

## CHAPTER 2

### REVIEW OF RELATED LITERATURE

This part involves a comprehensive overview that depends on the purpose of the study in the section of the literature review. Therefore, information about lexical bundle, corpus approaches, and research articles are explained in this unit. Previous studies revealed that lexical bundles were common in different registers, and in different contexts are added.

#### 2.1 Lexical Bundle

There are many multi-word expressions which function as structural or semantic units in English. A lexical item represents extensive appearance in language use. As cited in Jalali et al., the history of lexical bundles in applied linguistics dates back to Jespersen (1924) and Firth (1951), who popularized the term “collocation”.<sup>36</sup> Since then, there has been an increasing interest in the research on frequent word combinations under different names.

The name “lexical bundle” was first introduced in the extensive Longman Grammar of Written and Spoken English to identify the recurrent multi-word sequences found in the Longman Spoken and Written English Corpus of conversation and academic prose.<sup>37</sup> Biber and Conrad define lexical bundles as “multi-word expressions which occur frequently and with accidental sequences of three or more words (e.g. in the case of the, do you want me to).”<sup>38</sup> Basically, a lexical bundle is a combination of more than two words that co-occur more frequently than we expect by chance. Hyland thinks their frequent use helps to shape the meaning in a text and make difference in a register.<sup>39</sup>

In addition, many lexical bundles have to occur more than 10 or 20 times (based on the register) in a million words to be considered for analysis, whereas an idiom such as kick the bucket occurs only 0.5 times in a million words. Next,

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<sup>36</sup> Jalali et al, “Structural and Functional Analysis of Lexical Bundles in Medical Research Articles: A Corpus-Based Study”, *International Journal of Information Science and Management*, Vol. 13, No. 1, 2015

<sup>37</sup> Douglas, Biber, Federica Barbieri, “Lexical Bundles in University Spoken and Written Registers”, *English for Specific Purposes*, 26, 2007

<sup>38</sup> Susan M Conrad, Douglas, Biber, “The Frequency and Use of Lexical Bundles in Conversation and Academic Prose”, *Applied Linguistics Faculty Publications and Presentations*, 2005

<sup>39</sup> Hyland, “Bundles in Academic Discourse”

most lexical bundles are not idiomatic in nature and not perceptually salient; rather, “their meaning is transparent” and can be easily understood from the translation of individual words that make up the bundles. Finally, lexical bundles are not structurally complete.<sup>40</sup>

Lexical bundles differ across registers regarding the form and purpose of communication. The function of lexical bundles is dependent on the reason and formality of communication, and whether communication is made via oral or written discourse.

## 2.2 Corpus Approaches

Number of studies have made use of corpus data to analyze language elements. Corpus is the singular form and the plural of corpus is corpora. The word corpus comes from a Latin rooted which means *body*. The presence of corpus data attracted attention of linguists. The label of corpus linguistics become generally used in the linguistic studies. Corpus linguistics has been considered by many authors as the most important methodological trend since Chomsky’s revolution around 1950s.<sup>41</sup> The corpus linguistics has enabled linguists to observe language patterns in different types of texts. One of the language patterns which is quite commonly observed is that lexical bundles.

Researcher cannot expect and acquire the specific and fixed language pattern of the texts in the corpus without computer technology. It is obvious that linguists discovered lexical bundles not by reading one word to word of large text but they solve it through computational analysis. One of the first modern corpus projects analysis was initiated by Francis and Kucera at Brown University in 1961. This project deserves mention as it is the first major computational corpus project. It was a one-million-word corpus known as the Brown Corpus drawn from randomly sampled materials written in American English in 1961 in a variety of genres.<sup>42</sup> With the development of the field of linguistics and the computer-based corpus measures, the importance of lexical bundles in language use has been recognized.

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<sup>40</sup> Biber et al., “If You Look At ... Lexical Bundles in University Lectures and Textbooks”

<sup>41</sup> Peromingo, “The Use of Lexical Bundles in the Written Production of Spanish EFL University Student”

<sup>42</sup> Bal, “Analysis of Four-word Lexical Bundles in Published Research Articles Written by Turkish Scholars.”

Conrad emphasizes that there are important characteristics of corpus investigations. Analysis of a corpus (a) are based on principled collections of naturally occurring texts (the corpus), (b) use computers for both automatic and interactive analyses, and (c) include both quantitative analyses and functional interpretations in order to describe patterns in language features.<sup>43</sup>

There are two general approaches to the ways in which a specific linguistic feature can be studied in the corpus.<sup>44</sup> The first approach is corpus-based approaches, corpus-based research assumes the validity of linguistic structure derived from linguistics theory; the primary research goal is to analyze the systematic patterns of use for those pre-defined linguistics features. Thus, in corpus-based studies of formulaic language, the researcher pre-selects formulaic expressions, and then analyzes the corpus to discover how those expression are used.

In contrast, corpus-driven research is more inductive. Corpus-driven research assumes only the existence of lexical bundle discovered from the corpus analysis.<sup>45</sup>

### **2.3 Research Article**

Swales reports that English has become the dominant language of research, commerce, and education. English language research articles are relevant to the present study with regard to process of analysis of lexical bundles. All members of academia involving; students, lectures, researchers, and some faculty members have contributed large number of published researches from different target journals. Published researches is a medium to spread information and knowledge and also as reading materials in specific field for students.

The distribution and use of lexical bundles in English is vary from certain genre. In the products of journal article for example, the words written in research article text that construct the bundle identified empirically. Before the final results of the frequency of lexical bundle in research article is gained. It is important to

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<sup>43</sup> Susan Conrad, "Investigating Academic Texts with Corpus-Based Techniques: An Example from Biology."

<sup>44</sup> Douglas Biber, "A Corpus-Driven Approach to Formulaic Language in English." *International Journal of Corpus Linguistics* 14:3 (2009)

<sup>45</sup> *Ibid.*, 276

know the detail structure and characteristics of the collected data or research articles.

It is necessary to recognize that within a common core structure, there are variations from field to field and from journal to journal. But the focus of present study is in the article's content including abstract, introduction, methods, results, and discussion. These structure of research articles consist of many linguistics features in order to construct and structure the writing of each section. Consequently, the lexical bundles need to be developed not only in introductions but also in other sections of research articles.

#### **2.4 Review of Related Studies**

Many studies have been conducted to investigate and identify the occurrence of lexical bundles. The phenomenon and the probability across the target given have the results in lists of lexical bundles that arise distinction.

In this paper the researcher presents a method for deriving a list of formulaic expressions used in research article. Because this kind of research is not the first time and many investigations are available, for comparison purposes some examples of previous research have to be described. The researcher will simply summarize the relevant studies about analysis of lexical bundle in research article here.

Damchevska looks into the structure of four-word lexical bundles in five different disciplines of scientific articles in English written by Macedonian scholars. The bundles identified in published economic writing show similarity with the bundles found in applied linguistics and business studies, and differences with the ones used in biology and electrical engineering. Several bundles among the 20 most frequent (the development of the, in accordance with the, in the banking sector, the analysis of the, small and medium sized and the implementation of the) are not found in the other corpora, meaning that they are specific for the register of economics academic prose, which lends support to the concept that bundles are register specific (Biber et al., 1999). The grammatical structure of the bundles was found to be clausal, with the majority of bundles containing noun phrases and prepositional phrases.<sup>46</sup>

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<sup>46</sup> Damchevska, "Structure of Lexical Bundles in Economics Research Articles"

In the study of Jalali and Moini, they investigated the use of four-word lexical bundles in introduction section of published research articles in medicine. There were 161 lexical bundles in the corpus of introduction section. It was found through the structural analysis of bundles that introduction section contained the highest proportion of noun-phrases (24.02%) and phrasal bundles.<sup>47</sup>

In 2015 Jalali et al. investigated the use of four-word lexical bundles in published research articles in medicine. The results of the study showed that 102 identified lexical bundles. The identified lexical bundles were classified structurally based on Biber et al.'s (1999) and Hyland's (2008a) functional taxonomy. The most structure categorized the identified lexical bundles were prepositional phrases. For the functional category, most of the writers of medical research articles rely on text-oriented bundles.

Ucar comparing the occurrence of three-word lexical bundles with a qualitative analysis of the functions and structures of the lexical bundles between Turkish non-native scholars and Native English writers in the academic published articles. The study revealed that native speakers are more natural to produce three-word lexical bundles in texts compared with Turkish non-native scholars. The basic structure of the bundles in the non-native text is other- prepositional phrase. Regarding the function of lexical bundles Turkish non-native writers used more referential bundles in the text.

Besides research on sections of research articles, Demirel and Ahmadi decide to analyze the lexical bundles in the acknowledgments section of the research article. They compare the use of lexical bundles across three academic disciplines written by Turkish and Iranian authors. It was found that number of lexical bundles were found a lot in research article written by Iranian authors. whereas, Turkish authors generally avoided using these expressions in their texts.

Findings and discussion sections is not the only one structural pattern for research article but these sections also organize the thesis structure. Wachidah et al. analyzing the lexical bundles used in findings and discussion sections of graduate students' thesis along with their structures and functions. There are 74 lexical bundles found in the students' texts. The structures of bundles are mostly

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<sup>47</sup> Zahra Jalali, M. Moini, "Structure of Lexical Bundles in Introduction Section of Medical Research Articles", *Procedia - Social and Behavioral Sciences*, 98, 2014

involved prepositional phrase (fragment). Text-oriented function is the most form of functional types from overall bundles.

Actually, there are many kinds of text that can be a reliable data for the purpose of investigating lexical bundle. A basic type like argumentative and narrative writings is commonly learned by different level of English language learners. Yang interest to study lexical bundles in argumentative and narrative writings by Chinese EFL learners and then classified into structural and functional categories respectively based on Biber et al.'s (1999) and Biber et al.'s (2003) frameworks. The results show that students used much more four-word bundles in argumentative writings than those in narrative writings. In the structural patterns of the four-word lexical bundles used by the students between the two text types are slightly different. the functional patterns of four-word lexical bundles in argumentative writings are more on stance bundles. Chinese EFL learners imply more on referential expressions of the identified bundles in narrative writings.<sup>48</sup>

The majority of studies that have examined lexical bundles in research articles needed in order to provide insight into theory and practice for academic writers. In addition, lexical growth is strongly related to academic achievement. The main attention of the academic achievement in lexical competence of second language learners is furthermore a crucial area of study.

In the study of Crossley and Salsbury for example, they observed the development of two bundles of six adult second language English language learners. In a year of their natural English speaking during the class, their ability to use lexical bundles in spoken discourse accurately is increased.<sup>49</sup>

It has been noted that different studies have different criteria of lexical bundles whether in their grammatical structures or their functionalities. Therefore, this study presents more valuable information about the significance of lexical bundles and how they differ both structurally and functionally on the disciplines of education.

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<sup>48</sup> Yanfeng Yang, "Lexical Bundles in Argumentative and Narrative Writings by Chinese EFL Learners", *International Journal of English Linguistics*, Vol. 7, No. 3, 2017

<sup>49</sup> Scott Crossley and Thomas Salsbury, "The Development of Lexical Bundle Accuracy and Production in English Second Language Speakers, *International Review of Applied Linguistics In Language Teaching*, 49,2011