Brainstorming is an essential component of the process. Learners can work as a group or individually, yet the teacher always provides feedback on the ideas. Learners can have many drafts and receive feedback as much as they need. The main element in this approach is the writer's process.

When the outcomes of the application of two approaches are compared, it has been observed that the success level in the process approach is higher than the success level of the product approach. For instance, in Bacha's (2002) study on L1 EFL students where the grades of three essays instructed with the product approach and the grade of research writing activity instructed with the process approach are compared to each other, it was found that

> the average final essay grades over the past three semesters were between 68–73% even when take-home essays had been given… the grades on the research writing activity were higher than the teacher's expectations...10 students gained grades above 80% (three 90%), five in the 60s and the rest in the 70s, a spread of grades not previously attained. (p. 166)

Apart from the effectiveness of the process approach, the effectiveness of the types of feedback has been researched with the spread of the process approach since students are expected to receive feedback and improve their writings based on them. Hyland (2010) provided a list describing the types of corrective feedback: direct feedback, indirect feedback, focused and unfocused feedback, peer feedback, electronic feedback, and meta-linguistic feedback, and mini conferencing to go over

feedback with the students. The studies on the effectiveness of different types of feedback have concluded that all types of feedback do not have the same level of impact over the students' improvements. For instance, in a study over with twenty-five participants ranging from 19 to 25 years of age, Kamberi (2013) found out that the peer feedback is not as influential as the teacher feedback over the students (p. 1689). In another study, a similar outcome was found out since the participants reported the teacher feedback and the self-assessment as more significant than the peer feedback (Vasu, Ling, & Nimehchisalem, 2016). However, Ferris and Hedgcock (2004) supported the use of peer feedback. Hyland (2010) suggested that even though peer feedback has its own disadvantages since peer feedback requires more time and efforts due to the students' inexperience and "focus on surface level features", it is still valuable because it provides interaction and collaborative learning environment and the cultivation of critical thinking and decision-making skills (p.109). Finally, the effectiveness of different strategies on different phases and the effectiveness of the use of different tools have been also researched. For instance, while some scholars (e.g., Moghaddas & Zakariazadeh, 2011; Sarabi & Tootkaboni, 2012) focused on the effectiveness of the use of videos, picture, and music to facilitate ideas in the pre-writing phase, some scholars such as Dexter and Hughes (2011) found supporting evidence for the contribution of the graphic organizers to teach the organization of ideas to the students and to motivate the students, even the students with learning disabilities.

However, the process approach was not able to escape from the criticisms in the later years, particularly with the 1980s. While some scholars (e.g., Cambourne, 1988; Pennington & So, 1993) argued that the writing process of an L1 student and an L2 student are similar to each other since both of them require the composition

skills such as the organization of the thoughts and the delivery of ideas to the audience effectively, Caudery (1995) argued that they cannot be similar to each other because of "the constraints imposed by imperfect knowledge of the language code" (p. 41). Silva (1993) and Susser (1994) argued that the process approach mainly designed for L1 students could negatively affect the L2 writer's chance to benefit from this approach because they require additional assistance from the teachers on grammatical developments (Badger & White, 2000). Hinkel (2004) stated that research on the applying the pedagogy of writing which was mainly designed for native speakers to non-native speakers led to the same conclusions particularly on academic writing even after years of education. It "does not lead to sufficient improvements in L2 writing to enable NNS students to produce academic-level text requisite in the academy in English-speaking countries" (Hinkel, 2004, p. 6). Another criticism held against the process approach is the ignorance of the social perspective and how the meanings of the texts are constructed. Hyland (2010) presented this point by saying, the individual freedom within the process approach "leaves students innocent of the valued ways of acting and being in society . . . fail[ing] to introduce [them] to the cultural and linguistic resources necessary for them to engage critically with texts" (p. 20). The final criticism is related to the lack of instructions although the importance of sufficient and clear instructions and guidelines and goals provided to the students has been emphasized (Edwards-Groves, 2014).

The displeasure arising from the earlier methods a more process-oriented approach led to changes in the teaching of writing skills. Nonetheless, English for academic purposes, resembling the communicative approach, shifts the attention of EFL composition to a more meaningful direction (Silva, 1990). Having an academic

community in focus, the genres are selected to help students in their prospective academic career. In conclusion, the learners are supposed to blend in an institution in the target language with their writing capacity. The genre-based approach started to dominate writing instruction after its emergence in the late 1990s. In this approach, language is regarded as "embedded in (and constitutive of) social realities since it is through recurrent use of conventionalized forms that individuals develop relationships, establish communities, and get things done" (Hasan, 2011, p. 32). Swales (1990) defined genre as a social or communicate event; therefore, argued for the existence of a close relationship between the purpose of genre and the structure schema, language, and finally text. While it shares similarities with the product approach because it focuses on the linguistics and the patterns found in the same genre, it is also different from the product approach because it also investigates the social context in which the text and the meanings are constructed. Some scholars called the genre-based approach as the English for Specific or Academic Purposes (ESP/EAP) method. Particularly, the supporters of the ESP approach promoted the idea that students should be taught how to write specific texts and how to address the different communities (Halliday & Martin, 1993). For instance, Bacha (2000) argued that a study at the Lebanese American University revealed that there is a strong need for the development of research skills and lab-report writing skills. The application of the genre-based approach on teaching writing can be summarized as the wheel of three steps which are model targeting and the examination of the examples of the targeted genre; the production of a similar text to the examples with the collaboration of both the student and the teacher; and finally the production of an independent text by the student (Cope & Kalantzis, 1993).

The genre-based approach has been found very effective on the development of students' writing skills even though some such as Kamler (1995) criticized the genre-based approach since it disregards "the instructional and disciplinary contexts in which texts are constructed" (p.9). For example, while Kay and Dudley-Evans (1998) reported that the genre-based approach reduces the students' writing anxiety and boosts their confidence, Reppen (2002) found that it helped students to write more persuasive and appropriate texts. Finally, Devitt (2004) claimed that the genre-based approach raised the awareness of the relationship between context and the text among the students so that they could use this awareness in other tasks. Yet, it does not necessarily mean that the genre-based approach is free of the criticisms and it is embraced by every teacher.

Theorists and scholars continue to come up with new ideas about how to teach the students the language skills better every day, rejecting the application of only one approach to teaching writing, because the needs of learners change significantly in every class. Nation's Four Strand Theory (2008) is one of the newest and well-accepted ideas since it provides a more balanced approach to teaching language skills including writing. Nation has provided a number of principles to help teachers evaluate writing activities in order to employ the best ones by listing them four strands: meaning-focused input, meaning-focused output, language-focused learning, and fluency development (Nation 2008). The principles proposed by Nation (2008) can be summarized as follows: While meaning-focused input requires the consideration of students' previous experiences and knowledge, meaning-focused output demands the production of many texts belonging to different genres, the focus on the delivery of the messages and the integration of learners' ideas while choosing the tasks and determining their needs. The language-focused learning requires

equipping the students with the purpose of the writings and the necessary tools and methods and the focus on alphabet and spelling mistakes if the students are using a foreign alphabet. Finally, fluency development requires the teacher to create repetitive tasks and similar materials to increase the speed of students in writing.

**Assessing Writing**

Testing writing proficiency carries the purpose and the meaning of the task of writing within. One does not simply write letters or pledges without a reason. Writers would like to be understood as clear as possible since it is usually more difficult than face-to-face communication. Therefore, the success in a piece of writing is the extent the performance fulfills its purpose (McNamara, 1996). To illustrate, if one writes a persuasive essay, the purpose is convincing the reader. Only then, the essay should be considered as successful (Weigle, 2002). Conveying the meaning and serving its purpose is important in terms of writing ability, yet there is another consideration in language learning and assessment, the linguistic features in a text. According to McNamara (1996), in language testing, there is a strong sense of performance assessment and a weak sense. While strong sense is mainly about the purpose of the writing, weak sense focuses on the language use in the text instead of sole task achievement. A language teacher might consider the purpose, yet the use of language should also be addressed while assessing learner written responses. A text written by learners might be an answer for a reading passage. The task and response would be closer to the strong sense in writing assessment since comprehension would be more important. On the other hand, a language teacher might focus on organization, lexical items, or syntactic rules within the text, which would be more related to the weak sense. The decision highly depends on the purpose of assessment.

Concentrating on the weak sense in language assessment, a key component in writing assessment is scoring procedures. Essay raters often make use of rating scales while assessing a text. Weigle (2002) categorized two main types of scales for second language writing assessment, holistic scales and analytic scales. Both scales have strengths and weaknesses and have different purposes.

Holistic scales or rubrics are designed to assign a single score for the whole text without dividing it into sections. There are certain descriptors or benchmarks for each level, and levels may vary depending on the scale. The raters are usually trained for a specific holistic scale, and they grade learners' responses relying on their own judgments which are shaped by the scale. Main strengths of a holistic scale are speed and validity. As the scores are based on overall judgment, the raters need to read the text once and assign a single score, which makes the scoring significantly fast. Also, according to White (1984) holistic scales are more valid since they are more authentic and to the point. The main weakness to this type of scales is that they do not provide enough diagnostic data since there is only one overall score (Weigle, 2002). Therefore, they might not be as useful for language learners since students cannot locate the issues in their responses and improve these problems.

Analytic scales on the other hand include several criteria. Each of the criteria might concentrate on certain aspects such as content, organization, vocabulary, cohesion, grammar, or mechanics. Depending on the focus of the test, the scales can be adapted to feature certain aspects. Advantages of analytic rubrics are diagnostics data, appropriateness for novice raters, and yielding reliable results. As there are different components in analytic scales, the diagnostic data is more varied, which makes them more practical for foreign language learners. The learners can easily see the points that they should improve. Secondly, analytic scales are more detailed,

which makes them easier to follow for inexperienced raters. Lastly, they provide more reliable results compared to holistic scales. Analytic scales are criterion-based, and they are usually combinations of different criteria. As there are more items to score, the reliability becomes higher (Weigle, 2002).

Rubrics are essential in determining the quality of writing in language assessment. Also, they leave a margin for investigating separate constructs leading to higher quality writing such as lexical sophistication. The more sophisticated the vocabulary is in texts; the higher raters grade them. The higher ratings are closely related to the amount of complicated words since complex units of vocabulary are considered to be one of the most important measures of writing quality (Read, 2000). Traditionally, the level of sophistication was investigated through single words, yet recently there is a shift toward MWEs as formulaic sequences are also an essential tool for predicting lexical knowledge (Sinclair, 1991). The following sections focus on MWEs to further explain them and their use in EFL.

## Multi-word Expressions

Single words are considered to be the core of lexical knowledge (Schmitt, 2010). It might be easy to perceive speech as a sole collection of single words and neglect the importance of MWEs. However, a language learner would never be able to communicate flawlessly or deemed nativelike by merely using single words (Pawley & Syder, 1983; Wray, 2002). To be able to understand and interact in the target language, learners require the knowledge of syntax and morphology of that language. The long-lasting debate on the prevalence between vocabulary and grammar have shaped the way foreign languages are taught. Following Chomskyan theory (1957), it might be assumed that phrases are formed by adding each unit successively while following grammatical rules. However, this approach would

indicate that each word is stored separately in speakers' minds. Firth (1935), on the other hand, considered the meaning of a word or phrase as context-dependent without focusing on sheer grammar. Therefore, the focus should not be on mere grammatical or lexical items, yet the items surrounding single words, the context, should be taken into account while considering the meaning. In other words, the meaning of a word would mostly be determined by the words around it. Following Firthian conventions, advocates of the other end of the debate claimed that MWEs are stored in one's mind as a whole (Pawley & Syder, 1983; Sinclair, 1991). Therefore, speakers do not have to add each unit of a phrase successively as they are stored and uttered as single units. It was also suggested, "the language consists of grammaticalized lexis – not lexicalized grammar" (Lewis, 1993, p. 9). This suggestion indicates that these MWEs might have their own grammatical rules within their patterns (Sinclair, 1991). Therefore, MWEs might be used as a source instead of focusing on vocabulary and grammar separately in the process of language learning.

The concept of the MWEs derives from the Firthian understanding of meaning. MWEs are combinations of individual vocabulary units that are frequently used together. It requires less effort and time to retrieve MWEs since they are stored in the mind as a whole. Also, they might assist language in a variety of situations. While it has been suggested that MWEs account for almost half of the language (Erman & Warren, 2000), the use of formulaic language was found to be related to nativelike fluency (Pawley & Syder, 1983). Also, it requires less effort and time to retrieve MWEs since they are stored in the mind as a whole. To concentrate on the importance of MWEs, the researcher in the current study explains the origin of MWEs in the next section.

**The History of Multi-word Expressions**

The origins of MWEs were to be found in the writings of John Hughlings Jackson, a neurologist, when he was working on aphasic patients in 1879 (Jacyna, 2011). He noticed that even though certain aphasic patients had an impairment of language which disturbed their ability to comprehend or use the language, they were fluent in certain phrases or rhymes. After five decades, Saussure (1916, 1959) revisited the phenomenon of fixed phrases under the concept of agglutination which is a process of an independent mechanical inclination. Normally, the anticipation is that the brain would analyze each word in a phrase individually. However, when a concept is explained through a combination of words, they are no longer analyzed and accepted as separate units (p. 177).

The concept of multi-word expressions gained more interest later on, and John Rupert Firth became the most prominent figure in the literature. Initially, he battled against the conventional idea that language consisted of sounds that formed the units of utterance. While the traditional approach to linguistics used to be deductive, Firth supported an inductive approach supporting context over the smallest units of language. As he stated, with the start of an interaction, the continuation of the exchange relies on the options that context presents. Each utterance leads to narrower options for each speaker, which is defined as ‘contextual elimination’.  Although neither of the researchers studying linguistics or psychology had their focus on the conversation at the time, for Firth it was the core to understand the actual structure that language functioned within (Firth, 1935). It was his efforts that enabled an era of contextual meaning when he proposed that the sequence that a lonely word is residing contains a portion of the meaning of that word (Firth, 1935). He considered meaning not as fixed, but context dependent. It was mostly

determined by the surrounding words. Also, when looking into multi-word expressions, it is impossible to ignore his efforts since the concept of collocation can be first located in the works of Firth (1957) when he says, “you shall know a word by the company it keeps.” And he defined the term as “collocations of a given word are statements of the habitual and customary places of that word” (p. 181). His seminal work opened up the pathway to the analysis of multi-word expressions.

Following the Firthian convention, Halliday (Halliday & Matthiessen, 2014) included collocations as an aspect of lexical cohesion along with repetition, synonymy, hyponymy, and meronymy and assigns collocations as having particular relation which is not an association of meaning. He clarified and expanded the definition of collocations as bundles that tend to co-occur more frequently in certain contexts defying randomness since the expectation would be much lower in the context of the whole language. Just as Halliday, Sinclair also developed the Firthian theories. Sinclair (1991) described collocations as two or more words that are used together proximal to each other. The principles proposed by Sinclair, which formed the basis of the current study, are described in the next section.

**Theoretical Framework: The Idiom Principle**

Considering the interpretations on how meaning arose, Sinclair (1991) proposed two distinct principles on how language progresses, which are in harmony with Saussure’s findings; the open choice principle, and the idiom principle. The open choice principle is described as choosing the next unit solely seeking for grammaticalness without any other limitation. A great deal of choices that are available make it a very complex procedure since the only limitation is the consistency within the grammatical restraints. Therefore, the slot-and-filler model, another name for the open choice principle, indicates almost complete randomness,

which might not fully explain how the language operates as language users exercise a certain number of lexical bundles with little hesitation while they interact with others (Sinclair, 1991).

The latter principle is ‘the idiom principle’, which narrows down the choices that are available to the user of language. The principle indicates that there are a large number of preconstructed sequences that are stored and retrieved from speakers’ memory as single units (Sinclair, 1991). Storing these sequences as single choices enables learners to have a shorter delay in conveying them. Depending on the register, the circumstances in which the interaction takes place, there are a limited amount of choices that are available to a language user. To illustrate, the open choice principle indicates that while forming the phrase *each other*, the word *each* is a determiner, and it can be followed by any noun. Thus the language user should separately collect *each* and *other* from their mental lexicon. Also, they have to choose *other* from a large number of nouns stored in their memory, which means spending a certain amount of time while retrieving the combination. However, the idiom principle operates on retrieving the phrases simultaneously because they are stored together in the users’ mental lexicon. Simply, the speaker chose to utter this combination of words as a single unit, and he did not patch these two words individually.

Sinclair (1991) propounded the idea that the principle of idiom is not a minor feature, yet at least as significant as grammar in describing how meaning emerges from the text. To further support the idiom principle he apprised some evidence and generalizations (p. 113):

- Many uses of single words and phrases often attract others and build strong co-occurrences such as hard work and hard evidence.

- Certain grammatical choices are attracted by certain phrases or single words and build co-occurrence patterns. For instance, the phrase *look forward to* is strongly associated with gerunds as in *look forward to hearing from you*. In general, certain grammatical categories are common in co-occurrence patterns.
- Depending on the semantic environment, many uses of phrases and words tend to occur in particular contexts. To illustrate, the phrase *try to* indicates a sense of struggle. One does not *try to do* something easy, yet there has to be a difficulty to be dealt with.
- Some of the high-frequency words have very little or vague meanings attached to them. For instance, in *take a look at this* the word *take* does not have a clear meaning and only be defined by considering the phrase as a single unit.
- Some of the very frequent words might not convey the same meaning at all times. Therefore, they can only be defined by the phrase they are placed not individually.
- There is a correlation between the strength of collocations and the choices that are available to a language user. When the phrase is stronger, fewer choices the user has.
- The majority of the normal text is assembled by frequent words, and common meanings of less frequent words. Therefore, normal text can be considered as delexicalized, not bearing a particular meaning, and it was mostly formed by operational use of the idiom principle with sporadic switches to the open choice principle.

In light of the aforementioned evidence and generalizations, Sinclair (1991) defined the role of MWEs within this framework and stated that the use of MWEs represented the idiom principle. Having described the theoretical foundations of the current study, the next section describes the methods of identification of MWEs.

**Definition and Extraction of MWEs**

Single words have been considered as the smallest meaningful unit of utterance in a language. To emphasize the distinction between a single word and a multi-word expression, Schmitt (2010) defined the single words as individual units in passages separated from other words by the use of spaces. They have been considered as the core of the language in dictionaries and word processors. Therefore, many people working in professions related to language analysis and instruction would imagine a word as single words (Schmitt, 2010). Nevertheless, Wray (2002) implied there is no chance one can write any kind of a credible text without using multi-word expressions. Thus, it would be difficult to sound nativelike without using MWEs (Pawley & Syder, 1983). Multi-word expressions are specific combinations that involve words that usually co-occur, and the term MWE is an umbrella term that embodies an array of linguistic units which are formed by at least two lexical units such as collocations (black tea), binomials (war and peace), idioms (kick the bucket), lexical bundles (on the contrary) and others (Omidian, Shahriari, & Siyanova-Chanturia, 2018). Although the definition of the MWEs might look clear enough, there are myriad of terms to refer to MWEs in the field; some of these terms might not refer to the same phenomenon while some might refer to two separate phenomena (Wahl & Gries, 2018). Similarly, a consensus on the criteria for the classification of MWEs has not been reached (Laporte, 2018). Therefore, a series of definitions to refer to co-occurrence is defined in the current section.

The prominent role of MWEs in language learning has been stated in a number of studies (Biber, 2009; Schmitt, 2010; Wray, 2002), and according to Jackendoff (1997), it is not viable to ignore MWEs since they are too common to be bypassed in our utterances. Regarding the prevalence of multi-word expressions in the English language, Erman and Warren (2000) stated that the use of these multi-word sequences was quite frequent reaching 52 to 58 percent in the texts that comprised of the corpora. However, Altenberg (1998) announced that the sequences with formulaic nature make up about 80 percent of the English language.

As they are extremely common in English language, dozens of names have been suggested or used so far (Wahl & Gries, 2018). For example, Erman and Warren (2000) used the term prefab, while Moon (1998) chose fixed expression and Coulmas (1979) preferred routine formulae. However, these options are only a tiny portion of the whole. Clarification might be required as it has long been a troublesome issue referring to these units (Moon, 1998; Nunberg, Sag, & Wasow, 1994). It might be treated as a twofold problem; while a variety of terms might refer to the same phenomenon, conversely, one term might refer to different phenomena (Moon, 1998). Wray (2002) addressed the issue regarding the abundance of terminology defining formulaicity by listing fifty-four terms (see Table 2) including collocations, fixed expressions, semi-fixed expressions, lexical bundles, idiomatic expressions, and free combinations. To provide a clearer understanding, some of these terms are explained in the following paragraphs.

An early attempt on description and clarification of MWEs has been made by Becker (1975). He supported idiomacity and utilized the term lexical phrases. He defined lexical phrases as “previously known phrases consisting of more than one word” (1975, p. 1). He also believed that categorization was necessary to define

Table 2

*Terminology of MWEs*

| | |
|---|---|
| amalgams | automatic |
| chunks | clichés |
| co-ordinate constructions | collocations |
| complex lexemes | composites |
| conventionalized forms | fixed expressions |
| fixed expressions including idioms | formulaic language |
| formulaic speech | formulas/formulae |
| fossilized forms | frozen metaphors |
| frozen phrases | gambits |
| gestalt | holistic |
| holophrases | idiomatic |
| idioms | irregular |
| lexical simplex | lexicalized phrases |
| lexicalized sentence stems | listemes |
| multi-word items/units | multi-word lexical phenomena |
| noncompositional | noncomputational |
| nonproductive | nonpropositional |
| petrifications | phrasemes |
| praxons | preassembled speech |
| precoded conventionalized routines | prefabricated routines and patterns |
| ready-made expressions | ready-made utterances |
| recurring utterances | rote |
| routine formulae | schemata |
| sentence builders | set phrases |

Table 2 (cont'd)

*Terminology of MWEs*

| | |
|---|---|
| stereotyped phrases | stereotypes |
| stock utterances | synthetic |
| unanalyzed chunks of speech | unanalyzed multi-word chunks |

lexical phrases in order not to use the mainstream term "idiom" for all of them. The six categories are as follows:

- Polywords: functions as single words, no variability (e.g., for good = forever, blow up = to explode)
- phrasal constraints: there is some variability yet with constraints (e.g., by pure coincidence, or by sheer coincidence (not many options to be used here)
- deictic locutions / meta-messages: short to medium in length, functions as phrases or whole utterances [e.g., for that matter . . . ('I just thought of a better way of making my point'); . . . that's all (message: 'don't get flustered')]
- sentence builders: the length of a sentence, allows variation in parameters [(person A) gave (person B) a (long) song and dance about (a topic)]
- situational utterances: usually complete sentences, known as the appropriate utterances in certain situations (e.g., how can I ever repay you?)
- verbatim texts: can be as long as one can remember and use (e.g., better late than never; How ya gonna keep 'em down on the farm?)

Collocation is another general term that is used to define MWEs. The term collocation was coined by Firth and it was defined as "the company that words as

individual lexical items kept with one another" (Robins, 1997). Firth (1957) described the notion of collocation as

> The study of collocation in a more generalized way could be used to describe the poetic diction of, say, Swinburne. Throughout his poetry Swinburne lays general constructions alongside each other, syntagmatically parallel collocations are a feature of verse-form and stanza-form, and often carry parallel phonaesthetic and prosodic features. (p. 196)

Sinclair (1987) also emphasized the importance of collocations as they illustrated the principle of idiom. He described collocations as "on some occasions, words appear to be chosen in pairs or groups and these are not necessarily adjacent" (p. 325).

Lewis (1997) used the term chunk to indicate how languages operate, "the Lexical Approach argues that language consists of chunks which, when combined, produce continuous coherent text" (p. 7). He categorized chunks into four types including words, collocations, fixed expressions, and semi-fixed expressions. While the first type is single words, the other three types are multi-word items according to Lewis (1993). Words are described as stand-alone lexical items listed in dictionaries. Collocations were defined as "readily observable phenomenon whereby certain words co-occur in natural text with greater than random frequency" (Lewis, 1997, p. 8). *Make a mistake* and *slump dramatically* might be considered as examples of collocations within the definition of Lewis. A third type is fixed expressions which are emphasized as a major category of lexical items. Fixed expressions are also divided into four different types including *social greetings* (such as Good morning; have you looked at the mountains today?), *politeness phrases* (such as did you make it home?), *Phrase Book language* (such as could you help me with …, please), and *idioms* (such as better late than never). Semi-fixed expressions, on the other hand, are hardly considered as expressions as they are usually longer and flexible such as *Can I have a ..., please?*, or *What is that interesting/annoying is …*. Through the

categorization he proposed, Lewis (1997) attempted to challenge the conventional view of language and describe lexis in his terms.

Biber et al. (1999) considered MWEs as a universal term. They defined phrasal verbs, prepositional verbs, idiomatic expressions, collocations, lexico-grammatical associations, and lexical bundles within the realm of MWEs. The definition of collocation was presented as "associations between lexical words" as in *obvious difference* and *obvious reason* (Biber et al., 1999, p. 988). Lexico-grammatical associations were interpreted as the association between words and grammatical structures. However, the main focus of the authors was on lexical bundles which are described as extended collocations since they indicate word combinations that co-occur in longer sequences such as *do you want me to* and *in the case of the*. However, in Biber et al.'s terms (1999), more specifications are necessary to be considered as a lexical bundle. Lexical bundles should be recurrent expressions of as least three words. Frequency is another trait sought to define lexical bundles; a sequence must recur at least ten times per million words in a corpus. In addition, they considered contracted combinations (e.g. I'm not – I am not) as single words. In brief, the authors attempted to narrow down their scope to a more manageable size through the criteria they relied on.

Byrd and Coxhead (2010) expressed the influence of idiomacity on language by stating "language in use is characterized by repetition of fixed and semi-fixed multiword combinations and by use of formulaic patterns" (p. 32). These patterns might stretch from one word to multiple words: frames of *the … of the …,* collocation (made up of two-words as stated in the study), idioms, and sets of two or more adjacent words. The authors focused on lexical bundles and defined lexical bundles as combinations of "three or more words that are repeated without change

for a set number of times in a particular corpus" (p. 32). In the study, Byrd and Coxhead (2010) analyzed lexical bundles across four disciplinary areas including arts, commerce, law, and science, and the analysis led to a 21 four-word lexical bundles that were recurrent across all these four disciplines, which indicates the spread of lexical bundles across these disciplines.

Nunberg et al. (1994) focused on idioms while addressing idiomacity and stated that idioms had been considered as distinct forms compared to fixed expressions, formulae, collocations, clichés, proverbs, sayings or allusions. The authors asserted that the literature on idiomacity concentrated on non-compositionality, and lacked focus on several dimensions. To clarify the term idiom, they proposed a set of criteria as they believed a single-criterion definition would be misleading. The characteristics of idioms that set them apart are listed as conventionality, inflexibility, figuration, proverbiality, informality, and affect (Nunberg et al., 1994). Conventionality indicates that their meanings cannot be predicted fully due to their non-compositional nature. Inflexibility is another characteristic of idioms; it is unlikely for idioms to be used in a different syntactic frame. The third criterion refers to figurative elements that idioms involve including metaphors and hyperboles. As idioms are utilized to portray recurring events of common interest in the society, they are likely to be proverbial, which also causes idioms to be associated with colloquial registers. The last trait, affect, implies the stance of the society against a particular situation; idioms do not usually denote simple events involving natural everyday activity. Thus, the reaction of the society can be detected through idioms (Nunberg et al., 1994). Through the array of criteria stated, the authors categorized idioms into two separate categories: idiomatically combining expressions and idiomatic phrases. Idiomatically combining expressions

are considered compositional such as pulling strings while idiomatic phrases were considered as wholes as they were not parted in the lexicon of the speaker just as other types of MWEs.

Moon (1998) utilized the term fixed expressions and idioms (FEIs) as an umbrella term and she admitted that it was an unsatisfactory term since the expressions are not necessarily fixed. The term fixed expressions includes phrasal lexemes, multi-word lexical items, and phraseological units. Moon (1998) also clarified that while idioms might be considered as a type of MWE, they can also be used as a general term to refer to many types of MWEs. Moon (1998) described multi-word lexical items as frozen collocations, grammatically ill-formed collocations, proverbs, routine formulae, sayings, and similes. Her criteria to deem a string as FEI consist of institutionalization (to be frequent enough in corpora), lexicogrammatical fixedness (a certain level of rigidity in co-occurrence), and non-compositionality (the meaning of the phrase should be different from what each word would mean individually). Moon (1998) also described different terms that indicate FEIs without a distinction from her definition of MWEs; the other terms include phraseological units and phrasemes. A slight characteristic difference for these two terms would be that the term phraseological unit might be restricted to metaphorical items while the term phraseme might be used to describe idioms that are not semantically opaque and fixed (Amosova, as cited in Moon, 1998).

Nesselhauf (2003), using a phraseological sense, developed the ‘restricted sense’, with a focus on semantic transparency in selecting collocations. According to Nesselhauf, there are two criteria in deciding if a verb or a noun would be considered restricted; a very limited amount of words can follow the verb or noun since it has a very specific sense as in *eating cake* being a correct use but not *eating milk*, and the

other criterion is that even though it is structurally acceptable for that verb or noun to be used with the other verb or noun, yet it is arbitrarily not viable, as in scenic view being correct while scenic picture not. Nesselhauf, then, presented her categorization through the restricted sense:

- Free combinations: where both items being used completely unrestricted as in *need money*
- Collocations: where one item is unrestricted, but the verb has restricted sense as in *spill water*
- Idioms: where the restricted sense applies for all items in a phrase as in *draw a blank*

A more contemporary method of analysis is the frequency-based approach, supporting the idiom principle coined by John Sinclair (1991). The researchers might focus on the frequency of each lexical bundle through a reference corpus (Biber, Conrad, & Cortes, 2004) or association strength between the units that form the bundle (Bestgen, 2017). In their seminal study, Biber et al. (2004) used a conventional approach and accepted lexical bundles that occur 40 times per million words. Moreover, the taxonomy they presented has led the way in the field. The taxonomy consists of stance expressions that describe the level of certainty of the person, discourse organizers that are used to introduce or clarify the situation, and referential expressions that are used for identification of items or people. Bestgen (2017) used *t*-score and MI scores, which are association scores to accept combinations as multi-word expressions through a cut-score, to determine whether multi-word expressions or single-word measures would be useful in predicting the quality of L2 texts.

Another method to categorize MWEs was proposed by Wray (2002). The method was formed by an array of criteria including intuition and frequency. Intuition is clarified by linking it to shared knowledge. Although it does not seem scientific when phrases sound right or nativelike, it is still common to accept a phrase as a unit when approved by an expert language user. However, there are many issues depending on mere intuition since there is a high level of subjectivity. Wray also presented a method which is the hybrid of intuition with frequency. After detecting MWEs through intuition, researchers can reach consistency with computational methods since it is a more reliable method of extracting. For instance, after taking a proper sequence as *have a good day*, the researcher can look up the sequence on a larger reference corpus to support the intuition with computational data.

**Empirical Studies**

Pawley and Syder (1983) were some of the first researchers that mentioned the significance of MWEs. They claimed that the concepts of nativelike selection and nativelike fluency could not be achieved if there were infinite options as stated by grammarians. The concept of native selection meant that native speakers keep choosing words and sentences that would sound natural and idiomatic even though there were supposed to be infinite options after each unit by mere restraint of grammaticality. Similar to the nativelike selection, native speakers do not hesitate while talking although they are supposed to think and add the next unit. The researchers supported the idea that when speakers use MWEs in their conversations, they use less processing power, which will also help the utterance be nativelike. In line with Firthian conventions, Pawley and Syder opposed the traditional approach that supports endless choices when uttering a new unit, and hypothesized that the

majority of English language comprised of multi-word sequences that are stored in one's memory as chunks. Therefore, using these chunks in one's speech rather than using novel utterances leads to nativelike fluency.

Another seminal work by Yorio (1989) considered the probability of MWEs being indicators of proficiency in foreign languages. He selected the term 'conventionalized language' when referring to MWEs and defined them as "language forms that are more conventionalized than other language forms" (p. 56). The tenets that conventionalized language carried within were mainly related to them being acquired and used as wholes, their complex nature that would not give in to grammatical analysis, and the tendency to make the utterance more nativelike. The researcher reviewed many studies of the time and concluded that fluency could not be achieved without the use of formulaic sequences, which would make idiomacity a great measure that correlates with bilingual system competence.

Shifting to some of the recent studies on MWEs and their predictive value, Bestgen (2017) compared MWEs to single word expressions in order to determine which one would be a better indicator of writing proficiency. The author measured the predictive value of multi-word sequences in understanding the caliber of the texts written by the learners of the English language. The researcher also measured the merit of multi-word sequences compared to single word measures in doing so. After extracting all the 2-unit sequences from 2 different datasets, the researcher checked these bigrams in the British National Corpus to assign MI scores and *t*-scores, association scores measuring the quality of these sequences. Correlation analyses and multiple linear regressions indicated that formulaic measures were more useful than single word measures in predicting raters' judgments of determining the quality of texts.

Chen and Baker (2010) investigated MWEs through an automated frequency-based approach. The researchers utilized three separate corpora as one being compiled of published academic articles, the other two corpora were formed by learner academic writings. While the former learner corpus was comprised of academic writings of L1 writers, the latter one was an L2 academic writing learner corpus. The authors concluded that the proportion of MWEs increased when the writers were proficient. While L2 writers had the smallest range in MWE use, academic texts included the widest range. Also, non-native writers were keen on overusing certain MWEs that were not commonly used by native speakers of English.

Garner et al. (2018) targeted bigram and trigram uses of L2 learners by examining their essays. The purpose of the study was to determine stronger predictors of these sequences, including frequency, range, and association strength, comparing them to the judgment of the expert raters. The study concluded that regression analysis indicated a specifically higher number of frequent 3-word sequences and more associated 2-word sequences were able to predict the writing proficiency judgment of expert raters.

MWEs have been studied in the local context as well. A point of interest has been the relationship between the level of proficiency and the use of multi-word expressions. Bağcı (2014) concentrated on the knowledge side of the debate and compared the collocation knowledge of learners from different levels within both receptive and productive tests, checking if proficiency meant knowledge of more collocations. The receptive test measured the aptitude of the learners by asking if the collocations were correct. The gap-filling test, for productive level, asked learners different parts of speech to locate the correct and incorrect usages that learners could

come up with. Thirty-four students from both pre-intermediate and advanced levels, under the categorization of the university, were chosen as participants. The findings revealed that advanced level learners were more capable in their use of collocations both in receptive and productive levels.

Comparison of MWE use among Turkish speakers and native English language users has also been studied in the Turkish context. Öztürk and Köse (2016) investigated the use of 4-word lexical bundles in the essays and articles of Turkish and English native postgraduate students and scholars in the field of teaching English as a foreign language. Lexical bundles with a frequency of 25 per million words which occur at least 5 distinct writings were employed in the study. The results revealed that postgraduate Turkish language users employed far more multi-word expressions compared to their English-speaking peers. Also, the findings showed that half of the statistically significant lexical bundles that were overused by Turkish postgraduate students were unique to them. The authors tried to explain this phenomenon as transferring of certain phrases from their earlier writing training in Turkish.

Most of the studies conducted in the Turkish context have focused on collocations, as they have been the face of multi-word expressions for a longer period of time. A quite recent thesis written by Qader (2018) suggested that teaching collocations would help the learners achieve nativelike fluency in the long run. To support the hypothesis, the researcher conducted an experimental study with a control group and an experimental group. All the students were tested before and after the study while only the experimental group was provided with noticing exercises specifically on collocations. While none of the students were proficient in

the pre-test, results indicated that the lexical proficiency of the learners who had noticing exercises significantly improved.

The comparison of collocations with the single word has been the focus of some studies in the Turkish context as well. Mutlu (2016) measured the vocabulary size of high school students using five instruments targeting average vocabulary size along with their receptive and productive collocational knowledge. According to the findings of the researcher, vocabulary size, and collocations knowledge of the students correlated positively. Also, the productive knowledge of the students was not as large as their receptive knowledge of these bigrams. However, that was not unexpected according to the researcher. As most studies in the field of collocation or multi-word expressions are at the university level, it is important to include this study at the high school level. It was also striking that the only school that offered preparatory classes has a much larger vocabulary compared to the other schools.

Kılıç (2015) focused on formulaic language use of tertiary level students that they have been taught within the instruction at their institution. The researcher investigated the relationship between the proportion of formulaic language and the scores of coherence, overall writing, and overall proficiency. The phrases that were included in the study were taught through the textbook used at the institution. While the learners incorporated these phrases in their essays, there was no statistically significant relationship between their scores and their use of formulaic language.

Lastly, Üstünbaş and Ortaçtepe (2016) had an interest in the influence of MWEs on oral proficiency exams. In the article, the researchers concentrated on students' MWE use in an oral proficiency exam and the relationship between their MWE use and their overall proficiency. The MWEs that were investigated in the study was specifically the ones that were targeted in the textbooks of their institution.

Although both in the individual tasks, the tasks where the learners had to talk to the interlocutor alone, and paired tasks, which require the learners to interact with another peer, the learners used MWEs, there were differences in their uses. The results indicated that the learners who used MWEs in paired tasks more frequently had a higher level of fluency, and higher proficiency scores. The authors pointed out that the learners had a tendency to use more formulaic sequences in their spoken performance when textbooks provided them with a chance to be exposed to MWEs. Thus they revealed that exposure is a significant element in the use of formulaic language. However, a more significant result in the study would be the connection between the higher level of proficiency in language and more frequent use of MWEs in the process of assessment.

## Conclusion

In the second chapter of the current study, relevant literature on writing and MWEs was introduced. After writing was briefly presented as a medium of communication, it was described as one of the four language skills. Then, the approaches to writing instruction were explained, and the concept of writing assessment was described. The second half of the chapter was specifically on MWEs. The brief introduction of MWEs was followed by a framework focusing on MWEs, the idiom principle. Next, the definition and methods for extracting MWEs were explained. Then, the chapter ended with the presentation of empirical studies on the relationship with MWEs and writing proficiency, along with overall language proficiency. The methodology of the current study is presented in the next chapter including information on the research design, settings, participants, the tools, and data collection and analysis.

# CHAPTER 3: METHODOLOGY

## Introduction

The purpose of the current non-experimental study is to estimate the influence of MWEs on the writing proficiency and overall proficiency of tertiary level EFL writers at a state university in Ankara, Turkey. After describing the types of MWEs used by the learners, the frequency values are presented. Subsequently, the relationship between the frequency values and learners' writing proficiency and overall proficiency are calculated.

The research questions in the current study are below:

Specifically, this study aims to address the following research questions:

1. What types of MWEs are employed by tertiary level EFL students in their writings?
2. What are the frequency values of the MWEs employed by tertiary level EFL students in their writings?
3. To what extent can the variables below predict tertiary level EFL students' writing proficiency?
    a) the reference corpus frequency of MWEs
    b) the proportion of MWEs used in tertiary level EFL students' writings
4. To what extent can the variables below predict the overall proficiency of tertiary level EFL students?
    a) the reference corpus frequency of MWEs
    b) the proportion of MWEs used in tertiary level EFL students' writings

## Research Design

In this non-experimental quantitative study, a correlational design was adopted by the researcher. A cross-sectional survey was implemented to investigate the relationships among different variables mentioned above. Following the piloting stage, a questionnaire (see Appendix B) was given to the participants. And the final process was collecting learners' essays and their writing proficiency test scores along with their overall proficiency test scores. As the researcher had access to the institution and the records were available, convenience sampling was used in the current study. A convenience sample is when a group of individuals or data in the current study was available for a study (Fraenkel, Wallen, & Hyun, 2011).

The questionnaire was distributed to a randomly selected group for piloting. After obtaining the results, the actual process for the present study began. The learners were taken to a computer lab where they were asked to read and respond to the web-based consent form (see Appendix A). When the participants agreed to take part, the researcher handed them the codes that would provide access to the questionnaire. The language history questionnaire (LHQ) that was used in the study is a dynamic web-based research tool (see Appendix B), designed to assess the linguistic background of language learners along with their tendency, habits, or the level of proficiency in the languages that the learners acquired (Li, Zhang, Tsai, & Puls, 2014). Having obtained the legal consent from the participants, the essays written by the participants were collected for MWE extraction. Also, the exam scores were collected to investigate the relationship between overall proficiency and the use MWEs that were used in the essays of the participants. The essays that were collected were analyzed by two expert raters to tag and extract two-, three-, and four-

word MWEs to have consistent results. The MWEs that were selected by both raters were included in the computational analysis.

## Setting and Participants

The setting of this study is the School of Foreign Languages at a state university in Ankara, Turkey, which was selected for its convenience for the researcher. The learners are provided with intensive English language programs in 4 quarters each of which lasts for 8 weeks. In the beginning of the academic year, the learners take a proficiency test and according to the test, they either start their departments or spend a year to receive language training. The students who are obliged to attend the preparatory program sit a placement test and as a result of the test they start the program in a level that would fit their needs. The school categorizes learners in 4 different levels which are Level 1, Level 2, Level 3, and Level 4. The learners at the lowest level of proficiency are placed in L1 level and the highest are placed in Level 4. The students are required to reach the pre-determined level of proficiency (B1 level in CEFR Framework) to successfully start their departments.

The preparatory program consists of 4 quarters, each of which is 8 weeks, and twenty-three hours of teaching is delivered on a weekly basis. The classes are not divided into separate skills, yet there is still emphasis on all four skills through the use of textbooks and extra material provided by the material development unit. The material development unit, which recruits one member for each level, prepares all the presentations, handouts, technology enhanced learning tools, and revision worksheets in order to maintain a certain degree of standard in what each learner or class should receive in terms of language experience for each quarter. There is also a

unit that is responsible for the assessment, which employs one member for each unit as well.

The number of participants of the present study was 63. Among them 35 were female while 28 of them were male. Although there were students aged 21-23, majority of the students were 18-20 years old. Most of the students were from Turkey and a small number of the participants were from different countries. The demographic information is presented in Table 3.

Table 3

*Information on the Participants of the Study*

| Category | Participants ($n$ = 63) |
|---|---|
| Age | |
| 18 | 14 |
| 19 | 22 |
| 20 | 21 |
| 21 | 4 |
| 22 | 1 |
| 23 | 1 |
| Current Level of Education | College (Tertiary Level) |
| Gender | |
| Female | 35 |
| Male | 28 |
| Country of Birth | |
| Azerbaijan | 1 |
| Belarus | 1 |

Table 3 (cont'd)

*Information on the Participants of the Study*

| Category | Participants ($n$ = 63) |
|---|---|
| Egypt | 1 |
| Kazakhstan | 1 |
| Iraq | 2 |
| Palestine | 1 |
| Syria | 1 |
| Turkey | 55 |
| Native Language | |
| Arabic | 5 |
| Azerbaijan | 1 |
| Russian | 2 |
| Turkish | 55 |

## Instrumentation and Materials

Three types of instruments and data sources were used in the current study. The first instrument was the language history questionnaire (LHQ) (see Appendix B) prepared by Brain, Language, and Computation Lab at the Penn State University was equipped in the study to examine the factors that might be influencing the use and types of MWEs (Li et al., 2014). The learners' essays for the extraction of MWEs along with the scores given by the raters were used as data sources in the current study. Also, the overall proficiency scores of the learners were the other data source employed in the study. The tools and their uses in the current study are defined in three sections.

**Language History Questionnaire**

The first tool that was employed in the study was LHQ, which was designed by Li, Sepanski, and Zhao (2006) through analyzing articles that involved language background questionnaires. The user-friendly interface and automatically generated results enabled researcher to spend less time on data entering. Dörnyei and Taguchi (2010) also stated that web-based questionnaires require shorter amount of time to conduct and data analysis since the responses do not physically travel and they can be entered of transformed automatically, yet they mention a certain issue with online questionnaires, lower response rate compared to their traditional counterparts. To overcome the problem, the researcher of the current study took Fraenkel et al.'s (2009) advice and conducted the questionnaire in person since direct administration to a group results in "… a high rate of response – often close to 100 percent" (p. 393). In the end, except one person, all the participants were willing to participate in the survey and it allowed the researcher to monitor the process more carefully responding to issues and questions immediately. For the purpose of this study, questions regarding the age, current level of education, gender, country of birth and native languages of the participants were utilized to provide background information about the participants (see Table 3).

Regarding the validity and reliability of questionnaire, the fact that a number of studies employed LHQ might present a certain level of construct and content validity (Hartanto & Yang, 2016; Kuhl et al., 2016; Yang, Gates, Molenaar, & Li, 2014). However, the authors measured the validity and reliability of the questionnaire as part of a large-scale study through learners self-evaluation responses and major constructs within the questionnaire (Li et al., 2006).

**Learners' Essays and Writing Proficiency**

A data source used in the current study was the essays written by the EFL learners at the institution since the essays were scrutinized to identify the MWEs and determine the types and the frequencies of them. There were 63 argumentative essays and the essays were minimum of 220 words long. The average word count in the essays was approximately 270 words. Each learner received writing instruction of the same kind since they attended the preparatory classes at the same institution in the same semester. Also, the scores that were assigned to the essays were employed in the data analysis process. To build a clear image of the writing instruction and the scores, the process in the institution is described in detail.

Writing instruction starts with form filling exercises to give the learners an early start at Level 1. Then sentence construction exercises and basic conjunctions and connectors enable the learners become more confident in building accurate sentences in target language. The first linkers that students learn are: *and, but, or, so,* and *because*. Next, the teachers introduce basic paragraph structure by investigating model paragraphs. Along with the paragraph structure, basic paraphrasing methods through the difference between the introductory sentence and the concluding sentence in a paragraph. Particular details in the middle of the introductory and concluding sentences vary according to the topic including describing a person, a place, or a past holiday. To consolidate the basics of writing, the learners are supposed to complete 2 tasks in their writing folders. For each writing folder task, learners write their first draft and receive feedback from their teachers. Then they write the second draft relying on the feedback. The writing folders are not graded but the teachers give them as homework. The writing folder activities continue throughout the preparatory language education.

The learners start Level 2 with a little review on paragraph writing and more linkers (see Table 4). After the introduction of more conjunctions and connectors, a more detailed structure is presented including topic sentence, major and minor supporting ideas, and concluding sentence. At the end of the quarter, the learners are introduced with information on how to write an opinion paragraph with basic skills such as preparing an outline and brainstorming.

Table 4

*Additional Conjunctions and Connectors in Level 2*

| For addition | Opposite idea | Exemplification | Reason | Result |
|---|---|---|---|---|
| In addition | However | Such as | Because of | Therefore |
| What is more | Although | For example | | |
| Moreover | | For instance | | |
| Also | | | | |

The learners can write an essay in the institutions' standards when they are at Level 3. To begin with, common mistakes that the learners should be cautious of are presented including spelling, punctuation, missing words, wrong form, and subject-verb agreement. The next step is how to transform the paragraph format into the essay of minimum 220 words with an introductory paragraph, two to three body paragraphs, and a concluding paragraph (see Figure 2). After presenting the model paragraph, the teachers' guide the learners to turn it into an essay by explaining the necessary measures. Then more detailed paraphrasing strategies are presented including the use of synonyms, restating phrases, changing parts of speech through the use of collocations if necessary, and sentence restructuring.

After the opinion essay, the learners are presented with instructions on how to write an advantage/disadvantage essay format (see Figure 3). The instruction starts

| PARAGRAPH FORMAT | ESSAY FORMAT |
|---|---|
| Background information (optional)<br>Topic Sentence (topic + controlling idea) | **I. INTRODUCTORY PARAGRAPH**<br>**Background information (at least 2 sentences)**<br>- General statements about the topic<br>- Narrowing down<br>**Thesis statement (not a question)**<br>- Main idea/point of the essay<br>- Writer's opinion |
| 1st Major Supporting Idea<br>&<br>Minor Supporting Sentence(s) | **II. BODY PARAGRAPH 1**<br>- 1st Major supporting idea of the essay (Topic Sentence is optional.)<br>- Minor supporting sentences (explanations/details/examples)<br>- Concluding sentence (optional) |
| 2nd Major Supporting Idea<br>&<br>Minor Supporting Sentence(s) | **III. BODY PARAGRAPH 2**<br>- 2nd Major supporting idea of the essay (Topic Sentence is optional.)<br>- Minor supporting sentences (explanations/details/examples)<br>- Concluding sentence (optional) |
| Concluding Sentence<br>- Paraphrasing (restating) the topic sentence<br>**OR**<br>- Summarizing the main ideas<br>**AND**<br>- Final thoughts/comments (suggestion, warning, prediction, etc.) (optional) | **IV. CONCLUDING PARAGRAPH**<br>- Restatement of the thesis statement including the writer's opinion<br>**OR**<br>- Summary of the main ideas<br>**AND**<br>- Final thoughts/comments (suggestion, warning, prediction, etc.) |

*Figure 2.* The transformation from paragraph to essay

with introducing useful expressions including the main advantage of, the most serious drawback of, and so on. The process is similar to the previous instruction. First the model essay is presented, then the learners investigate the essay. After that, the learners try to come up with ideas to write an essay together through brainstorming on a topic presented by the teacher. Finally, they write an argumentative essay of minimum 220 words as homework.

| ADVANTAGE & DISADVANTAGE ESSAY FORMAT | | |
|---|---|---|
| **INTRODUCTION** | | • **Background information, general statements, narrowing down**<br>• **Thesis statement (not a question)** |
| **BODY** | **1st BODY: ADVANTAGES** | Topic sentence<br>1st advantage + explanations, details, examples, supporting evidence<br>2nd advantage + explanations, details, examples, supporting evidence<br>3rd advantage + explanations, details, examples, supporting evidence<br>Concluding sentence **(OPTIONAL)** |
| | **2nd BODY: DISADVANTAGES** | Topic sentence<br>1st advantage + explanations, details, examples, supporting evidence<br>2nd advantage + explanations, details, examples, supporting evidence<br>3rd advantage + explanations, details, examples, supporting evidence<br>Concluding sentence **(OPTIONAL)** |
| **CONCLUSION** | | • **Restatement of the thesis statement**<br>• **Writer's opinion**<br>• **Final thoughts/comments, warning, advice, prediction, etc.** |

*Figure 3.* Advantage/disadvantage (argumentative) essay format

To describe the essays that were collected for the current study, the examination process is described. In the second achievement test, the learners were asked to write an advantage/disadvantage essay. They had two options:

1. What are the advantages and disadvantages of having young parents?
2. What are the advantages and disadvantages of working part-time for a student?

The learners had around 135 minutes to finish the exam and around 75 minutes were allocated to write the essay. The majority of the learners chose to write on "working part-time for a student"; therefore, sixty-three test-takers that wrote on that topic were included in the study. After the exam, the essays were rated by two raters separately according to the rubric (see Appendix D). The essays were graded out of 10 according to an analytic rubric focusing on several aspects of writing. These aspects included content and organization, use of English, and mechanics. The grades would be 0.5 points if the essays were off-topic, too short, or copied from another source. And 1 point would be deducted if the essays were shorter than 220 words. Also, if the learners wrote a different type of essay or a mere long paragraph,

they would lose 6 points out of 10. To have standardized scores, all the raters had to attend norming sessions in the beginning of the academic year and the sessions that took place each quarter.

The first raters of the essays were invigilators of the test. They had to grade the paper right after the test and submit the results until the end of the day. While the first raters had to mark all the sections, they were supposed to fill in the results of the essays on a separate document, which is called as first rater grading chart. Therefore, the second raters could not see the essay scores when they received the exam papers the next day. The second raters checked the paper once more and graded the essays on a separate document as well, which is called as second-rater grading chart. If there were a discrepancy of 2 points the essays were graded by a third rater. When the third assessment took place, the average score of the third score and the closest score from the first or second rater was considered as the final score. Furthermore, the interrater reliability of the essays was calculated and the consistency between the raters was .*90* (see Table 5).

Table 5

*Essay Raters' Interrater Reliability*

| Essay Grades | Intraclass Correlation | Number of Items | Number of raters |
|---|---|---|---|
| Average Measures | .90 | 94 | 2 |

All in all, writing proficiency of the learners is described as the scores they obtained through their writings at the achievement test. Having described the materials used for writing instruction and the assessment process of these writings, in the next section the examination process of overall language proficiency was depicted.

**Learners' Overall English Language Proficiency**

There are four level of proficiency at the institution from Level 1 to Level 4. Each level is two months long and there are two achievement tests in each quarter. The achievement tests consist of reading, listening, writing, and use of English sections. Also, there is a speaking assessment that takes place after the first achievement test and before the second achievement test. Both achievement tests are out of 80 points, and the speaking test is worth 20 points. The learners should score a total 60 out of 100 in order to take the test to move up to a higher level. The weight of each achievement exam is 40 points while the weight of speaking test is 20 points. If the learners score a total of 60 and above out of these three sessions in total they can take the third test which is called as "Kur Atlama Sınavı" (KAS). KAS is the exam that would determine if the learner is qualified to be promoted to a higher level. At the end of each quarter, the learners that are qualified to take KAS have to obtain at least 70 points out of 100 to step into a higher level of language education within the institution. However, there is not a KAS test for Level 4 groups at the preparatory program since there is not a higher level. If the learner collects 60 points or more in the achievement tests and speaking test, they can come to school for extra tutoring. However, there are not any more tests for these students until the end of year proficiency examination.

As mentioned above, there was not a KAS examination for Level 4 group. Hence, students' writings used in the analysis were collected in the second achievement test of the third quarter which was the closest examination at the time of data collection. The total score of the second achievement test was considered as the overall English language proficiency. The achievement test consisted of 4 sections including listening, reading, use of English, and writing sections. All sections are

scored out of 20 points, and the total score is out 80 points. In the listening section there were two listening tracks, one being a conversation and the other one being a lecture. Although the learners are asked to use their note taking skill for the lecture, the questions are all multiple choice and there were ten questions each one working for the listening section. The reading section started with five heading matching questions, and then multiple-choice questions were used. While there were three questions regarding detail in the passage, there were two reference questions. The second part of reading section was related to a graded book, *Little Women,* and students were supposed to answer ten questions. After the reading section, there was the use of English part. First twelve questions were from two cloze tests which were composed of multiple-choice questions. The following part was about word formation. Test-takers were supposed to change the form of the word that they had already covered in the classroom. Rewriting questions were mainly grammar related, and learners were expected to write a similar statement in different terms and/or structure. The end of the achievement test was a writing question and the learners were supposed write an argumentative essay.

The preparation of each test involves a control cycle and plenty of feedback at the institution. First, a member of the testing unit prepares the questions for each level. After they prepare the first draft, the head of the testing unit checks each question and provides feedback on the questions. Based on the feedback, the questions are revised and sent to the coordinators, and a second layer of feedback is provided by coordinators of the English unit and the head of the testing unit. Along with the coordinators a sample is sent to a native speaker employed at the institution for proofreading. After the second layer of revision, the test is checked by the head of the testing unit once more. Finally, the test is answered by 2 separate teachers on

paper in order to crosscheck the test one more time. Only then the tests are printed. After the learners take the exam, the invigilators grade each paper along with the writing section. Writing section is filled in a different document not to reveal the scores to the second rater. The next day, second raters receive the papers and grade them and check each question to ensure the accuracy of the scores. Also, they grade the writing section relying on the rubric. Finally, if there is a difference more than two points, a third assessor grades the paper again. If an essay goes to the third assessment process, the final score of the essays is given as the average of the score given by the third assessor and the closest score from either the first or the second rater.

In conclusion, overall English language proficiency of the learners is described as the overall scores they obtained through the achievement test at the institution. Having described the steps of the examination process, the method of data collection is defined in the next section.

## Method of Data Collection

Soon after the Institutional Review Board (IRB) report had been received on March 6, 2019 (IRB no: 2019_03_06_02) from the institution where the researcher studies at, permission was also granted from the state university where the study was conducted. The piloting stage took place right after the permission was granted. As stated by Isaac and Michael (as cited in Hill, 1998) for a pilot study a sample size 10 to 30 would be enough to test the null hypothesis without weakening the actual sample size. Therefore 12 participants were included in the piloting stage. After the piloting data were collected, no contradicting issue was present during the procedure. When a reliability analysis was conducted, Cronbach alpha level was .786 providing a reliable score according to Muijs (2004). The actual study was conducted a week

later. In the main study, the students were taken to the computer lab as one group at a time depending on the convenience of the class. The consent forms (see Appendix A) were collected in the form of softcopy through Qualtrics software and the participants were directed to LHQ (see Appendix B) after their consent. The consent forms indicated information stating that the identities or grades of the learners would not be revealed. Also codes were used to enter the questionnaire to protect participants' privacy through an extra layer of security. The questionnaire was presented via a web-based interface when prospective participants agreed to participate. The learners were scheduled to fill out the questionnaire in the computer lab at different sessions. A total of 4 sessions were scheduled for the 63 students that were included in the study which can be considered as sufficient amount for a correlation study since as for Fraenkel et al. (2011), required sample size for correlation designs is 50. After the questionnaire data were collected, another reliability analysis was conducted, and Cronbach alpha level was .817.

**Item Extraction**

Having collected the essays (see Appendix C) written by the tertiary level EFL writers, the process of MWEs extraction began. The researcher of the current study explained the criteria to the second rater. The criteria are essential since they bring consistency between raters on how MWEs would be extracted from learners' essays (Schmitt, 2010). The initial criterion was related to the length of MWEs. Determining the length of MWEs is not an uncommon decision in the field of phraseology as many scholars also made that decision depending on their purpose. Garner et al. (2018) investigated bigrams and trigrams when they measured the influence of MWEs on human judgments of writing proficiency, and concluded that they were significant predictors in EFL settings. Biber et al. (2004) focused on four-

word MWEs since they were most commonly studied formulaic sequences in academic writing. The researcher of the current study determined the length as two-, three-, and four-unit MWEs to cover more ground and these types were frequently studied either separately or as a whole in the field of n-grams (Garner et al., 2018; Tremblay & Tucker, 2011). Next criterion was the exclusion of the function words such as *a, an,* and *the,* pronouns, and auxiliary verbs as Laufer and Nation (1995) suggested. Another consideration was about spelling errors. MWEs with one or two minor spelling errors are accepted as recommended by Bestgen (2017), and Kojima and Yamashita (2014). As an illustration, when the learners missed or misspelled a letter or two, without causing a misunderstanding, the phrase was accepted (e.g. undersatnd / accomodation).

The MWEs in the learners' essays were tagged by two raters as the first step of the extraction of MWEs. Both of the expert raters were holding a degree in education. While one was still in the process of an MA in TEFL degree, the other rater was holding a PhD in Linguistics. Both raters were EFL teachers at a state university. While one rater had 6 years of experience in language teaching and assessment, the other rater had over 10 years of experience. Also, both raters had active duties in the testing units of their institutions. Before starting tagging, the researcher explained the criteria regarding the inclusion of MWEs and the raters had a calibration session together. When both raters were on the same page and calibrated, they started tagging MWEs in learners' essays separately. When the raters finished tagging MWEs, the expressions were compared and the matching MWEs were detected. Then, first rater inspected the matching words and located the inconsistencies. When either of the raters missed any MWEs, the raters discussed with each other and considered if the phrases fit the criterion. Also, when there were

a lot of discrepancies for certain groups, those essays were tagged once more to avoid missing relevant MWEs. At the end of the tagging process the agreement between raters were around 90%. After these processes, the phrases were excluded unless they were accepted by both raters. Next, the MWEs were checked through a reference corpus, Corpus of Contemporary American English (COCA) by Davies (2008). Each MWEs used by learners checked through COCA one by one over a two-week period so that the changes in corpus would not affect the results.

While checking the frequencies of each word and MWE, the range was set to include 4 words before and after the unit for consistency (see Figure 4).

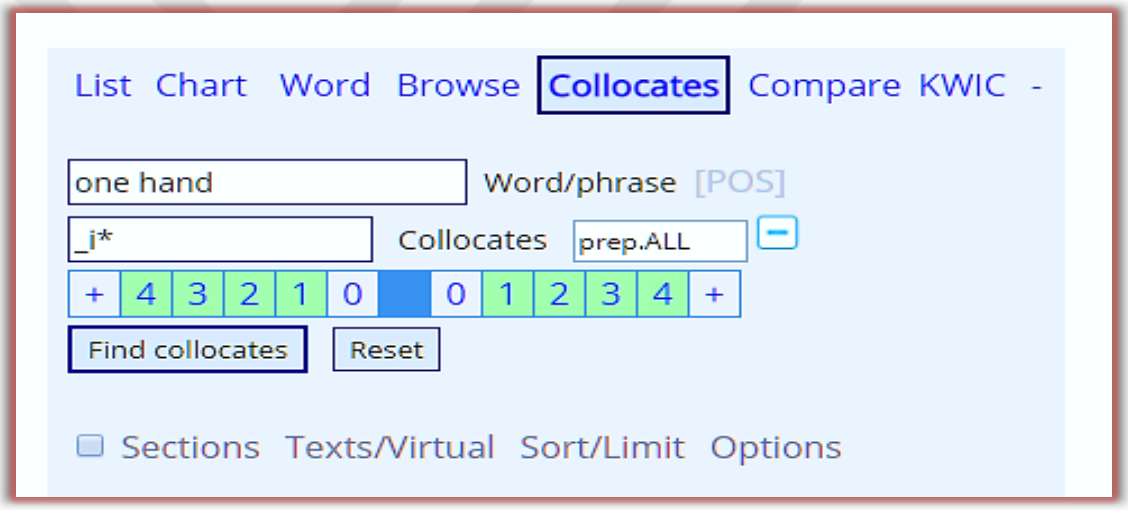


*Figure 4.* COCA criteria interface

First, raw frequency values were retrieved for each component in MWEs (see Figure 5).

| | | CONTEXT | FREQ |
|---|---|---|---|
| 1 | | ON | 11954 |
| 2 | | IN | 3737 |
| 3 | | WITH | 3452 |
| 4 | | OF | 1730 |
| 5 | | TO | 598 |
| 6 | | FOR | 302 |
| 7 | | FROM | 284 |

*Figure 5.* COCA frequency view

After collecting raw frequency values of each component, *t*-scores and Mutual Information (MI) scores were calculated through an excel file prepared by Durrant (2008) (see Figure 6).

| w1 | w1 count | w2 | w2 count | collocation | t-score | MI |
|---|---|---|---|---|---|---|
| main | 66411 | advantage | 40760 | 166 | 12,52 | 5,13 |
| financial | 72774 | opportunity | 91788 | 136 | 10,66 | 3,54 |
| poor | 66988 | family | 344590 | 1185 | 33,25 | 4,87 |
| positive | 57911 | aspect | 40097 | 543 | 23,13 | 7,06 |
| school | 356349 | life | 465985 | 1138 | 25,10 | 1,97 |
| negative | 38569 | aspect | 40097 | 402 | 19,91 | 7,21 |
| affect | 60664 | badly | 13309 | 43 | 6,34 | 4,92 |

| W1 | W1 count | W2 | W2 count | W3 | W3 count | collocation | t-score | MI |
|---|---|---|---|---|---|---|---|---|
| waste | 23478 | of | 14489750 | time | 908345 | 1452 | 38,08 | 10,58 |
| make | 1219839 | right | 180876 | decision | 120023 | 843 | 29,03 | 13,34 |
| play | 271730 | computer | 65808 | game | 220676 | 199 | 14,11 | 14,00 |
| problem | 290462 | with | 3847516 | marriage | 54261 | 32 | 5,62 | 7,42 |
| deal | 78600 | with | 3847516 | drawback | 2616 | 3 | 1,73 | 10,27 |
| build | 139087 | strong | 91922 | relationship | 120673 | 46 | 6,78 | 13,24 |

*Figure 6.* Calculation table for MI scores and *t*-scores

A clarification is necessary on the use of *t*-scores and MI scores to measure the strength of MWEs. There are different frequency-based measures out there. The easiest would be to count the number of MWEs in a corpus, yet that would not yield significant results since many meaningless word pairs would be in the results. Many high frequency words are function words such as *the*, *a*, and *an*. Another option would be using a test that would yield results indicating that the word combinations are not used together by mere chance. This method would result in meaningful MWEs, yet they would just be the most frequent ones as stated by Hoey (1991). However, this might still be insufficient since highly frequent words might have many combinations which do not mean they are usually used as a phrase. To illustrate, *t*-score for *have time* is 300.64, yet that does not necessarily mean that this is a rare and strong bigram. MI score by Church and Hanks (1990), on the other hand, provides information about how strong the association between constituent elements is. In other words, when one utters the phrase *for God's,* there is a high probability that the next word would be *sake*, and this is because this combination

has a high MI score (Durrant & Doherty, 2010). MI score is not affected by the raw frequency as *t*-score does. For instance, while a relatively high *t*-score is assigned for *have time*, the MI score of that bigram is 3.49. Nonetheless, when *time* is used with *spare* instead of *have*, it yields quite different results. While the *t*-score for *spare time* is relatively lower (32.64), the MI score assigned for that bigram is much higher (6.99). In other words, while *t*-score is highly affected by raw frequency of the MWEs, MI score is influenced by rarity or exclusivity. As MI scores indicate exclusivity while *t*-scores indicate frequency, there is a complementary nature between these two frequency-based association measures (Cangır, 2018). Therefore, these two strength measures of frequency are used in the current study.

An explanation of the calculations for *t*-scores and MI scores is necessary because the current study may be replicated by other researchers. However, prior to calculating MI score and *t*-score, it is necessary to find out how many times MWEs are expected to occur since both scores require that information. To find the expected occurrence or probability of two-word MWEs, simply a corpus search was conducted for each word in MWEs. After that, the occurrence of first and second words were multiplied. Then, that number was divided by the size of the corpus. However, there was a slight difference for three-, and four-word MWEs. The second power of corpus size was used for three-word MWEs, and the third power of corpus size was used for four-word MWEs. Each formula is presented below with examples from the current study.

The formula for two-word MWEs is shown in (1) (Schmitt, 2010).

$$P(Word1\ (w1)\ Word2\ (w2)) = \frac{Word1\ Occurrence\ (O1) * Word2\ Occurrence(O2)}{Corpus\ Size} \quad (1)$$

When a corpus search was conducted for the word "spare time," *spare* appeared 5339 times, and *time* appeared 908345 times. When they were placed in the equation

$$P(spare\ time) = \frac{5339*908345}{570353748} = 8.50$$

The formula to calculate the probability of three- and four-word MWEs are shown in (2) and (3) (Lyse & Andersen, 2012).

$$P(w1\ w2\ w3) = \frac{O1*O2*O3}{(Corpus\ Size)^2} \quad (2)$$

$$P(all\ things\ considered) = \frac{1510646*584603*144462}{(570353748)^2} = 0.39$$

$$P(w1\ w2\ w3) = \frac{O1*O2*O3*O4}{(Corpus\ Size)^3} \quad (3)$$

$$P(last\ but\ not\ least) = \frac{441112*2590528*2326684*181548}{(570353748)^3} = 0.0026$$

Having found the expected frequencies of occurrence of these combinations, calculating the *t*-scores and MI scores is now possible. The equation of *t*-score is obtained from the works of Schmitt (2010), and Durrant and Doherty (2010) and shown in (4).

$$t - \text{score} = \frac{O-E}{\sqrt{O}} \quad (4)$$

The expected frequency of occurrence gives us the *E* value, and the actual frequency from the reference corpus gives the *O* value in the equation. In the light of the equation above, now the *t*-score of the two-word MWE *spare time* can be calculated as follows:

$$t - \text{score} = \frac{1082 - 8.50}{\sqrt{1082}} = 32.64$$

As there is no difference between three-, or four-word, there is no need to calculate the *t*-score again. Thus, the equation for MI score is shown in (5).

$$MI = \log_2 \frac{O}{E} \quad (5)$$

Similar to the calculation of *t*-score, *E* value stands for the expected frequency while *O* value stands for the reference corpus frequency. Thus the MI score for *spare time* was:

$$MI = \log_2 \frac{1082}{8.50} = 6.99$$

As a result of the calculations a *t*-score and an MI score were assigned to each MWEs written by the participants. Some of the *t*-scores and MI scores from the current study is presented in Table 6.

Table 6

*Association Strength Measures of MWEs*

| MWEs | Actual Count | t-score | MI score |
|---|---|---|---|
| on (the) one hand | 8254 | 90.81 | 11.09 |
| financial opportunity | 136 | 10.66 | 3.54 |
| poor family | 1185 | 33.50 | 5.21 |
| positive aspect | 543 | 23.13 | 7.06 |
| on (the) other hand | 23432 | 153.06 | 13.48 |
| negative aspect | 402 | 19.91 | 7.21 |
| affect badly | 43 | 6.33 | 4.84 |
| become exhausted | 61 | 7.15 | 3.56 |
| pay attention | 18705 | 136.55 | 9.29 |
| fall behind | 1189 | 33.35 | 4.93 |
| firmly believe | 769 | 27.58 | 7.55 |
| earn money | 2605 | 50.71 | 7.28 |
| recent years | 14474 | 118.70 | 6.23 |

## Method of Data Analysis

Both descriptive and inferential statistics were used to answer the research questions in this study. The questionnaire data were gathered through LHQ software and converted to a Statistical Package for the Social Sciences (SPSS) file. The analyses were conducted on SPSS v.25. Descriptive statistics were run to have a clear idea on the demographic information of the data. Also piloting stage resulted in relatively high scores regarding item reliability ($a$ = .885), so the questionnaire could be employed in the actual study.

The types of MWEs that were used by tertiary level EFL students in their writing were extracted and descriptive statistics were run to have a clear picture on whether the learners use bigrams, trigrams, or four grams more often. Second research question required the researcher to check the extracted MWEs on a reference corpus to understand how frequent the MWEs were in the reference corpus. COCA was used since it is the most comprehensive corpus so far with a balanced division including different types of text, such as spoken, academic, newspapers, and fiction. The third and fourth questions required inferential statistics (multiple linear regression analyses), since the predictive value of frequency-based measures of MWEs on the overall writing proficiency and overall proficiency of the participants were examined.

## Conclusion

In this chapter, the research design was described. Also, setting and participant information was provided. Then, information on the instrument and formulas for how *t*-scores and MI scores were calculated were explained in detail. In addition, demographic data and MWE data were presented. The next chapter focuses on the results of the analyses.

# CHAPTER 4: RESULTS

## Introduction

The multi-word expressions' influence on the writing proficiency and the overall language proficiency were investigated in the current study. First, descriptive information about types of MWEs and frequency profiles of these MWEs were presented. Next, the extent to which frequency-based measures can predict writing proficiency and overall proficiency of tertiary level EFL learners at the institution was explained.

Regarding these steps, the research questions are as follow:

Specifically, this study aims to address the following research questions:

1. What types of MWEs are employed by tertiary level EFL students in their writings?
2. What are the frequency values of the MWEs employed by tertiary level EFL students in their writings?
3. To what extent can the variables below predict tertiary level EFL students' writing proficiency?
    a) the reference corpus frequency of MWEs
    b) the proportion of MWEs used in tertiary level EFL students' writings
4. To what extent can the variables below predict the overall proficiency of tertiary level EFL students?
    a) the reference corpus frequency of MWEs
    b) the proportion of MWEs used in tertiary level EFL students' writings

## Types of MWEs

The researcher in the current study investigated the types of the multi-word expressions that were used by the tertiary level EFL learners at the institution in their writings to answer the first research question. Then, a frequency distribution is presented here to provide a clear view on the types of the aforementioned multi-word expression. According to Figure 7, the majority of the MWEs (521 instances of 2-word MWEs) extracted from the essays of the learners, which is about 63%, were made up of two words.

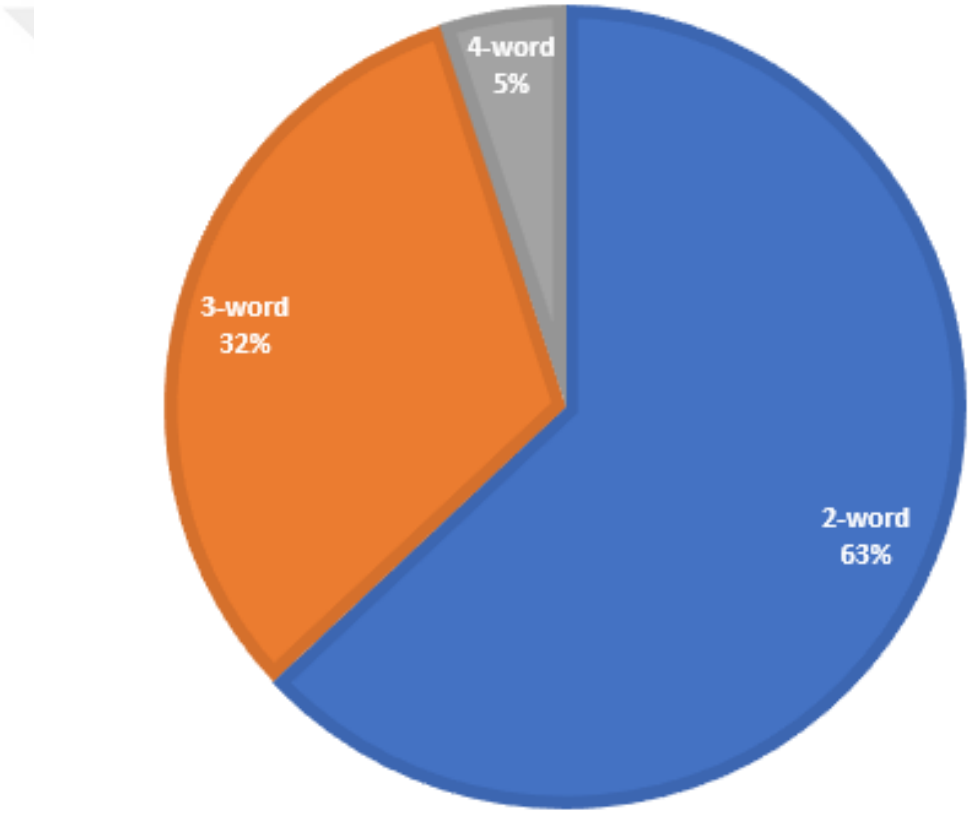


*Figure 7.* Distribution of MWE types

Five most commonly used two-unit MWEs and their frequency of use among the participants are shown in Table 7.

Table 7

*Most Commonly Used Two-Unit MWEs*

| Two-Unit MWEs | Instances in Learner Corpus** |
|---|---|
| earn money | 38 |
| pros (and) cons* | 28 |
| positive aspect | 23 |
| benefits (and) drawbacks | 18 |
| negative aspect | 18 |

*The items in parenthesis are excluded.
**The number of observations of MWEs in learner essays separately

MWEs that are made up of three words were 32% of the formulaic phrases that were employed in these essays (260 instances of 3-word MWEs). Five most commonly used three-unit MWEs and their frequency of use among the participants are shown in Table 8.

Table 8

*Most Commonly Used Three-Unit MWEs*

| Three-Unit MWEs | Instances in Learner Corpus |
|---|---|
| on (the) other hand | 63 |
| on (the) one hand | 54 |
| positive (and) negative aspect | 18 |
| all things considered | 12 |
| advantages outweigh (the) disadvantages | 4 |

The proportion of four-word MWEs was the smallest portion (38 instances of 4-word MWEs). In other words, their proportion was 5% of the total compared to

bigrams and trigrams. Five most commonly used four-unit MWEs and frequency of use among the participants can be seen in Table 9.

Table 9

*Most Commonly Used Four-Unit MWEs*

| Four-Unit MWEs | Instances in Learner Corpus |
|---|---|
| hang out with friends | 6 |
| main argument in (its) favour | 4 |
| increase day by day | 3 |
| go out with (their) friends | 2 |
| taking everything into account | 1 |

**The frequency values of the MWEs**

The frequency and association strength values of the MWEs used by the tertiary level EFL learners at the institution were measured through descriptive tools to answer the second research question. First measure of frequency to understand writing proficiency was *t*-scores of the MWEs used by the participants (see Table 11). An average *t*-score was assigned for each participant. Higher *t*-scores indicate that co-occurrence of individual words in MWEs is not random (Durrant & Doherty, 2010). In other words, the words are used more frequently than they could co-occur randomly. The range of the average *t*-scores among the participants was 50.07 with a minimum of 33.31, and a maximum score of 83.38. The mean score was 52.05 (see Table 10).

Table 10

*Descriptive Values for Frequency Measures of the MWEs*

| MWEs | *M* | *SD* | *Range* |
|---|---|---|---|
| *t*-score | 52.05 | 11.31 | 50.07 |
| MI score | 8.79 | 1.11 | 4.36 |
| Proportion | 13 | 4.21 | 20 |

The second measure of frequency to estimate association strength was MI scores of the MWEs used by the tertiary level EFL writers (see Table 11). An average MI score was calculated for each writer. MI score measures the strength of association when two or more words are used together. When an individual word reminds people of another word or group of words, that combination is supposed to have a high MI score. The main difference between MI score and *t*-score is that MI score is not affected by high frequency words as much as *t*-score does (Schmitt, 2010). The mean MI score of MWEs that were used by the EFL writers was 8.79 (see Table 10). The scores ranged between 6.96 and 11.32.

The last method for measuring writing proficiency was the proportion of the MWEs used by the tertiary level students (see Table 11). High scoring learners are expected to use higher number of MWEs in their essays. Mean proportion of MWEs used by the learners was 13 (see Table 10). The lowest amount of MWEs used in the essays was 4 while the highest amount was 24.

Table 11

*MWE Frequency and Score Details for Each Participant*

| Participants | t-score | MI score | Proportion | Writing score | Proficiency score |
|---|---|---|---|---|---|
| 1 | 46.37 | 7.30 | 13 | 13.50 | 64 |
| 2 | 68.60 | 9.40 | 12 | 16.25 | 71 |
| 3 | 74.41 | 8.41 | 11 | 16.00 | 64 |
| 4 | 48.47 | 10.11 | 14 | 13.75 | 68 |
| 5 | 49.87 | 11.27 | 18 | 15.00 | 74 |
| 6 | 77.52 | 10.37 | 5 | 12.25 | 70 |
| 7 | 47.23 | 10.42 | 16 | 11.25 | 57 |
| 8 | 52.63 | 9.95 | 17 | 15.25 | 75 |
| 9 | 42.09 | 8.87 | 8 | 13.25 | 68 |
| 10 | 47.11 | 7.60 | 10 | 12.25 | 69 |
| 11 | 41.59 | 10.54 | 11 | 18.25 | 89 |
| 12 | 67.45 | 9.50 | 12 | 15.25 | 69 |
| 13 | 56.19 | 7.21 | 18 | 13.00 | 73 |
| 14 | 62.36 | 9.68 | 4 | 11.25 | 62 |
| 15 | 51.29 | 8.83 | 16 | 13.25 | 70 |
| 16 | 33.31 | 11.10 | 11 | 14.75 | 72 |
| 17 | 41.88 | 10.63 | 12 | 18.00 | 81 |
| 18 | 58.53 | 9.23 | 12 | 15.25 | 80 |
| 19 | 54.06 | 9.42 | 11 | 12.75 | 68 |
| 20 | 45.28 | 7.32 | 9 | 12.00 | 66 |
| 21 | 55.33 | 8.00 | 16 | 14.25 | 73 |
| 22 | 55.19 | 10.85 | 9 | 14.25 | 63 |

Table 11 (cont'd)

*MWE Frequency and Score Details for Each Participant*

| Participants | t-score | MI score | Proportion | Writing score | Proficiency score |
|---|---|---|---|---|---|
| 23 | 64.26 | 8.16 | 8 | 9.50 | 67 |
| 24 | 45.80 | 8.10 | 18 | 14.00 | 73 |
| 25 | 46.20 | 7.43 | 10 | 13.00 | 66 |
| 26 | 83.38 | 8.57 | 6 | 11.25 | 63 |
| 27 | 44.02 | 8.01 | 11 | 10.50 | 52 |
| 28 | 57.49 | 8.83 | 17 | 19.50 | 96 |
| 29 | 56.19 | 8.70 | 12 | 17.25 | 72 |
| 30 | 53.03 | 6.98 | 10 | 13.25 | 72 |
| 31 | 43.04 | 6.96 | 13 | 12.75 | 73 |
| 32 | 45.45 | 9.71 | 12 | 15.00 | 67 |
| 33 | 40.43 | 9.54 | 19 | 16.25 | 54 |
| 34 | 71.06 | 9.75 | 12 | 13.87 | 68 |
| 35 | 47.95 | 8.28 | 9 | 17.25 | 85 |
| 36 | 51.37 | 10.16 | 10 | 19.00 | 86 |
| 37 | 51.68 | 8.08 | 16 | 14.00 | 63 |
| 38 | 54.25 | 7.99 | 16 | 17.25 | 82 |
| 39 | 48.29 | 8.48 | 12 | 12.75 | 68 |
| 40 | 44.92 | 8.74 | 11 | 16.50 | 51 |
| 41 | 40.28 | 8.73 | 24 | 18.25 | 67 |
| 42 | 42.49 | 8.38 | 13 | 10.88 | 62 |
| 43 | 46.70 | 8.11 | 18 | 18.75 | 93 |
| 44 | 64.81 | 7.84 | 21 | 18.75 | 83 |

Table 11 (cont'd)

*MWE Frequency and Score Details for Each Participant*

| Participants | t-score | MI score | Proportion | Writing score | Proficiency score |
|---|---|---|---|---|---|
| 45 | 59.66 | 7.38 | 16 | 15.50 | 64 |
| 46 | 44.01 | 8.44 | 14 | 12.25 | 63 |
| 47 | 75.33 | 9.70 | 7 | 13.25 | 59 |
| 48 | 52.13 | 7.41 | 16 | 13.75 | 68 |
| 49 | 53.06 | 8.42 | 13 | 12.50 | 75 |
| 50 | 50.63 | 11.32 | 14 | 16.50 | 61 |
| 51 | 42.03 | 8.82 | 13 | 15.00 | 71 |
| 52 | 37.23 | 8.68 | 17 | 14.13 | 70 |
| 53 | 47.91 | 8.82 | 19 | 13.50 | 73 |
| 54 | 83.06 | 8.48 | 10 | 17.50 | 83 |
| 55 | 38.32 | 9.21 | 11 | 12.75 | 72 |
| 56 | 58.29 | 7.48 | 10 | 14.00 | 64 |
| 57 | 36.95 | 7.51 | 23 | 17.25 | 75 |
| 58 | 42.88 | 7.44 | 9 | 11.00 | 58 |
| 59 | 41.70 | 9.32 | 9 | 15.50 | 77 |
| 60 | 41.58 | 8.17 | 17 | 15.75 | 75 |
| 61 | 50.08 | 8.30 | 10 | 12.25 | 68 |
| 62 | 45.11 | 8.55 | 19 | 16.25 | 75 |
| 63 | 59.41 | 9.06 | 9 | 10.75 | 61 |

## The Relationship between Proportion and MI Scores of MWEs and Writing Proficiency

The researcher in the current study extracted reference corpus frequency of all the MWEs that writers used. Next, the researcher investigated whether proportion of MWEs in each writer's essay and MI scores of these MWEs can predict the writers' writing proficiency (see Table 12). The normality was checked, and a multiple linear regression analysis was conducted to answer the third question.

Table 12

*Writing Proficiency Prediction*

| Predictors | *n* | *M* | *SD* | *r* | *F* | *df1, df2* | *Sig.* | $R^2$ |
|---|---|---|---|---|---|---|---|---|
| Proportion | 63 | 13.00 | 4.21 | 0.44 | 14.90 | 1, 61 | < .001 | .18 |
| MI score | 63 | 8.79 | 1.11 | 0.19 | 5.27 | 1, 60 | .024 | .06 |

**Model 1**

The proportion of the MWEs is a statistically significant predictor ($F_{(1,61)}$ = 14.90, $p$ = .000) explaining approximately 18% of the variance in writing proficiency of the EFL learners at the institution. As shown in Figure 8, a rising trend in the proportion of the MWEs results in an increase in the writing proficiency of the EFL learners at the institution. The equation predicting writing proficiency is: Writing = 11.16 + .25 (proportion). This means as proportion increases by 1, writing proficiency increases by .25 points.

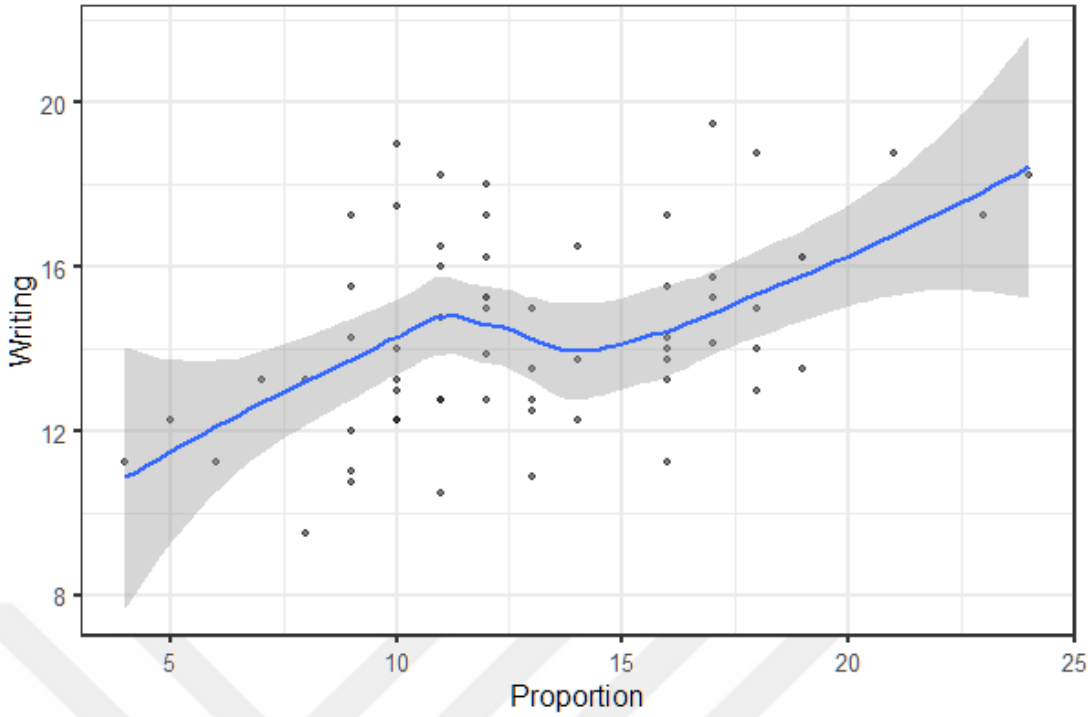


*Figure 8.* Relationship between MWE proportion and writing proficiency

**Model 2**

The linear proportion of the MWEs and MI frequency scores of the MWEs is a statistically significant predictor ($F_{(2,60)} = 10.67$, $p = .000$) explaining approximately 24% of the variance in writing proficiency. The addition of MI frequency scores increased the explained variance in writing proficiency significantly ($F_{(1,60)} = 5.96$, $p = .024$) by about 6%. As shown in Figure 9, a rising trend in MI scores of the MWEs results in an increase in the writing proficiency of the EFL learners at the institution.

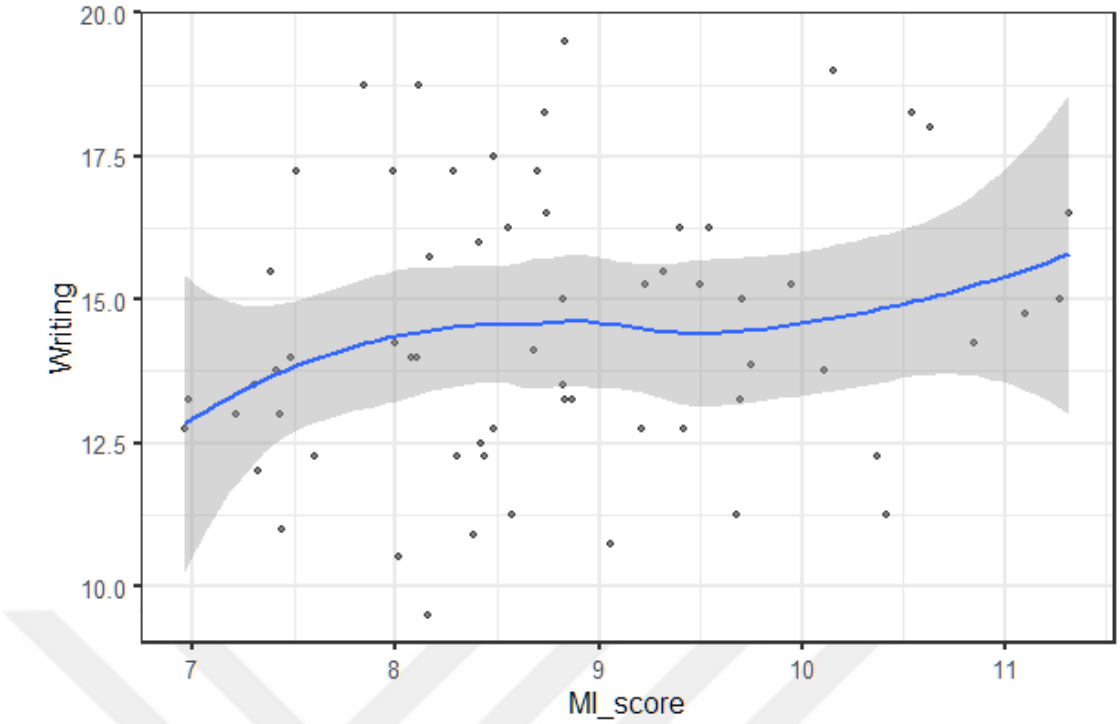


*Figure 9.* Relationship between MI scores and writing proficiency

The equation predicting writing proficiency is: Writing = 5.97 + .27 (proportion) +.56 (MI score). This means as proportion increases by 1, writing proficiency increases by .27 holding MI score constant. And as MI score increases by 1, writing proficiency increases by .56 points holding the proportion of MWEs constant.

## The Relationship between Two-word and Three-word Proportion and Writing Proficiency

The researcher in the current study extracted reference corpus frequencies of all the MWEs that writers used. Next, the researcher investigated whether proportion of MWEs in each writer's essay, specifically two-word and three-word MWEs can predict the writers' writing proficiency (see Table 13). The normality was checked, and a multiple linear regression analysis was conducted to answer the third research question.

Table 13

*Two-word and Three-word MWEs' Prediction of Writing Proficiency*

| Predictors | *n* | *M* | *SD* | *r* | *F* | *df1, df2* | *Sig.* | $R^2$ |
|---|---|---|---|---|---|---|---|---|
| 3-word Proportion | 63 | 4.13 | 1.81 | .35 | 8.35 | 1, 61 | .005 | .11 |
| 2-word Proportion | 63 | 8.27 | 3.32 | .28 | 3.93 | 1, 60 | .052 | .04 |

**Model 1**

The proportion of three-word MWEs is a statistically significant predictor ($F_{(1,61)} = 8.35$, $p = .005$) explaining approximately 11% of the variance in writing proficiency of the EFL learners at the institution. The equation predicting writing proficiency is: Writing = 12.5 + .46 (three-word proportion). This means as proportion increases by 1, writing proficiency increases by .46 points.

**Model 2**

The linear combination of two-word and three-word proportion of the MWEs is a statistically significant predictor ($F_{(2,60)} = 6.34$, $p = .003$) explaining approximately 15% of the variance in writing proficiency. The addition of two-word MWEs' proportion increased the explained variance in writing proficiency by about 4%. However, two-word proportion of MWEs did not yield statistically significant results ($F_{(1,60)} = 5.96$, $p = .052$). The equation predicting writing proficiency is: Writing = 11.34 + .41 (three-word proportion) +.17 (two-word proportion). This means as three-word proportion of MWEs increases by 1, writing proficiency increases by .41 holding two-word proportion of MWEs constant. As two-word proportion of MWEs increases by 1, writing proficiency increases by .17 points holding the three-word proportion of MWEs constant.

## The Relationship between Two-word and Three-word MI Scores and Writing Proficiency

The reference corpus frequency values of all the MWEs used by the writers were found. Then, the influence of the MI scores of two-word and three-word MWEs on participants' writing proficiency was analyzed (see Table 14). Multiple linear regression analysis was conducted to answer the third research question.

Table 14

*Two-word and Three-word MWEs' Prediction of Overall Proficiency*

| Predictors | *n* | *M* | *SD* | *r* | *F* | *df1, df2* | *Sig.* | $R^2$ |
|---|---|---|---|---|---|---|---|---|
| 3-word MI score | 63 | 12.11 | 1.05 | 0.05 | .83 | 2, 60 | .440 | .03 |
| 2-word MI score | 63 | 6,58 | .63 | 0.16 | | | | |

Overall, the linear composite of the independent variables entered into the regression procedure, proportion and MI scores of two-word and three-word MWEs used by the EFL learners at the institution predicted (or explained) only 3% of the variation in the writing proficiency of these EFL learners $F_{(2,60)} = 0.83$, $p = .440$.

## The Relationship between Proportion and MI Scores of MWEs and Overall Proficiency

The reference corpus frequency values of all the MWEs used by the writers were found. Then, the influence of the proportion of MWEs in each writer's essay and MI scores on writers' overall proficiency was analyzed (see Table 15). Multiple linear regression analysis was conducted to answer the fourth research question.

Overall, the linear composite of the independent variables entered into the regression procedure, proportion and MI scores of the MWEs used by the EFL learners at the institution, predicted (or explained) 3% of the variation in the overall

Table 15

*Overall Proficiency Prediction*

| Predictors | *n* | *M* | *SD* | *r* | *F* | *df1, df2* | *Sig.* | $R^2$ |
|---|---|---|---|---|---|---|---|---|
| Proportion | 63 | 13 | 4.21 | 0.27 | 1.89 | 2, 60 | .166 | .03 |
| MI score | 63 | 8.79 | 1.11 | 0.02 | | | | |

proficiency of these EFL learners at the institution $F_{(2,60)} = 1.89$, $p = .166$.

## Conclusion

In the fourth chapter of the current study, the data extracted from 63 tertiary level EFL learners' essays and their achievement test scores were analyzed quantitatively. The first research question was answered through the extraction of MWEs by hand annotation and frequency-based computational analysis. Then, the amounts of bigrams, trigrams, and four-unit MWEs were presented. Next, the frequency-based association strength profiles of the MWEs were presented. To find out the predictive value of MWEs, two regression tests were conducted for the last two research questions. For the third question, the relationship between the independent variables, the proportion of MWEs and association strength of MWEs, and writing proficiency of tertiary level EFL learners at the institution was investigated. For the last question, the relationship between the same independent variables and overall proficiency of the EFL learners at the institution was analyzed. In the conclusion chapter of the study, the overview of the study is explained briefly. Then, information regarding the major findings of the study, pedagogical implications, further research suggestions, and limitations of the study are presented.

# CHAPTER 5: CONCLUSIONS

## Introduction

Returning to the questions posed at the beginning of this study, this chapter presents an overview of the study. First, the findings of the current study are discussed by referring to the literature. Next, the pedagogical implications that might influence classroom experience are presented. After some ideas for further research are presented, the limitations of the current study are explained.

## Overview of the Study

The present study described the types and frequency values of MWEs employed by tertiary level EFL students in their writings. After describing the types and frequency values, the researcher examined the extent of the reference corpus frequency of MWEs, and the proportion of MWEs used in tertiary level EFL students' writings can predict the writing proficiency of tertiary-level EFL students. Also, the researcher investigated the extent that the reference corpus frequency of MWEs and the proportion of MWEs used in tertiary level EFL students' writings can predict the overall proficiency of tertiary-level EFL students.

This study set out to address the following questions:

Specifically, this study aims to address the following research questions:

1. What types of MWEs are employed by tertiary level EFL students in their writings?
2. What are the frequency values of the MWEs employed by tertiary level EFL students in their writings?

3. To what extent can the variables below predict tertiary level EFL students' writing proficiency?
    a) the reference corpus frequency of MWEs
    b) the proportion of MWEs used in tertiary level EFL students' writings
4. To what extent can the variables below predict the overall proficiency of tertiary level EFL students?
    a) the reference corpus frequency of MWEs
    b) the proportion of MWEs used in tertiary level EFL students' writings

## Discussion of Major Findings

### Types of MWEs employed by tertiary level EFL students

The researcher examined the types of MWEs used by tertiary level EFL students in the first question of the current study. The types are considered as two-word MWEs, three-word MWEs, and four-word MWEs. The majority of the MWEs used by the EFL students were formed by two units. While 63% of the MWEs were bigrams, trigrams composed, a 32% of the MWEs extracted from the essays of EFL learners at the institution. Four-word MWEs formed a very small amount of total MWEs use, 5% in total. Higher proportion of 2-word and 3-word MWEs are parallel to the previous research on formulaic language as bigrams and trigrams were found to be among the strongest predictors of writing proficiency (Garner et al., 2018).

### The frequency values of the MWEs employed by tertiary level EFL students

Defining MWEs has been a complicated process for a long time (Wahl & Gries, 2018). In fact, MWE use is considered to be multi-faceted. Therefore, there are several dimensions in detecting or extracting these sequences including

frequency, and association strength. Combining both these dimensions, MI scores and *t*-scores measure the association strength of the MWEs through their frequency in a reference corpus. MI score shows how frequently these words in a multi-word expression co-occur compared to their occurrence separately. In other words, they measure the level of uniqueness in MWEs. On the other hand, *t*-score indicates the confidence of the MWEs showing that these words occur together more frequently than they would be used randomly. These two measures are the most frequently used tools in determining the strength of formulaic language (Schmitt, 2010). Thus, they were employed in the current study while extracting MWEs using a reference corpus.

The mean *t*-score for each learner ranged between *33.31* to *83.38* with an overall mean of *59.96*. High *t*-scores indicate high use of more frequent MWEs including *on the one hand* (90.81*), on the other hand* (153.06), *pay attention* (136.55), *have an opportunity* (120.33), *high school* (270.07), and *at the same time* (195.24). Since the task was an argumentative essay, most of the learners used conjunctions including *on the one hand, on the other hand, for example, and for instance* all of which have extremely high frequency which led to higher *t*-scores. This finding is in line with several other studies that focused on the idea that non-native language users have a tendency to overuse a limited number of phrases (De Cock, Granger, Leech, & McEnery, 1998; Nesselhauf, 2005). Since the learners in the current study are novice non-native essay writers, high frequency MWE use might be considered in parallel with earlier studies in the field.

The mean MI score for each learner, on the other hand, ranged between 6.96 and 13.55. As compared to the *t*-scores, mean MI scores are relatively lower. Also the higher end of the MI scores usually assigned to the MWEs that were used by almost all the students, such as *on the one hand* (11.09) which was used 54 times, *on*

*the other hand* (13.48) used 63 times meaning all the learners used it, *and pros and cons* (11.25) used 28 times. In line with the current study, Durrant and Schmitt (2009), and Granger and Bestgen (2014) suggested that learners of English usually avoid using strongly associated MWEs with high MI scores. Durrant and Schmitt (2009) examined native and non-native writers bigram use through frequency-based methods. Supporting the claims of the current study, they found that texts written by non-native EFL writers included significantly fewer collocations with high MI scores. Granger and Bestgen (2014) also reached similar results when they investigated the difference between intermediate and advanced level learners in terms of the frequency profiles of MWEs they used in their essays. They stated that strongly associated bigrams, with high MI score, were significantly underused by intermediate level EFL learners when compared to their peers of advanced level of English.

**The Relationship between Tertiary Level EFL Students' MWE Use and Their Writing Proficiency and Overall Proficiency**

Describing or predicting the quality of a text is not an easy matter, and there are three main components in examining text quality in terms of linguistic features: lexical sophistication, syntactic complexity, and text cohesion (McNamara, Crossley, & McCarthy, 2010). The researcher in the present study focused on the lexical properties in a text mainly because the words or phrases in a text become more complex when the learner's expertise in writing is deemed more advanced (Crossley, 2020). Traditionally, the words that are included in academic texts (Coxhead, 2000), more abstract words (Saito, Webb, Trofimovich, & Isaacs, 2016), less frequently used units (Laufer & Nation, 1995) or more context-dependent vocabulary units were considered to influence a text to be accepted as high-quality. One commonality in all

these properties was that they all had single words in their focus. However, recent trends show that researchers have started studying MWEs following Sinclair's (1991) assumptions (Crossley, 2020). Sinclair (1991) suggested that not only single words but also word combinations including two or more units can gauge the extent of a learner's lexical knowledge. Supporting his assumption, current study investigated whether learner's use of MWEs can predict the quality of their writings through lexical sophistication. EFL learners' use of MWEs has been operationalized as the proportion and frequency-based dependency values of the MWEs used by the learners in their essays.

Through regression analyses, the researcher in the current study revealed that the proportion of the MWEs were the most significant predictor of the writing proficiency of the EFL learners at the institution. The proportion could predict a significant 18% of the variance in the writing proficiency. The influence of the MWEs is in line with the studies from Chen and Baker (2010), and Üstünbaş and Ortaçtepe (2016).

The findings related to the proportion of MWEs in the essays are in line with the study conducted by Chen and Baker (2010). The researchers analyzed published articles, texts written by native speakers of English, and texts written by L2 learners in terms of MWEs and their influence on writing proficiency. The authors concluded that the proportion of MWEs had a positive correlation with proficiency levels of the texts. The number of MWEs in texts rose when the text was written by a more proficient writer. Üstünbaş and Ortaçtepe (2016) also disclosed similar results in their study in which they investigated learners' use of MWEs through their oral production. The researchers found significant correlations between the proportions of

MWEs the learners have included in their oral performance and their proficiency level.

Along with overall proportion, the proportion of three-word MWEs were found to be statistically significant predictors of writing proficiency through the essays written in the tertiary level institution where the study was conducted. It can then speculatively be said that as the number of the constituent parts of MWEs increase, the raters are more likely to judge the chunk as an advanced L2 use contributing to the strength of L2 fluency. This may affect their scoring. This finding is line with earlier research. For instance, Garner et al. (2018) suggest there is a strong correlation between the number of 3-word MWEs and writing performance of L2 writers.

Another interesting finding of the current study was the predictive value of the frequency-based measures on EFL learners' writing proficiency at the institution where the study was conducted. The association strength of MWEs were analyzed through the regression analysis, and the analysis revealed that MI scores of MWEs were also a statistically significant predictor of writing proficiency of EFL learners at the institution, forming 6% of the variance. As mentioned, MI scores indicate less frequently used but more strongly associated MWEs. Therefore, the result of the relationship between MI scores and writing proficiency do not come as surprise as Crossley and McNamara (2012) stated that more advanced EFL learners, similar to native speakers, can employ less frequent meaningful vocabulary items.

Granger and Bestgen (2014) studied the developmental differences between non-native speakers to examine how advanced and intermediate EFL learners use two-unit MWEs in their writings. In line with the findings of the current study, authors found that intermediate students used fewer amounts of two-unit MWEs that

are strongly associated compared to advanced learners. The current study also found that learners that wrote lower scored essays employed fewer numbers of MWEs, and also the MI scores of these low scoring learners were lower than their high scoring peers.

Garner et al. (2018) also investigated the essays of Korean EFL learners of different proficiency levels. The authors aimed to understand the measures that can predict human judgments while scoring essays of EFL learners. Having adopted a multi-faceted approach, they checked the frequency and association strength of the MWEs in learner's essays with a focus on two-unit and three-unit MWEs. Similar to the current study, higher proportion of MWEs and stronger association could estimate human judgment while scoring the essays.

Crossley, Cai, and McNamara (2012) built a connection and attempted to explain why MWEs can predict the writing proficiency. They based their explanation on Lewis' (1993) key principle of grammaticalized lexis. Mainly because formulaic language is intermediary between syntactic complexity and lexical sophistication, these chunks might be able to predict writing proficiency better compared to single words. Therefore, that might be the reason behind the significant results of the findings of the current study.

The relationship between frequency-based approaches and overall proficiency is another topic that intrigues researchers in the field of phraseology. Pawley and Syder (1983) claimed that vocabulary knowledge of an English speaker is mostly formed by complex lexical stems instead of single words. And they concluded that holistically stored sequences might lead to nativelike oral fluency. Thus, the researcher in the current study was interested in the relationship between MWEs and overall proficiency of the tertiary level EFL learners at the institution the

study was conducted through their written production. However, the findings of the analysis did not yield statistically significant results, indicating that there was no relationship between proportion and frequencies of MWEs and overall proficiency of the learners.

Although the researcher in the current study could not find a statistically significant relationship between MWEs and overall proficiency, the results might not be totally irrelevant. The learners' levels of proficiency were too close since they were all Level 4 students in their institution, which stands for roughly B1 level in terms of CEFR criteria. Earlier studies focusing on the relationship between MWEs and proficiency usually included learners of different levels of proficiency (Paquot, 2019; Rafieyan, 2018; Üstünbaş & Ortaçtepe, 2016; Yoon, 2017).

Paquot (2017) investigated the descriptive value of the phraseological complexity measures on different levels of language proficiency. Average Mutual Information (MI) scores of the MWEs extracted from the learner texts were taken into consideration. According to her results, the researcher found that average MI scores increased systematically through CEFR levels, which means that a higher number of MI score indicates higher level of proficiency.

Rafieyan (2018) focused on learners' MWE knowledge through a task completion test. Learners were supposed read and listen to a number of scenarios and respond to these scenarios. In the end, the researcher reported that higher level learners performed better than their lower level peers. Üstünbaş and Ortaçtepe (2016) also investigated the relationship between formulaic language and overall proficiency and found significant results. Including students from all different levels of proficiency, the researchers concluded that learners of higher proficiency in L2 had a better grasp in formulaic language as well. As stated earlier, the researcher in

the current study targeted learners at similar levels of proficiency, and the small difference between learners might be the reason for the modest significance in the results regarding MWE use and overall proficiency of the learners.

Yoon (2017), on the other hand, targeted proficiency levels of the learners while examining their essays. He employed a number of frequency-based measures including word frequency, lower frequency meaning higher sophistication as in MI scores. Yoon stated that these measures predicted the level of proficiency effectively within non-bordering levels (A2 – B2), yet these frequency-based measures could not significantly show the distinction between bordering levels (A2 – B1). Thus, the fact that participants were at comparable levels in the current study might be the main reason for insignificant results.

The proportion of MWEs employed by EFL learners at the institution was reported very close to the rejection zone, although not statistically significant. Considering earlier studies indicating the relationship between proportion of MWEs and proficiency (Huang, 2015), the finding might still encourage further research to focus on the predictive value. Huang (2015) mainly addressed the accuracy of the MWEs used by Chinese EFL learners. The researcher compared the texts produced by junior and senior EFL learners to target two distinct groups with different levels of language proficiency. In the end, advanced group employed almost three times more MWEs in terms of proportion.

## Implications for Practice

There are many components of language teaching that might benefit from MWEs including language instruction, textbooks, and assessment methods. As Martinez (2013) stated, “there is little disagreement that multi-word expressions should feature in L2 pedagogy.” Prefabricated chunks help language speakers have

shorter processing times in receiving and producing language. These chunks provide learners with necessary tools in the first stages of language learning. Also, they assist the students in becoming more proficient language users. As facilitators of language learning environment, teachers should have the tools they require. As for vocabulary, single words might not be omnipotent. Therefore, adding MWEs in their lesson plans might enrich the classroom. However, it is not an easy job to determine required phrases since abrupt use of a reference corpus might not simply lead to fruitful results. The frequency and association strength of MWEs might be considered as the current study suggested.

The second pedagogical implication would be related to textbooks. As Martinez (2013) suggested there is a dearth of MWEs in textbooks. The language textbooks we come across in the classroom usually focus on the topic, grammar, functions, or tasks. Then they often continue with the vocabulary items that emerged from these tasks or functions. Therefore that might be the reason behind the scarcity of MWEs in language textbooks. Usually the aforementioned components are planned, and then the words are presented according to these components, most often the reading passages. Thus, single or multi-word units are targeted to help to address the requirements of the syllabi not the students (Martinez, 2013). To overcome the issue, more textbooks targeting vocabulary items might be prepared.

Current study presents some implications regarding language assessment as well. The assessment models might include frequency-based measures, along with other frequency-based measures, in determining text quality, as they might be a significant predictor of writing proficiency (Kyle & Crossley, 2015). Another dimension in assessing writing would be concentrating on automatic essay scoring (AES) systems. As objectivity is a problematic issue with essay scoring, focusing on

AES systems that employs frequency-based measures might help language education have more objective and precise scoring systems.

## Implications for Further Research

Based on the findings and limitations of the current study, several suggestions can be made for further research. The current study included learners of the same language proficiency levels. Future studies might consider including students of different proficiency levels. Having participants of different levels might yield different results in terms of relationship between MWE use and overall proficiency.

Another suggestion would be conducting studies that would other skills or components of an exam. There was no clear relationship between MWEs and overall language proficiency. However, a study that covers the MWE use in learners' oral production and perhaps reading and listening skills in an exam, might see a clearer connection between the use of MWEs and overall proficiency levels of learners.

## Limitations

Main limitation of the current study was that the study was conducted within a single institution. In addition, the writing curriculum and materials provided to all students studying at this institution were uniform. The institution did not provide the researcher with the scores for reliability, or the raw data of the proficiency exam. Therefore, it was not possible to examine the internal reliability of the proficiency exam; however, for the writing section, raters' scores were obtained, and inter-rater reliability was calculated and ensured as explained in Chapter 3.

Other limitations of the current study are about the number of the participants, and proficiency level of the participants. Therefore, these limitations should be considered while interpreting the findings. The number of the participants might not be sufficient enough, yet the extraction of the MWEs from learners' essays

were extremely time-consuming. Due to sample size, the fact that the study was conducted at a single site, and the learners were provided with the same set of writing instruction, the generalizability of the findings might not be possible.

The last limitation of the study to be mentioned was related to the proficiency level of the learners. As lower level learners were not supposed to write essays, the researcher of the current study was to concentrate on solely highest-level learners at the institution. However, the institution where the study was conducted did not have diversity in higher proficiency students. Therefore the proficiency levels of the participants were all approximately B1 according to CEFR. Should the proficiency levels of the participants were different, the relationship between MWE use and overall proficiency might have indicated varying results.

## Conclusion

The current study with a non-experimental correlational design examined the relationship between learners' use of MWEs and their writing proficiency as well as their overall proficiency. The results of the current study revealed that proportion and MI scores of MWEs used by the tertiary level students were significant predictors of learners writing proficiency. Also, the current study indicated that MI scores were better predictors than *t*-scores of the MWEs in predicting learners' writing proficiency. However, the current study could not find significant relationship between learners' MWE use and their overall proficiency.

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# APPENDICES

## APPENDIX A

### Consent Form

Dear Participants,
My name is Metin Torlak. I am a TEFL student at Bilkent University. I am collecting data for my thesis research study at the moment. The study is designed to explore the factors influencing the use of Multi-Word Expressions (MWEs) and their predictive value. To that end, your careful completion of the questionnaire will contribute to obtaining accurate data, which is crucial for more accurate findings. You will be asked to complete an online questionnaire in English consisting of 14 items. Instead of your names, the codes that you will access to the questionnaire will be used while analyzing the data to protect your confidentiality. The items are about your habits and your education background related to your language use. The survey takes approximately 20 minutes. After the completion of your survey, the next step is collecting your essays and proficiency scores in the next achievement test that you will take this quarter. The scores will be used to investigate whether they will be in correlation with your use of MWEs.
By completing this survey, it is assumed that you agree to participate in this study and give the researcher permission to use your answers for research purposes. Please be informed that you can discontinue your participation at any time, and you will not be penalized in any way, including your studies at the school of foreign languages, for deciding to stop participation. The researcher guarantees that all the responses and the information that you provide will be strictly confidential and not shared with others in ways that your individual responses could be identified. Additionally, in all presented and published data resulting from this research, your responses will be aggregated with responses from the other participants to assure the protection of your identity. This means that you will not be identified by your responses.
If you have any questions or concerns about this study at any time, please, contact the principal investigator, Metin TORLAK at mtorlak@ankara.edu.tr, and his supervisor, Assistant Professor Dr. Hilal PEKER at hilal.peker@bilkent.edu.tr.
By participating in this study, you confirm the criteria below:

1. I am over 18.
2. I have read and understood the information about this study.
3. I understand that I can withdraw from the study without any consequences at any time.
4. I understood who will have access to identifying information provided AND what will happen to the data at the end of the project.
5.I understand that this project has been reviewed by and received ethical clearance through Bilkent University Research Ethics Committee.

Thank you very much in advance for your invaluable time and cooperation.

Metin TORLAK
MA TEFL Student
Graduate School of Education
Bilkent University, ANKARA

# APPENDIX B

## Language History Questionnaire (LHQ)

Language History Questionnaire (Version 3.0, 2018)

Go to http://cogsci.psu.edu to use online and for reference

1. Participant ID Number:

2. Age:

3. Gender: Male / Female

4. Education:

Graduate School (PhD/MD/JD) High School

Graduate School (Masters) Middle School

College (BA/BS) Other: _____

5. Indicate your native language(s) and any other languages you have studied or learned, the age at which you started using each language in terms of listening, speaking, reading, and writing, and the total number of years you have spent using each language.

| Language | Listening | Speaking | Reading | Writing | Years of use* |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

*For Years of Use, you may have learned a language, stopped using it, and then started using it again. Please give the total number of years.

6. Country of origin: _____

7. If you have lived or traveled in countries other than your country of residence for three months or more, then indicate the name of the country, your length of stay (in Months), the language you used, and the frequency of your use of the language for each country.

| Never | Rarely | Sometimes | Regularly | Often | Usually | Always |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| Country | Length of stay | Language | Frequency of Use |
|---|---|---|---|
| | | | 1 2 3 4 5 6 7 |
| | | | 1 2 3 4 5 6 7 |
| | | | 1 2 3 4 5 6 7 |
| | | | 1 2 3 4 5 6 7 |

8. Indicate the age at which you started using each of the languages you have studied or learned in the following environments (Including native language).

| Language | At Home | With Friends | At School | At Work | Language Software | Online Games |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

9. Rate your language learning skill. In other words, how good do you feel you are at learning new languages, relative to your friends or other people you know?

| Very Poor | Poor | Limited | Average | Good | Very Good | Excellent |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

10. Rate your current ability in terms of listening, speaking, reading, and writing in each of the languages you have studied or learned (including the native language).

| Language | Listening | Speaking | Reading | Writing |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

11. Estimate how many hours per day you spend engaged in the following activities in each of the languages you have studied or learned (including the native language).

| Language | Watching Television | Listening to Music | Reading for Fun | Reading for School | Writing Messages | Writing for School |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

12. In which language do you communicate best or feel most comfortable in terms of listening, speaking, reading, and writing in each of the following environments? You may be selecting the same language for all or some of the fields below.

| | Listening | Speaking | Reading | Writing |
|---|---|---|---|---|
| At Home | | | | |
| With Friends | | | | |
| At School | | | | |
| At Work | | | | |

13. Which cultures/languages do you identify with more strongly? Rate the strength of your connection in the following categories for each culture/language.

None Very Weak Weak Moderate Strong Very Strong Extreme

1 2 3 4 5 6 7

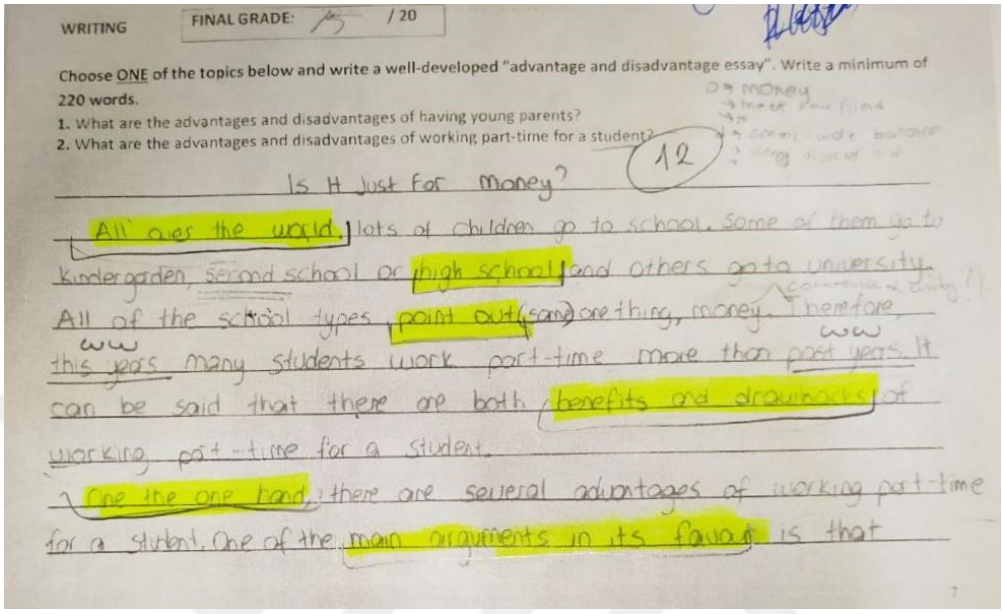
| Culture | Way of Life | Food | Music | Art | Cities/Towns | Sports Teams |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

14. Use the comment box to provide any other information about your language background.

# APPENDIX C

## Essay Samples

### Sample Essay 1



WRITING FINAL GRADE: 15 / 20

Choose ONE of the topics below and write a well-developed "advantage and disadvantage essay". Write a minimum of 220 words.

1. What are the advantages and disadvantages of having young parents?
2. What are the advantages and disadvantages of working part-time for a student?

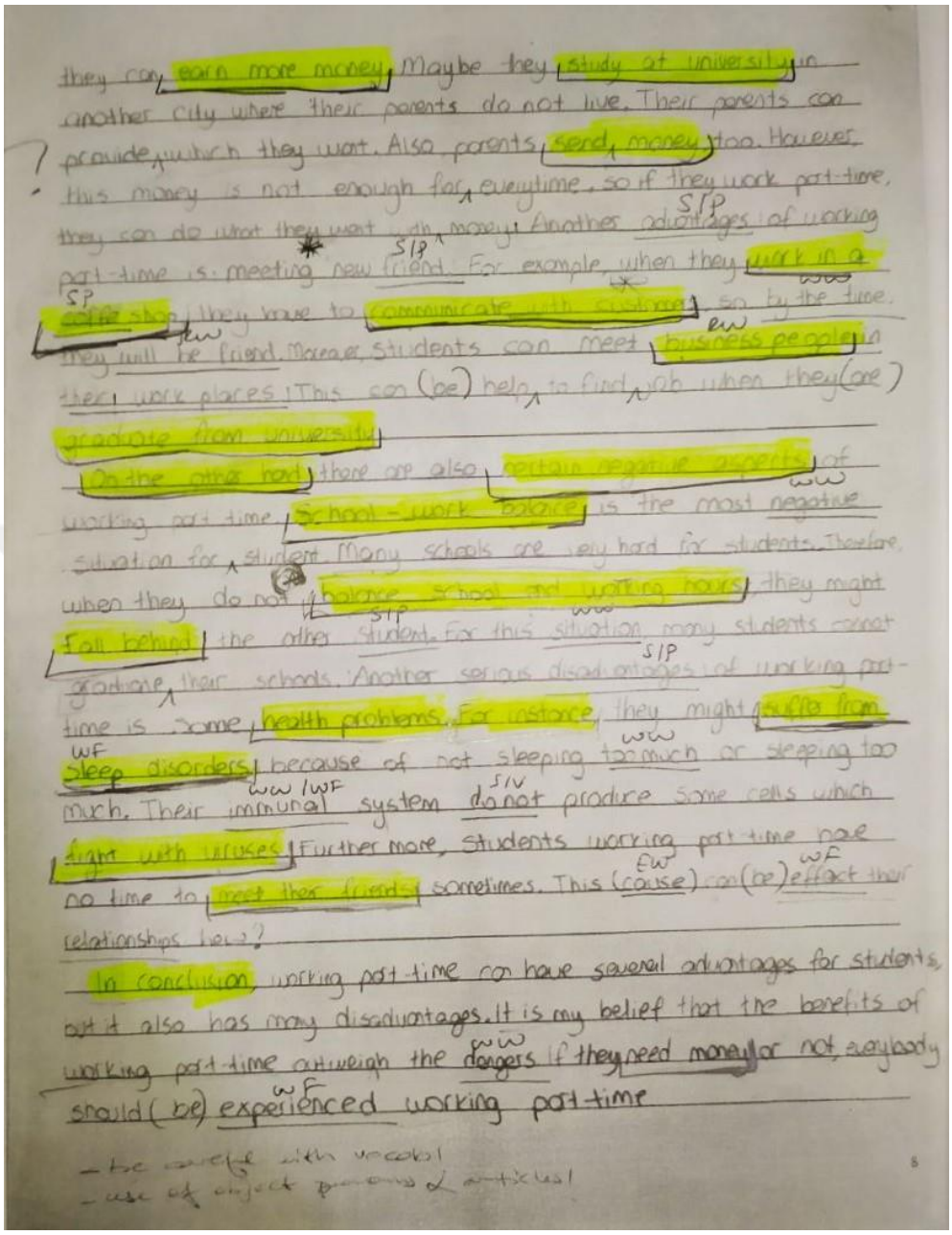
12

Is It Just For Money?

All over the world, lots of children go to school. Some of them go to kindergarden, second school or high school and others go to university. All of the school types point out(same) one thing, money. Therefore, this years many students work part-time more than past years. It can be said that there are both benefits and drawbacks of working part-time for a student.

One the one hand, there are several advantages of working part-time for a student. One of the main arguments in its favour is that

Sample Essay 2 – Part 2



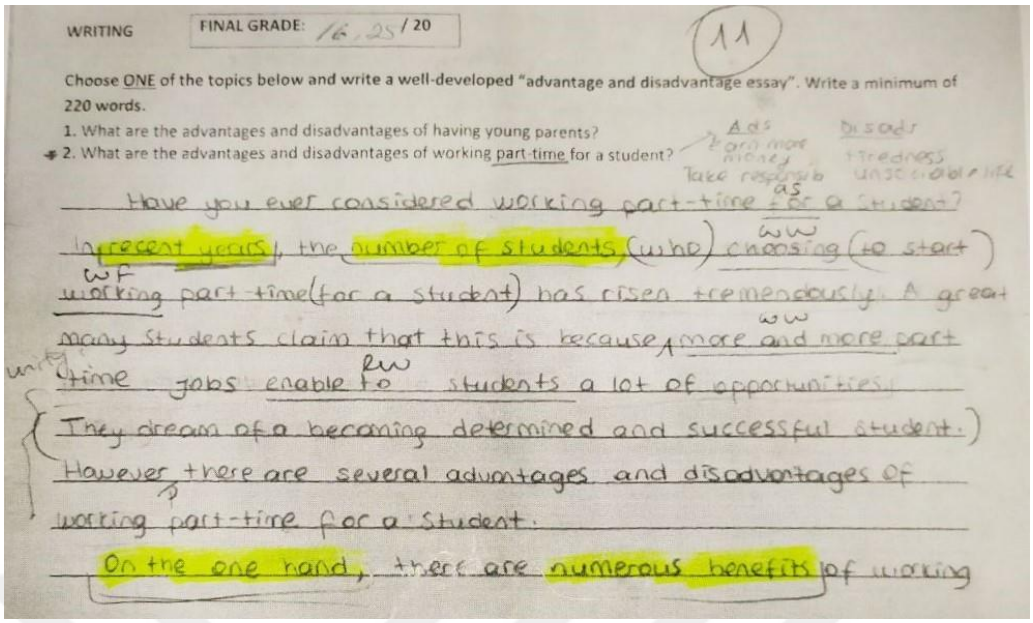
they can earn more money. Maybe they study at university in another city where their parents do not live. Their parents can provide which they want. Also parents send money too. However, this money is not enough for everytime, so if they work part-time, they can do what they want with money. Another advantages of working part-time is meeting new friend. For example, when they work in a coffee shop they have to communicate with customers so by the time, they will be friend. Moreover, students can meet business people in their work places. This can (be) help to find job when they (are) graduate from university.

On the other hand, there are also certain negative aspects of working part time. School-work balance is the most negative situation for student. Many schools are very hard for students. Therefore, when they do not balance school and working hours, they might fall behind the other student. For this situation many students cannot graduate their schools. Another serious disadvantages of working part-time is some health problems. For instance, they might suffer from sleep disorders because of not sleeping too much or sleeping too much. Their immunal system do not produce some cells which fight with viruses. Further more, students working part-time have no time to meet their friends sometimes. This (cause) can (be) effect their relationships bad.

In conclusion, working part-time can have several advantages for students, but it also has many disadvantages. It is my belief that the benefits of working part-time outweigh the dangers if they need money or not everybody should (be) experienced working part-time.

- be careful with vocab!
- use of object pronouns & articles!

Sample Essay 2 – Part 1



WRITING FINAL GRADE: 16.25 / 20

11

Choose ONE of the topics below and write a well-developed "advantage and disadvantage essay". Write a minimum of 220 words.

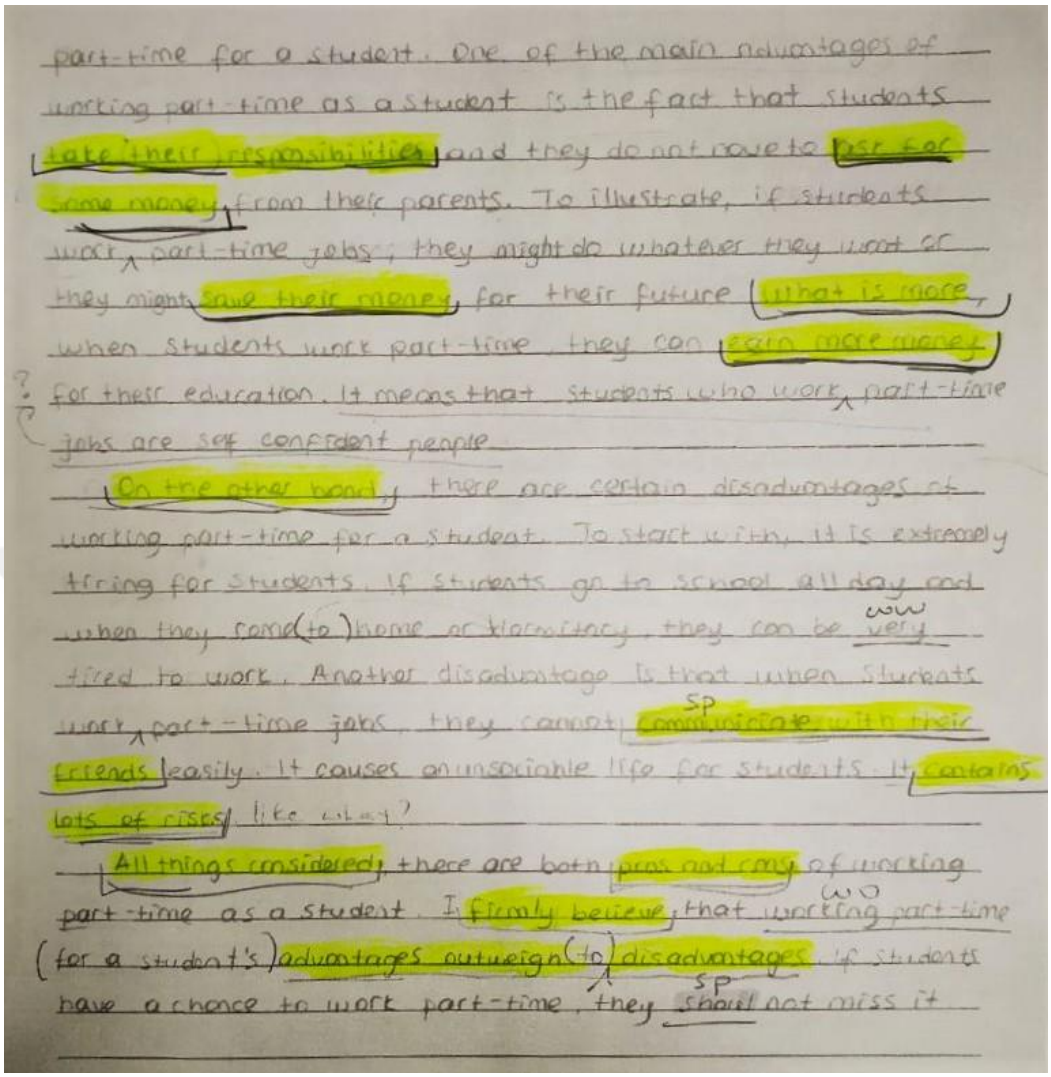
1. What are the advantages and disadvantages of having young parents?
2. What are the advantages and disadvantages of working part-time for a student?

Ads: earn more money; Take responsib
Disadv: tiredness; unsocial life

Have you ever considered working part-time as a student? In present years, the number of students who ww choosing to start wf working part-time (for a student) has risen tremendously. A great many students claim that this is because ww more and more part-time jobs enable rw to students a lot of opportunities. They dream of a becoming determined and successful student. However, there are several advantages and disadvantages of working part-time for a student.

On the one hand, there are numerous benefits of working

Sample Essay 2 – Part 2

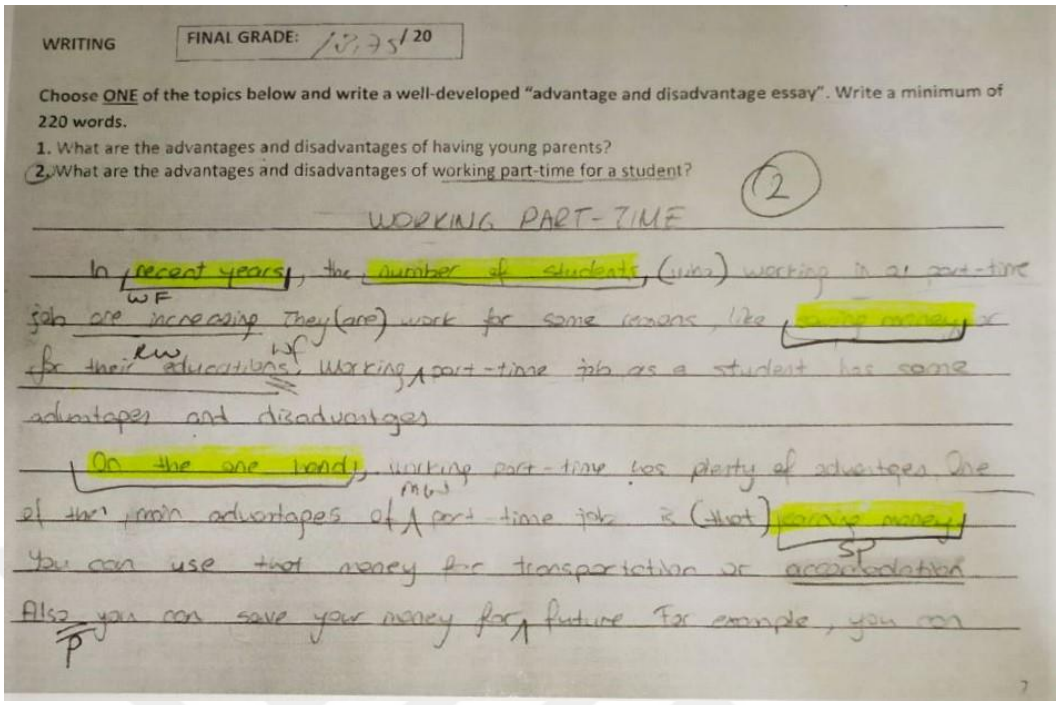


part-time for a student. One of the main advantages of working part-time as a student is the fact that students take their responsibilities and they do not have to ask for some money from their parents. To illustrate, if students work part-time jobs, they might do whatever they want or they might save their money for their future. What is more, when students work part-time, they can earn more money for their education. It means that students who work part-time jobs are self confident people.

On the other hand, there are certain disadvantages of working part-time for a student. To start with, it is extremely tiring for students. If students go to school all day and when they come(to) home or dormitory, they can be very tired to work. Another disadvantage is that when students work part-time jobs, they cannot communicate with their friends easily. It causes an unsociable life for students. It contains lots of risks like what?

All things considered, there are both pros and cons of working part-time as a student. I firmly believe that working part-time (for a student's) advantages outweigh (to) disadvantages. If students have a chance to work part-time, they should not miss it.

Sample Essay 3 – Part 1



WRITING FINAL GRADE: 17.75/20

Choose ONE of the topics below and write a well-developed "advantage and disadvantage essay". Write a minimum of 220 words.

1. What are the advantages and disadvantages of having young parents?
2. What are the advantages and disadvantages of working part-time for a student?

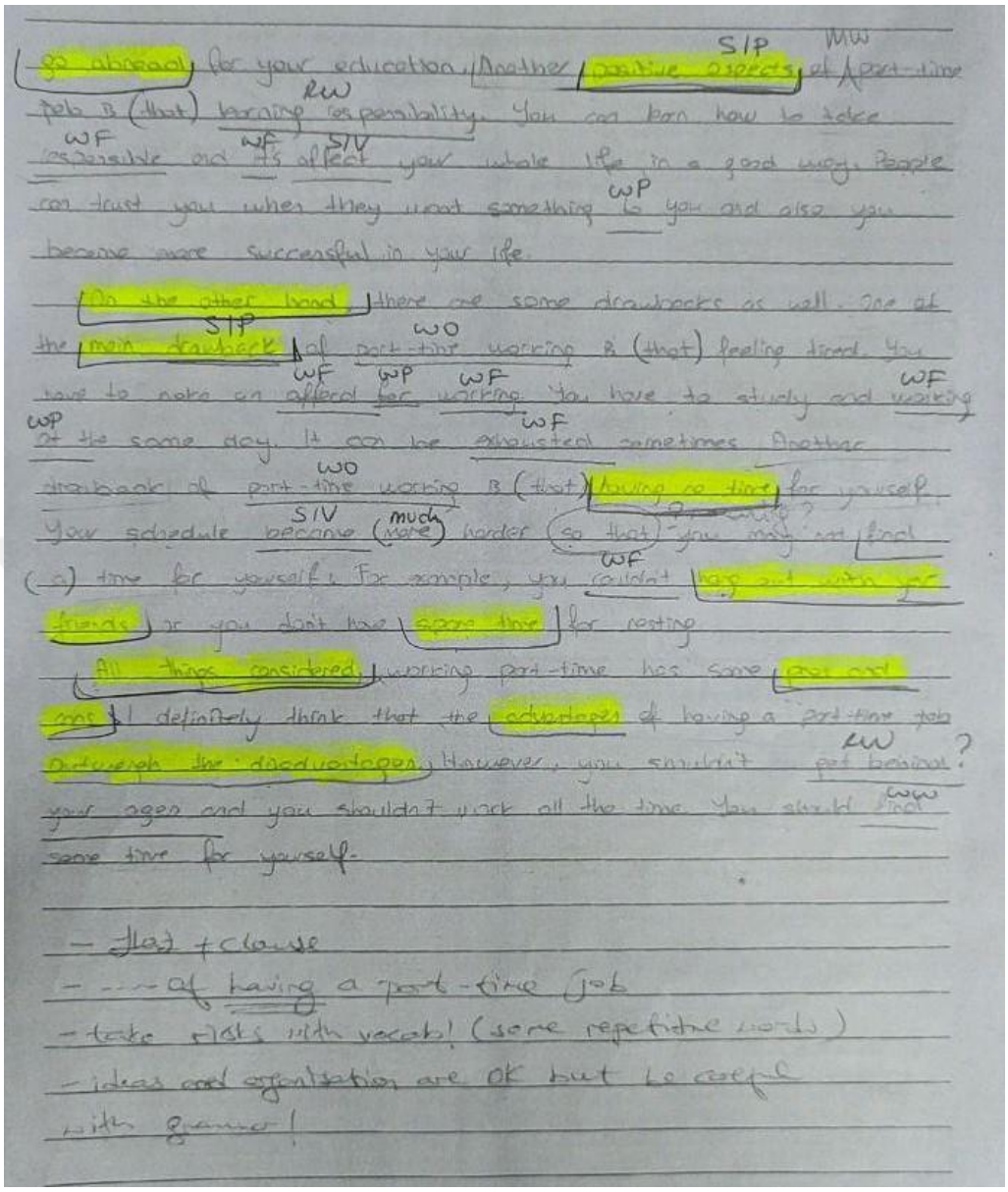
(2)

WORKING PART-TIME

In recent years, the number of students (who) working in a part-time jobs are increasing. They (are) work for some reasons, like saving money or for their educations. Working a part-time job as a student has some advantages and disadvantages.

On the one hand, working part-time has plenty of advantages. One of the main advantages of a part-time job is (that) you can save money. You can use that money for transportation or accomodation. Also you can save your money for future. For example, you can

Sample Essay 3 – Part 2



go abroad for your education. Another positive aspects of part-time job is (that) learning responsibility. You can learn how to take responsible and its affect your whole life in a good way. People can trust you when they need something to you and also you become more successful in your life.

On the other hand, there are some drawbacks as well. One of the main drawback of part-time working is (that) feeling tired. You have to make an effort for working. You have to study and working at the same day. It can be exhausted sometimes. Another drawback of part-time working is (that) having no time for yourself. Your schedule become (more) harder (so that) you may not find (a) time for yourself. For example, you couldn't hang out with your friends or you don't have spare time for resting.

All things considered, working part-time has some pros and cons. I definitely think that the advantages of having a part-time job outweigh the disadvantages. However, you shouldn't put behind your ages and you shouldn't work all the time. You should find some time for yourself.

- Last + clause
- ...-s of having a part-time job
- take notes with vocab! (some repetitive words)
- ideas and organization are OK but be careful with grammar!

# APPENDIX D

## Sample Rubric

| L4 RUBRIC FEEDBACK FORM (ADVANTAGE & DISADVANTAGE ESSAY) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **CATEGORIES** | **DESCRIPTORS** | **SCORES** | | | | | **TOTAL SCORE** |
| **CONTENT & ORGANISATION** | Narrowing down | 1 | 0.75 | 0.5 | 0.25 | 0 | ____ / 6 |
| | Thesis statement | 1 | 0.75 | 0.5 | 0.25 | 0 | |
| | Topic Sentences of Body Paragraphs | 1 | 0.75 | 0.5 | 0.25 | 0 | |
| | Major Supporting Ideas | 1 | 0.75 | 0.5 | 0.25 | 0 | |
| | Minor Supporting Ideas | 1 | 0.75 | 0.5 | 0.25 | 0 | |
| | Concluding paragraph | 1 | 0.75 | 0.5 | 0.25 | 0 | |
| **Instructor's Feedback:** | | | | | | | |
| **USE OF ENGLISH** | Various and correct words & Spelling | 1 | 0.75 | 0.5 | 0.25 | 0 | ____ / 3 |
| | Correct and meaningful use of linking words / expressions | 1 | 0.75 | 0.5 | 0.25 | 0 | |
| | Accurate sentence structure and correct meaning & Variety of structures | 1 | 0.75 | 0.5 | 0.25 | 0 | |
| **Instructor's Feedback:** | | | | | | | |
| **MECHANICS** | Punctuation and capitalisation | 1 | 0.75 | 0.5 | 0.25 | 0 | ____ / 1 |
| **Instructor's Feedback:** | | | | | | | |

Grade is '0.5 pts.' when:
- ☐ the essay is off-topic.
- ☐ the essay is too minimal to be graded.
- ☐ the essay is COPIED from another source.

'1 pt.' should be deducted when;
- ☐ there is NO valid essay outline (there is content but problems in indentation)
- ☐ the essay is less than 220 words.

When there is a different type of writing (different type of essay/paragraph format/listing), DO NOT grade *"content & organisation"* part.

**TOTAL: ____ / 10**

# APPENDIX E

## List of Multi-Word Expressions

| Two-word MWEs | t-score | MI score |
|---|---|---|
| (the) real life | 76.47 | 5.43 |
| (the) right time | 89.76 | 4.9 |
| (the) same age | 42.96 | 4.61 |
| above mentioned | 9.80 | 3.54 |
| academic success | 33.54 | 7.67 |
| adequate education | 11.16 | 5.14 |
| adequate time | 16.05 | 3.90 |
| adult life | 40.25 | 6.21 |
| affect (their) budget | 9.76 | 4.15 |
| affect badly | 6.33 | 4.84 |
| affect negatively | 26.59 | 10.64 |
| arrive home | 35.42 | 6.31 |
| as (a) result | 206.12 | 4.24 |
| become (an) adult | 27.39 | 4.43 |
| become exhausted | 7.15 | 3.56 |
| becomes harder | 17.12 | 5.37 |
| benefits (and) drawbacks | 8.96 | 8.00 |
| big city | 54.12 | 4.60 |
| bright future | 28.19 | 7.39 |
| broaden (their) horizon | 10.04 | 9.91 |
| build (their) future | 20.63 | 4.60 |
| business people | 49.61 | 3.11 |

| | | |
|---|---|---|
| busy life | 21.20 | 4.63 |
| busy schedule | 22.72 | 9.11 |
| buy happiness | 11.05 | 5.71 |
| certain drawbacks | 2.68 | 4.25 |
| certainly believe | 17.39 | 3.40 |
| communication skills | 37.41 | 8.50 |
| consume alcohol | 18.49 | 9.13 |
| controversial issues | 29.51 | 7.32 |
| cost money | 40.56 | 6.46 |
| countless benefits | 3.22 | 3.86 |
| cover (their) expenses | 25.58 | 7.54 |
| create problems | 50.53 | 4.93 |
| cultural activity | 19.74 | 5.13 |
| daily life | 62.14 | 7.02 |
| daily routine | 31.09 | 9.73 |
| definitely believe | 10.14 | 3.37 |
| definitely think | 31.67 | 4.42 |
| different aspects | 28.86 | 5.70 |
| do homework | 55.01 | 6.01 |
| early age | 44.73 | 5.70 |
| early life | 31.47 | 3.56 |
| earn (a) living | 34.41 | 8.69 |
| earn money | 50.71 | 7.28 |
| economic situation | 28.82 | 5.41 |
| enjoyable activities | 9.65 | 7.61 |

| | | |
|---|---|---|
| enough time | 69.12 | 4.01 |
| extra job | 10.81 | 3.38 |
| extra money | 33.88 | 6.42 |
| face (many) difficulties | 28.41 | 7.22 |
| face problems | 63.06 | 6.32 |
| fail exams | 12.04 | 7.10 |
| fall behind | 33.35 | 4.93 |
| family budget | 14.31 | 3.24 |
| feel responsible | 25.74 | 4.78 |
| feel abandoned | 18.45 | 6.71 |
| feel alone | 27.24 | 4.61 |
| feel bad | 63.59 | 5.64 |
| feel bored | 10.67 | 5.05 |
| feel depressed | 22.39 | 6.69 |
| feel exhausted | 15.8 | 5.51 |
| feel self-confident | 4.41 | 6.11 |
| feel sleepy | 11.97 | 5.99 |
| feel tired | 29.47 | 5.69 |
| financial problems | 31.42 | 4.84 |
| find (a) job | 66.03 | 4.43 |
| finish (the) school | 35.91 | 4.84 |
| finish (your) job | 29.73 | 5.28 |
| firmly believe | 27.58 | 7.55 |
| first priority | 31.72 | 5.21 |
| first step | 91.56 | 6.24 |

| | | |
|---|---|---|
| first-hand experience | 11.03 | 9.94 |
| for example | 388.27 | 6.42 |
| for instance | 217.83 | 7.01 |
| foreign language | 62.85 | 8.41 |
| free time | 47.52 | 3.76 |
| full-time job | 38.20 | 8.57 |
| future career | 18.65 | 5.85 |
| future job | 12.33 | 3.34 |
| future life | 17.26 | 3.28 |
| future plans | 23.70 | 5.70 |
| gain experience | 29.16 | 6.37 |
| get distracted | 19.76 | 5.06 |
| get tired | 55.86 | 5.69 |
| give (more) attention | 51.01 | 5.07 |
| give (more) importance | 23.86 | 4.28 |
| give (you) (a) job | 44.30 | 3.48 |
| go abroad | 30.76 | 4.88 |
| good choice | 39.20 | 4.50 |
| good idea | 98.54 | 6.02 |
| great platform | 7.93 | 3.22 |
| greatly outweigh | 4.78 | 8.74 |
| handle (their) expenses | 3.86 | 5.46 |
| hard life | 29.70 | 3.58 |
| have (a) chance | 145.9 | 4.63 |
| have (an) opportunity | 120.33 | 4.07 |

| | | |
|---|---|---|
| have experience | 116.08 | 3.45 |
| have fun | 80.67 | 4.59 |
| have time | 300.64 | 3.49 |
| health problems | 69.66 | 5.65 |
| healthy communication | 4.44 | 3.73 |
| help (their) families | 53.32 | 4.09 |
| high percentage | 31.44 | 6.20 |
| high school | 270.07 | 8.47 |
| important aspect | 39.48 | 6.82 |
| important drawback | 3.20 | 3.71 |
| important exam | 5.57 | 3.56 |
| important issue | 66.15 | 5.87 |
| important skill | 27.38 | 4.87 |
| improve (his) relationship | 18.82 | 4.90 |
| improve (their) ability | 27.21 | 6.59 |
| improve (their) skills | 33.95 | 7.15 |
| Increase (their) income | 22.83 | 6.17 |
| increase dramatically | 35.33 | 9.43 |
| job interview | 27.83 | 5.46 |
| job opportunities | 29.20 | 5.14 |
| join clubs | 32.42 | 6.38 |
| learn (the) life | 32.90 | 3.19 |
| leave (their) schools | 43.44 | 3.15 |
| leave home | 76.03 | 6.19 |
| leaving school | 43.44 | 3.15 |

| | | |
|---|---|---|
| leisure time | 27.91 | 6.80 |
| life experiences | 35.62 | 3.92 |
| live (their) lives | 105.37 | 5.83 |
| lose (their) focuses | 20.19 | 5.03 |
| lose (your) job | 84.41 | 6.61 |
| lose time | 44.92 | 3.13 |
| low budget | 12.79 | 4.41 |
| lower scores | 6.18 | 4.12 |
| main argument | 14.83 | 5.37 |
| main benefit | 9.09 | 3.60 |
| main drawback | 7.71 | 7.62 |
| main issue | 22.20 | 4.40 |
| major benefit | 14.13 | 4.01 |
| major drawback | 10.53 | 7.71 |
| major reasons | 29.26 | 4.91 |
| make (a) decision | 197.39 | 7.26 |
| make (a) plan | 60.50 | 3.85 |
| manage (our) budget | 11.86 | 4.71 |
| meet friend | 39.76 | 4.69 |
| mental health | 117.04 | 10.06 |
| mentioned above | 35.52 | 7.01 |
| miss (their) classes | 16.83 | 4.23 |
| modern life | 32.64 | 4.73 |
| modern world | 43.69 | 5.68 |
| monthly budget | 7.79 | 5.76 |

| | | |
|---|---|---|
| most probably | 71.57 | 5.98 |
| mostly prefer | 4.57 | 3.55 |
| natural beauty | 28.20 | 7.67 |
| natural limits | 9.80 | 4.70 |
| need help | 96.43 | 7.82 |
| need information | 53.76 | 4.57 |
| need money | 66.15 | 4.80 |
| negative aspects | 19.91 | 7.21 |
| negative sides | 18.85 | 4.71 |
| obvious benefits | 13.42 | 5.75 |
| older (and) wiser | 14.58 | 10.29 |
| open (her) café | 11.81 | 5.72 |
| part-time worker | 18.79 | 8.40 |
| pass (their) exam | 23.62 | 8.18 |
| past decade | 89.95 | 9.48 |
| patriarchal society | 13.72 | 9.07 |
| pay attention | 136.55 | 9.29 |
| people argue | 28.59 | 3.09 |
| personal activities | 15.94 | 3.96 |
| personal knowledge | 20.75 | 5.25 |
| personally believe | 17.87 | 5.50 |
| physical problems | 25.44 | 4.26 |
| play sports | 43.18 | 5.65 |
| pocket money | 24.75 | 6.09 |
| poor family | 33.50 | 5.21 |

| | | |
|---|---|---|
| positive aspects | 23.13 | 7.06 |
| positive sides | 22.93 | 4.69 |
| Possible danger | 12.13 | 4.61 |
| pretty important | 13.60 | 3.13 |
| pretty sure | 46.40 | 6.60 |
| private school | 72.64 | 6.33 |
| pros (and) cons | 30.22 | 11.25 |
| psychological effects | 22.11 | 6.61 |
| Psychological problems | 24.76 | 5.91 |
| raise awareness | 37.53 | 8.43 |
| recent years | 118.70 | 6.23 |
| remarkable experiences | 7.96 | 4.17 |
| requires energy | 25.14 | 5.05 |
| rise significantly | 11.33 | 4.98 |
| save money | 80.44 | 7.79 |
| school friends | 40.83 | 3.91 |
| school project | 24.59 | 3.41 |
| school supplies | 15.02 | 3.66 |
| send money | 44.60 | 5.26 |
| serious drawback | 8.21 | 7.75 |
| serious problem | 68.83 | 7.10 |
| social activities | 36.42 | 5.22 |
| social life | 54.16 | 4.38 |
| social skill | 59.98 | 7.12 |
| solve problems | 121.94 | 10.03 |

| | | |
|---|---|---|
| spare money | 8.55 | 4.71 |
| spare time | 32.64 | 6.99 |
| spend money | 109.18 | 7.54 |
| spend time | 184.55 | 7.05 |
| start (your) career | 38.54 | 5.23 |
| start smoking | 19.09 | 6.52 |
| strongly believe | 31.59 | 6.90 |
| study hard | 17.97 | 5.68 |
| suitable job | 6.67 | 4.14 |
| take lesson | 43.28 | 4.82 |
| take responsibility | 72.23 | 6.02 |
| take taxi | 21.54 | 5.44 |
| take time | 156.97 | 4.19 |
| technological devices | 7.52 | 6.26 |
| tough problem | 14.50 | 3.47 |
| treat (you) badly | 18.26 | 7.99 |
| truly believe | 32.85 | 6.46 |
| university student | 79.20 | 5.46 |
| vital role | 26.46 | 7.73 |
| waste money | 31.18 | 7.50 |
| waste time | 66.18 | 7.65 |
| well-known fact | 10.30 | 5.21 |
| well-paid job | 8.17 | 8.94 |
| whole life | 73.43 | 5.86 |
| work hard | 133.47 | 8.53 |

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|---|---|---|
| working conditions | 38.35 | 9.19 |
| working hours | 41.86 | 8.35 |
| young adult | 68.83 | 7.92 |

| Three-word MWEs | t-score | MI score |
|---|---|---|
| (it) takes hours | 56.15 | 3.53 |
| (the) number of students | 59.08 | 9.46 |
| advantages __ outweigh (the) disadvantages | 2.00 | 21.27 |
| agree with (this) opinion | 8.00 | 12.38 |
| all over (the) world | 96.58 | 13.45 |
| all things considered | 55.75 | 12.95 |
| apply for job | 28.03 | 11.94 |
| apply for scholarships | 8.54 | 12.48 |
| ask for (some) money | 26.18 | 9.02 |
| at (the) same time | 195.24 | 14.06 |
| build (a) strong relationship | 6.78 | 13.24 |
| communicate with (their) parents | 12.88 | 12.19 |
| communicate with others | 11.31 | 16.50 |
| communicate with people | 16.36 | 10.34 |
| concentrate on (their) lessons | 3.31 | 10.24 |
| deal with (the) problems | 54.74 | 13.44 |

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|---|---|---|
| depend on (their) family | 12.19 | 10.04 |
| earn (their) pocket money | 4.58 | 14.9 |
| earn enough money | 12.65 | 14.65 |
| earn more money | 15.03 | 12.49 |
| encourage students to work | 3.29 | 7.25 |
| enough free time | 3.98 | 7.78 |
| feel under pressure | 11.31 | 16.5 |
| find enough time | 6.73 | 7.10 |
| find enough time | 6.73 | 7.10 |
| finding (a) suitable job | 2.00 | 10.48 |
| first of all | 153.79 | 6.56 |
| focus on (your) lessons | 11.87 | 11.57 |
| gain work experience | 4.00 | 10.9 |
| get high marks | 13.78 | 11.25 |
| get over problem | 6.08 | 6.13 |
| graduate from university | 33.9 | 15.38 |
| hanging with (their) friends | 5.63 | 7.66 |
| have (a) better relationship | 9.14 | 8.27 |
| have any income | 5.30 | 6.02 |
| have enough money | 34.16 | 10.35 |
| have enough time | 36.82 | 8.56 |
| have no time | 35.53 | 6.14 |
| have spare time | 10.29 | 10.19 |

| | | |
|---|---|---|
| improve (their) communication skills | 5.83 | 16.34 |
| improve (their) social skills | 6.16 | 13.76 |
| in (the) modern world | 26.92 | 10.08 |
| in other words | 136.16 | 11.61 |
| keep in mind | 75.95 | 12.30 |
| lack of education | 21.20 | 10.31 |
| lack of income | 7.54 | 9.14 |
| lack of money | 17.41 | 9.35 |
| lack of time | 23.75 | 8.24 |
| learn (the) real life | 4.46 | 8.78 |
| learn life skills | 6.93 | 11.19 |
| learn taking risks | 3.86 | 8.21 |
| look for solution | 17.97 | 9.44 |
| lose all (the) energy | 2.97 | 6.83 |
| main arguments against | 4.36 | 12.71 |
| make (the) right decision | 29.03 | 13.34 |
| make new friends | 21.12 | 9.90 |
| meet different people | 5.98 | 8.10 |
| meet new friends | 8.88 | 10.12 |
| meet new people | 16.95 | 9.73 |
| money (is) no object | 10.29 | 11.57 |
| need more money | 20.69 | 10.13 |
| number of students | 59.08 | 9.46 |

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|---|---|---|
| on (the) one hand | 90.81 | 11.09 |
| on (the) other hand | 153.06 | 13.48 |
| one step ahead | 18.76 | 13.71 |
| over (the) past decades | 44.05 | 17.79 |
| part of (a) team | 39.46 | 9.22 |
| pay for (the) expenses | 15.10 | 11.91 |
| pay for accommodation | 2.99 | 9.03 |
| pay for education | 18.03 | 9.46 |
| pay for transportation | 9.10 | 10.57 |
| play computer games | 14.11 | 14.00 |
| play important role | 54.64 | 17.10 |
| point of view | 106.79 | 13.11 |
| positive (and) negative aspects | 8.54 | 18.02 |
| positive (and) negative outcomes | 6.24 | 17.10 |
| positive (and) negative sides | 2.83 | 12.39 |
| prepare for (the) future | 13.22 | 11.14 |
| produce (a) new model | 2.82 | 8.39 |
| save more time | 4.30 | 6.09 |
| search for (a) job | 13.37 | 10.82 |
| send enough money | 6.78 | 11.14 |
| short of cash | 8.99 | 9.62 |
| spend all (his) time | 29.79 | 10.33 |

| | | |
|---|---|---|
| spend money wisely | 5.66 | 16.84 |
| start to use drugs | 7.35 | 12.08 |
| stay in (a) dormitory | 5.39 | 11.96 |
| study at university | 44.11 | 14.28 |
| study for (the) exams | 11.31 | 13.97 |
| study for (their) lessons | 2.63 | 7.52 |
| suffer from drawbacks | 2.24 | 12.45 |
| take into account | 71.05 | 15.05 |
| take part in | 70.67 | 9.46 |
| take up sports | 7.53 | 4.52 |
| taken into consideration | 35.98 | 14.55 |
| thanks to (their) parents | 5.71 | 7.45 |
| to start with | 64.05 | 4.00 |
| to sum up | 29.13 | 9.01 |
| travel all (the) world | 11.22 | 10.3 |
| understand each other | 25.82 | 12.01 |
| waste of time | 38.08 | 10.58 |
| work late hours | 3.74 | 9.25 |
| work until midnight | 4.69 | 12.47 |

| Four-word MWEs | t-score | MI score |
|---|---|---|
| best times of (your) life | 10.44 | 13.76 |
| deal with financial problems | 2.65 | 17.63 |
| different kind of people | 13.67 | 15.55 |

| | | |
|---|---|---|
| every area of life | 7.00 | 14.26 |
| fall behind at school | 2.24 | 15.14 |
| focus on (their) school work | 2.24 | 14.78 |
| go out with (their) friends | 14.46 | 14.94 |
| hang out with friends | 17.06 | 19.62 |
| have any free time | 4.12 | 13.22 |
| have no time to spare | 11.66 | 17.15 |
| high percentage of people | 5.00 | 15.34 |
| high percentage of students | 7.87 | 17.87 |
| increase day by day | 2.00 | 13.38 |
| last but not least | 19.95 | 17.22 |
| leave nothing to chance | 7.28 | 18.39 |
| live away from (their) family | 3.00 | 14.89 |
| main argument in (its) favour | 2.00 | 20.87 |
| spend more (and) more time | 4.47 | 13.77 |
| spend much more money | 4.36 | 17.06 |
| spend time with (their) family | 15.56 | 17.79 |
| spend time with friends | 9.38 | 17.09 |
| students' performance in | 3.61 | 15.78 |

| | | |
|---|---|---|
| school | | |
| suffer from sleep disorders | 2.83 | 24.43 |
| take too much time | 11.66 | 17.15 |
| taking everything into account | 3.61 | 18.35 |
| taking everything into consideration | 2.24 | 18.43 |
| work for (a) long time | 8.60 | 15.22 |
| work in (a) coffee shop | 3.32 | 18.10 |