



Students' Familiarity with Metaphorical Collocations of Time: A Preliminary Investigation

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ABSTRACT

The present study attempted to investigate EFL students' familiarity with collocations of time (i.e., verb + *time* and *time* + noun) in the English language. As many as 42 students were enrolled in this study as participants in which 23 participants were fifth-semester students and 19 were seventh-semester students. To collect the data, the questionnaire was designed and developed based on corpus search results in terms of the verb collocations (verb + *time*) and noun collocates (*time* + noun). The data were collected by distributing questionnaires confirming their familiarity with some setlists of time collocations. The results showed that most students are already familiar with many time collocations, either verb + *time* or *time* + noun combinations. However, some high-frequency collocations were less familiar among EFL learners. This result should be considered by introducing more intensively learners to English collocations, especially collocations of *time*.

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INTRODUCTION

Time is essential in human life since we experience things that happen in time. However, time is intangible; we cannot see or touch it. It is different from space, for instance, since it has dimensions, and we can measure it. Although time is abstract, we need to express it a lot to function daily. According to Wierzbicka (1996), time is a universal semantic prime, alongside quantifiers, space, and life and death. This concept is innately understood by all people (language users) and exists in all languages. Time is also persistent in English (e.g., the word *time* is the most frequent noun in the *British National Corpus*). It indicates that time is a daily expression, and we use it very frequently. Thus, to express time humans, we lexicalized it in terms of space and motion (Boroditsky, 2000, 2011; Evans, 2003)

Regarding the abstractness of time, the representations must be constructed through analogical extensions from more experienced-based domains, such as space and motion (Boroditsky, 2011). The expressions of time then are predominantly metaphorical

due to the shift of the domains. When we spatialize time, we express time metaphorically. Not only spatialized, but the expressions of time might also be expressed through other domains, such as TIME IS MONEY as in the collocations *spend time*, *save time* or TIME IS POSSESSION as in the collocation *have time*. This shows that many time collocations are metaphorical. Time is a central topic in our life, and collocations are crucial for language learning; therefore, being familiar with collocations of *time* is essential for language learners.

In the EFL context, learning time concepts can be perplexing since time expressions differ across cultures (Boroditsky, 2011). Although time is predominantly expressed through space and motion, the manifestation in languages might vary. Chen (2014) reported that English and Chinese have different horizontal or vertical time conceptualizations. This might result in a different way to construct time collocations. To this extent, EFL learners should familiarize themselves with various collocations, including time collocations. However, learning collocation is quite challenging, as proven by several studies (Ghaniabadi et al., 2015; Tsai, 2015). These studies reported that EFL learners have some difficulties understanding and using collocations.

Many studies have been done on lexical collocations in general; however, little is known about time collocations and students' familiarity with the collocations in the Indonesia context. Therefore, the present study aims to answer the following questions: (1) What are the most familiar and the least familiar collocations of *time* among EFL learners? (2) What is the pedagogical implication of the findings?

LITERATURE REVIEW

Time Metaphor

Time and the lexicons or expressions of time are essential for humans to function (Boroditsky, 2011; Evans, 2003). The word *time* is very notable and ubiquitous in terms of language use. Based on the Corpus of Contemporary American English, the word *time* is the second most frequent noun with 1.668.979 per million words. As for the British National Corpus, the word *time* is the most frequent noun with 145.997 per million words. These corpus results show that *time* is an important word in the English language as it is used so intensively in day-to-day life as recorded in the two general corpora.

We cannot live without time because events happen *in* time. Time also provides important and crucial dimension to understand the world. Although time seems

fundamental to our understanding of other events, we ordinarily think and talk about time not in time's own terms. Furthermore, Lakoff & Johnson (2003) claimed that it is nearly implausible to talk about time without referring to space and motion. Boroditsky (2000, 2011) explained that this is due to the intangibility or abstractness of time. We co-opt the representations we've built for more physical and concrete domains to construct mental representations of abstract or intangible elements. As a result, we talk of the 'passing' or 'flow' of time, as well as being 'placed' in time, to represent time.

The borrowing of a specific domain like space into time expressions is metaphorical. According to Lakoff and Johnson (2003), we use lexical content from the motion domain because it mirrors how we think about and experience time. In other words, temporal notions are metaphorically structured by motion and spatial concepts. Boroditsky (2011) explained that people all across the world use space to express time. In cultural artifacts such as graphs, timelines, clocks, and calendars, we spatialize time. We rely extensively on spatial language to represent time and employ gestures to express temporal links (e.g., short, long, forward, backward). However, time is spatialized differently in different languages and civilizations. Native English speakers may express themselves differently than native Indonesian speakers. As a result, it's equally fascinating to look into how foreign language learners perceive time in the target language.

Collocations

Collocations can be defined as the co-occurrence of words related to syntagmatic relationships (Nesselhauf, 2004; Szudarski, 2017; Wood, 2015). Furthermore, Sinclair (1991) stated that collocations are co-occurrences of words within a certain distance around the word (node), usually four words to the right and the left. This term was proposed by Firth (1957), showing that the meaning of a word not only depends on what it possesses in itself but also on how it co-occurs with other linguistic units. There are two approaches of collocations: frequency-based and phraseological (Granger & Paquot, 2008). The frequency-based approach can be called a statistically oriented approach (Nesselhauf, 2004) since it considers frequency to measure the association of co-occurrences. The second view, the phraseology approach, views collocation as a word combination (Nesselhauf, 2004; Wood, 2015). There is the dichotomy of word combinations in phraseology approach, namely composite and formula; formulae carry primarily pragmatic functions, e.g., *how are you*, *good morning*, while composites have predominantly syntactic functions (Wood, 2015).

The present study employed a frequency-based approach to identify the collocations of verb + *time* and *time* + noun in the English language because it provides more certain criteria of collocation identification. Using this approach, the co-occurrences of the two words must be remarkably frequent to be categorized as collocations. However, the frequency cannot measure the strength of association between word combinations. As a consequence, a specific association measure (AM) that may combine frequency information with additional collocational qualities should be used (Gablasova et al., 2017). In addition, frequency is not the best tool to show regularity and predict language use. Although certain word combinations have a high frequency of use, they might be used within the exact text or only produced by a minimal number of speakers/writers (Brezina, 2018; Gablasova et al., 2017). Thus, this study also utilized Mutual Information (MI) to identify the collocations. The MI-score is a logarithmic scale that expresses the proportion of collocations to random co-occurrences of two words in a combination (Brezina, 2018; Gablasova et al., 2017). Another critical aspect of collocation is the collocation span or window span. Using the window span, the collocations will include minor but also show broader patterns and associations (Gablasova et al., 2017; Nesselhauf, 2004; Szudarski, 2017).

Previous Studies

Time as metaphoric expressions has been studied rigorously in many languages, including English. There have been some studies focusing on space as the metaphoric expression of time (Ahrens & Huang, 2002; Boroditsky, 2000) and comparing time expressions in English with other languages, e.g., Chinese (Chen, 2014), Spanish (Valenzuela & Alcaraz Carrión, 2020). Boroditsky (2000) evaluated whether the abstract domain of time borrows the manifestation from the domain of space. The study indicated that space and time do share conceptual structure. Similarly, Ahrens & Huang (2002) investigated the conceptual metaphor TIME IS SPACE as one of the universal metaphors. The study showed that the source domain of MOTION and SPACE should be distinguished with TIME IS MOTION that can be specified into TIME IS A MOVING POINT OVER A LANDSCAPE or TIME IS A MOVING ENTITY.

Compared to another language, time metaphors or metaphorical time expressions have also been discussed. Chen (2014) claimed that English and Chinese have different time metaphor manifestations. It is illustrated with the horizontal level in which the observer is facing the past in English. At the same time, Chinese manifests time in vertical

level with different observation points and the observer's states. Similar to Chen, Valenzuela & Alcaraz Carrión (2020) also suggested that English more frequently uses deictic expressions with directional language than Spanish. Still, sequential expressions and duration expressions are more frequent in Spanish. In comparing English and Persian, Golfam et al. (2019) reported that the two languages demonstrate a similar conceptualization of time expressions which were proven by the use of similar collocations of *time* in both languages.

Since this study focused on collocations of time, it is also necessary to discuss previous studies on collocation. Some studies on students' familiarity and mastery of collocations in the EFL contexts have been conducted (Habtoor & Al-Swaidan, 2019; Hanamoto, 2013; Harida & Hamka, 2019; Pertiwi, 2019). Habtoor & Al-Swaidan (2019) have conducted research concerning translation strategies for familiarity with collocations. The study results showed the learners' collocational knowledge is not satisfactory and still below the expectation, considering the participants are English major students. This study also figured out a positive relationship between learners' familiarity with English collocations and their ability to translate them correctly and appropriately into Arabic. In the Indonesian context, Pertiwi (2019) examined the ability of eight-semester students to use lexical collocations and showed that they are not familiar enough with many lexical collocations. In other words, the students have insufficient collocational knowledge, which might happen due to the lack of vocabulary knowledge of the target language and the influence of the mother tongue. In general, the students used lexical collocations restrictedly, and the results of the tests were low.

Related to familiarity, studies on collocations have been done by covering the aspects of intelligibility and mastery. Hanamoto (2013) conducted a study to investigate the intelligibility and acceptability of collocations produced by Japanese learners. The results indicated that Japanese learners' collocations tend to lack intelligibility for those who do not share the same language system. Meanwhile, among Japanese learners, English collocations become more acceptable and understandable. A more recent study about students' collocation mastery in the Indonesia context was done by Harida & Hamka (2019) who found out that sixth-semester students were still in low categories related to collocational knowledge. The study showed that the students felt difficult to understand collocations because they needed to remember them more intensively.

Regarding the previous studies, collocations are more intensively and robustly discussed in relation to the production and the teaching activity. In students' production of collocations, the studies are primarily concerned with the usability test (Ababneh, 2020),

error analysis (Dukali, 2018; Harta et al., 2021; Setiarini, 2018; Tanihardjo, 2018). Ababneh (2020) administered a test to identify the students' collocational competence. The study results showed that students' performance in the test of collocation was low. The study also revealed that the teaching of collocations as a vocabulary component was neglected, which might be due to students' insufficient knowledge of collocations.

More studies on students' collocation production were related to error analysis. Dukali (2018), for instance, analyzed the errors of lexical collocation use in academic writing and claimed that three broad categories of errors were identified in the study, namely grammatical errors, lexical errors, and usage errors. These errors were classified based on the patterns, revealing 16 verb-noun collocations and 12 adjective-noun collocation errors. As for the Indonesian context, errors analyses on collocation production were done by Harta et al. (2021), Setiarini (2018), Tanihardjo (2018). Tanihardjo (2018) investigated the errors of collocations in students' essays and figured out 22 errors. According to the study, the errors might be related to the influence of the L1 of the learners.

Similarly, Harta et al. (2021) also examined students' errors in using collocations and found 54 erroneous use of lexical collocation consisting of verb + noun/pronoun, adjective + noun, adverb + adjective, noun + noun, and verb + adverb combinations. This study explored the causes of the errors, such as the lack of collocation competence, L1 influence, the use of synonyms, overgeneralization, and approximation. Students' errors in using collocations were also studied in translation. Setiarini (2018) explored the most frequent errors in translating collocations made by EFL learners. This study revealed that the most frequent translation errors are lexical errors, followed by grammatical errors. The errors are predominantly caused by the influence of the learners' L1s and intralingual errors.

Collocations have also been studied in teaching activity, e.g., the effectiveness of collocational-based materials (Boonyarattanasoontorn et al., 2020) or how to teach collocations using certain media (Basal, 2019; Kim, 2017). Boonyarattanasoontorn et al. (2020) employed several paradigms in teaching collocations: (i) Presentation and Observe (P&O), (ii) Practice and Hypothesis (P&H), and (iii) Production and Experiment (P&E). After taking the lessons, the students were required to write essays to be compiled as a corpus. The corpus investigation showed that the participants made the most verb + noun collocation errors. However, in general, they benefited from the lessons.

Regarding the teaching of collocations, Kim (2017) has examined the use of dictionaries to teach collocations and reported that the participants perceived the instructions of using a dictionary as necessary and helpful in improving their collocational competence. Besides, their dictionary usage was generally changed after receiving the instruction, raising their sense of learner autonomy. Similarly, Basal (2019) also proved using online tools to learn collocations is more effective than traditional activities. These studies showed that teaching collocations require particular efforts from the teachers, but it should be done nonetheless.

Based on the previous studies on collocations, they are not related to time collocations in the English language. The studies of time collocations are rarely done, especially in the EFL settings. Although several studies have concerned the comparison of time expressions in the L1 and English as the target language (e.g., Chen, 2014; Golfam et al., 2019; Valenzuela & Alcaraz Carrión, 2020), little is known about the familiarity of EFL learners towards collocations of *time* which is also important in mastering the target language since time expressions are basic expressions in daily life.

METHODS

This qualitative study explores students' familiarity with collocations of *time* in the English language. The participants of the study were 42 English major students that have studied for more than two years in English department (five-semester students and above). These students have taken *Vocabulary* course and several writing and reading courses; thus, it is expected they have learned basic vocabulary and basic expressions in English as well as have sufficient knowledge of word combinations.

The present study distributed questionnaires asking their familiarity with collocations of *time to collect the data*. However, this study focused on verb + *time* and *time* + noun combinations. To design the instrument, the corpus investigation was done in the *Corpus of Contemporary American English* (COCA) to find the verb and noun collocates of *time*. Frequency and a particular association measure (AM), *Mutual Information* (MI) scores were employed to identify the corpus's collocations. This study used MI-score as it is crucial to employ a particular AM to identify collocations, and the feature to calculate MI-score is already available in COCA. Furthermore, it fits the need of this study that might deal with lower frequencies (Brezina, 2018; Gablasova et al., 2017). As for the collocation identification, the MI-score must be above 3 to be considered as

collocations (Szudarski, 2017). Table 1 presents the results of the most frequent verb collocates of *time* found in COCA per million words (pmw).

Table 1. Verb + *time* collocations in COCA

No.	Collocations	Freq (pmw)	MI
1	have time	14553	4.41
2	spend time	3968	11.25
3	take time	3336	7.89
4	waste time	1171	10.47
5	save time	806	8.91
6	find time	671	6.32
7	make time	658	5.29
8	buy time	422	7.47
9	need time	262	4.41
10	kill time	184	6.43
11	invest time	110	8.50
12	keep time	104	3.99
13	stop time	97	4.46
14	give time	96	3.67
15	serve time	90	6.16
16	provide time	58	4.47
17	gain time	55	6.16
18	measure time	51	5.61
19	share time	42	4.22
20	steal time	22	6.01

Concerning *time* + noun combinations, there are 10 most frequent collocations. The size is different from verb + *time* since *time* + noun combination is naturally less common than verb + *time*. Table 2 displays results for *time* + noun collocations.

Table 2. *time* + noun collocations in COCA

No.	Collocations	Freq (pmw)	MI
1	time period	4938	8.77
2	time frame	3353	9.93
3	time travel	1997	8.19
4	time zone	1289	8.53
5	time management	1054	6.92
6	time limit	1001	8.09
7	time line	924	5.32
8	time bomb	778	8
9	time constraints	713	9.54
10	time scale	563	6.67

The results of corpus investigation were then developed into a questionnaire by asking them which collocations are more familiar to them and which are least familiar. They were

also asked to write some sentences using the verb + *time* and *time* + noun collocations they are familiar with. These examples were to verify their familiarity with the collocations they chose. Since this is a preliminary study, the focus of the questionnaires was delimited to ask about the more familiar collocations and the least familiar collocations. Students were not tested any further. The questionnaires were then distributed to the participants of the study using *Google Form*, and the responses were recorded accordingly. After having the data collected, they were calculated and interpreted to answer the research questions proposed in this study.

FINDINGS

This section displays the results of the familiarity questionnaire distributed to the participants. Table 3 below presents the percentage results of the *verb + time* collocations.

Table 3. Familiarity of *verb + time* collocations

No.	Verb + time collocations	Percentage
1	take time	92.9
2	save time	90.5
3	need time	90.5
4	spend time	88.1
5	have time	85.7
6	waste time	83.3
7	give time	64.3
8	make time	61.9
9	kill time	52.4
10	keep time	45.2
11	share time	38.1
12	stop time	38.1
13	find time	35.7
14	buy time	33.3
15	provide time	23.8
16	steal time	21.4
17	invest time	19
18	serve time	16.7
19	measure time	11.9
20	gain time	7.1

Table 3 shows that *take time* is the most familiar verb + time collocation (92.9%), followed by *save time*, *need time* (90.5%), *spend time* (88.1%), *have time* (85.7%), and *waste time* (83.3%). The table also 3 presents that collocations of time, such as *give time*, *make time*, and *kill time*, are pretty familiar among the learners by having more than 50% results. On the contrary, some collocations are less familiar for the learners, such as *keep time*, *share*

time, *stop time*, *buy time*, *provide time*, and *steal time*. Interestingly, collocations like *invest time*, *serve time*, *measure time*, and *gain time* are the least frequent among the learners, with the percentage below 20%. These results show that although time expressions are crucial for daily communications, some collocations are still less heard or used by the participants.

As for the *time* + noun collocations, table 4 presents the overall percentage of the learners' familiarity with the collocations.

Table 4. Most familiar time + noun collocations

No.	Verb + time collocations	Percentage
1	time zone	92.9
2	time management	83.3
3	timeline	81
4	time travel	71.4
5	time period	64.3
6	time limit	64.3
7	time scale	11.9
8	time bomb	11.9
9	time constraint	9.5
10	time frame	9.5

Table 4 demonstrates that *time zone* is the most familiar collocation with 92.9%, followed by *time management* and *timeline* (83.3% and 81%, respectively). Based on table 4, collocations of *time* + noun, e.g., *time travel*, *time period* and *time limit* are pretty familiar by having more than 50% results (71.4%, 64.3%, and 64.3%, respectively). Meanwhile, other collocations like *time scale*, *time bomb*, *time constraint*, and *time frame* are less or least familiar for the learners with the percentage below 20%.

Comparing the collocation list in table 1 and the familiarity in table 3, it might not have a significant difference. Almost all familiar collocations are in the top ten of the collocation lists, except for the collocation *buy time* and *find time*. In COCA, *buy time* occurs 422 time per million words with an MI-score 7.47. However, only 34.1% of the participants are familiar with this collocation. Similarly, the collocation *find time* can be found in COCA with 671 occurrences per million words, and the MI-score is 6.32, but only 36% of the participants are familiar with this collocation.

Regarding the *time* + noun collocations, the results are pretty much alike with the list of top ten collocations in COCA. The most noticeable difference is the collocation *time frame* with high frequency (3353 pmw) and MI-score above 3 (9.93) in COCA, but it is the least familiar collocation among the participants. This result demonstrates that there might

be some discrepancies between the actual use of time expressions in the English language with what the EFL learners learn and master.

DISCUSSION

This preliminary study found out that there were some discrepancies between the actual use of metaphorical time collocations and EFL students' familiarity with those collocations. Some highly frequent collocations turned out to be less or least familiar among the EFL learners. The results of the study showing the mismatches of collocations learned or mastered by the EFL learners do correspond to the previous relevant research, e.g., Habtoor & Al-Swaidan (2019). The study found the students' collocation knowledge is unsatisfactory. This is partially in line with the present study results emphasizing the lack of collocational knowledge in EFL learners.

In a more relevant setting, the results of this study confirmed the study conducted by Harida & Hamka (2019). Harida & Hamka (2019) figured out that the collocational knowledge of six-semester students in Indonesia was still in low categories. Although many of the time collocations that are frequent in COCA are also familiar for learners, some collocations are the least familiar regardless of the high frequency in the corpus. It indicates the mismatches between actual collocation use and the EFL learners' collocation understanding or knowledge. Similar to Harida & Hamka's (2019) study, the present study also corresponds to the results of Pertiwi's (2019) study confirming that EFL learners in Indonesia might have some problems dealing with collocations. When performing in a test, the lack of collocation knowledge might result in the low score as Ababneh (2020) has proven, emphasizing the low results of students' performance in the test of color term collocations.

The findings of this study are also in line with the probability of errors produced by EFL learners. Dukali (2018) has proven that EFL learners tend to make errors in using collocations, especially in academic writing. This study confirms that there might be a different understanding of collocational knowledge and use between native speakers and EFL learners. In the Indonesia setting, this study's results also support the previous research findings on errors in using collocations (e.g., Harta et al., 2021; Setiarini, 2018; Tanihardjo, 2018). These studies indicated that learners are inevitable when producing collocations in the EFL context. This is similar to what the present study implies; differences in time collocation knowledge are plausible and common since it also happens in any other type of collocations (color, lexical collocations).

Since language by nature is formulaic, these word combinations called collocations are essential for language learning. Considering the discrepancies are plausible, it is necessary to introduce learners to collocations more intensively. They should be integrated in vocabulary courses, writing courses, speaking courses, and many other relevant courses for English language skills. Teachers and writing instructors should consider the formulaic language as part of their teaching materials, e.g., collocations, lexical bundles, colligations, etc. These can enhance the quality of the language input for the learners, especially concerning the importance of time expressions on day-to-day communication. Collocations should be taught based on the frequency in the actual English used to help learners learn the necessary word combinations or expressions. In other words, teachers should also consult a corpus before the teaching activity or materials design to better the language aspects.

CONCLUSION

Based on COCA queries, this is a preliminary study investigating the familiarity of the most frequent collocation of time (verb + *time* and *time* + noun) in the English language. The results showed that although most EFL learners are familiar with most collocations, some mismatches are identified in terms of familiarity. The present study marked the inevitability of different collocational knowledge and mastery between native speakers of English and EFL learners, as proven by the previous studies. The findings then should be revisited by the teachers and writing instructors to get better learning results.

However, this study has some shortcomings related to the methodological aspects. L1 backgrounds are overlooked in this study, and there was no test to simplify the data collection as this is mere preliminary research that needs further follow-up. In addition, the number of participants is negligible compared to the population of the English department. Therefore, other studies should be conducted by conducting collocation tests, enrolling more participants, and considering the L1 backgrounds.

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