

Collocations of *verb + time* in English and *verb + waktu* in Indonesian: A Corpus-Driven Study of Time Metaphors

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ABSTRACT

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Time is one of the salient concepts in human life since we live and act in *time*. Thus, research investigating time is always intriguing yet perplexing. This study aims to describe the collocations of verbs with the most frequent lexical item for the temporal concept, i.e., *time*. The present study also compared the English collocations to those in Indonesian counterparts, i.e., *verb + waktu*. This corpus-driven study uses two reference corpora, *Corpus of Contemporary American English* for English data and *Leipzig Corpus Collection* for Indonesian data. The association measure used to identify the verb collocates is *Mutual Information (MI)*, and the results of collocates in both languages were compared. The result of the study shows that there are 15 most frequent verb collocates of *time* and *waktu* for both English and Indonesian, e.g., *have, spend, take, membutuhkan, memanfaatkan, memerlukan*, etc. Of all these collocates, some similarities and differences can be mapped. The similarities are associated with basic mappings of time metaphor, e.g., *TIME IS MONEY, TIME IS A RESOURCE, TIME IS A COMMODITY, and TIME IS MOTION*. Despite the similarity, some differences are also identified, which might be affected by a limited number of verb collocates analyzed in the present study (e.g., *TIME IS A FLEXIBLE OBJECT, TIME IS A CONTAINER, TIME IS A BEING, TIME IS A VICTIM*). The study's results can be used as a reference for teachers in teaching or designing teaching materials on time expressions or time metaphors.

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Introduction

Time is one of the primary conceptual domains in human experience; it permeates everything in human reasoning (Filipović & Jaszczolt, 2012). Each language has a distinct way of expressing time, which societal worldviews may influence. However, some studies reported evidence of the effect of language on cognition, meaning that language affects how we think about the world,

including time, following the neo-Whorfian theory (Wearden, 2016). The manifestation of time in language may reflect society's world view towards time, adhering to the concept of linguistic determinism (Boroditsky, 2000).

Time can be conveyed grammatically or lexically, and there are many different ways to express time in different cultures and languages. Time is expressed grammatically and lexically in English (e.g., tense inflection) (Comrie, 1985; Oktavianti & Prayogi, 2018). While Indonesians have unique traits and do not use tense systems, other Indo-European languages have similar time marker features (tense, aspect) (Hewson, 2012). Indonesian speakers use periphrastic time expressions because the language lacks tenses (Oktavianti & Prayogi, 2018). Aside from the various time expressions and time manifestations, the term "time" ranks among the most used words in English, according to corpora. It suggests that among English speakers, time is a crucial concept.

According to the *Corpus of Contemporary American English*, the word *time* is one of the most frequent nouns in the English language. This is plausible since we need to express time daily. Furthermore, time has multiple senses for different contexts, making it extremely frequent. Baker (2010) stated that frequency indicates markedness; a word with a high frequency of use exhibits the importance of the word in the language. In other words, the word *time* is a salient word, and it is then intriguing to find out how that word is used in expressing time. Since words are not used in isolation and information is retrieved in chunks (Wood, 2015), it is necessary to explore the co-occurrences of the word *time*, especially in the VP constructions (*verb + time*), to find what verbs co-occur with time and what are the similarities among those verbs. Considering the possible metaphorical expressions in time, it is also plausible to explore how English speakers perceive time based on the metaphorical mapping of the verb collocates of *time*.

As an international language, studying English is quite demanding nowadays, including in Indonesia. Apart from English grammar, it is also important to understand the cultural aspects of the language. Time as one of the important cultural-related concepts, should also be considered in learning English. Thus, in response to the need to explore the use of *time*, it is also necessary to find out the counterparts in Indonesian. By doing so, we can compare how English and Indonesian speakers perceive time and indirectly support the learning process of the English language for Indonesians. Since time expressions are predominantly metaphorical, there can be some metaphorical mappings of the expressions, as described by Lakoff & Johnson (2003) and Hernández (2001). However, these studies are solely based on the English language; thus, it is essential to find out what these metaphorical mappings look like in other languages, including Indonesian.

Considering its significant part of life, time has been studied quite massively by scholars from various disciplines, e.g., psychology, physics, and also linguistics. More specifically in linguistics, time has been researched in the past decades by focusing on the English language and its comparison to other languages. Time expressions have been specifically studied using a corpus-based method to investigate the English language (Li, 2015). Li (2015) explored the phraseology behavior of the noun *time* and figured out some patterns of metaphorical mappings, such as TIME IS MONEY, TIME IS MOTION, etc. Research on time expressions has also been conducted to examine other languages, usually in comparison to the English language, such as Chen (2014), Fuhrman et al. (2011), Golfam et al. (2019), Valenzuela & Alcaraz Carrión (2020). These studies compare time orientation and time expressions in several languages proving that each language and each culture has distinctive ways of describing time-related concepts.

In the Indonesian context, time has been studied by utilizing psychological perspectives (Indirasari, 2017, 2019), conceptual metaphor theory (Prayogi, 2013; Rajeg et al., 2022), and corpus-based approach (Deignan, 1999; Prayogi & Arimi, 2020; Rajeg et al., 2022). Rajeg et al. (2022) specifically studied Indonesian's spatial conceptualization of time. Regardless of those previous studies, the number of the studies is still limited and the topics do not vary compared to those conducted to study English. More surprisingly, very limited research compares English and Indonesian in terms of time and time expressions. Boroditsky et al. (2002), for example, analyzed the event perception in both languages and identified that tenses do influence the way people perceive actions; actions in the same tense will be more familiar for English speakers. Meanwhile, Indonesian speakers do not value tense in making action judgments. In other words, the representation of action events is not universal, as proven by English and Indonesian speakers. Regarding the familiarity of Indonesians with English metaphorical time collocations, Oktavianti (2022) has demonstrated that some English time collocations are familiar enough for Indonesian learners, yet some are still less familiar.

Based on the brief literature review, it is evident that there are some previous studies investigating time expressions and time collocations; however, little is known about the time collocations in English and their counterparts in Indonesian, specifically the verb collocates of *time* (English) and *waktu* (Indonesian). Therefore, this study aims to investigate the collocates of *time* and *waktu* in verb phrase constructions and to map the similarities and differences of the verb collocates. The study results can contribute to a better understanding of time in both languages and inform English teachers on how to teach English time expressions to Indonesians.

Methods

The present study employed two synchronic corpora, *Corpus of Contemporary American English* (COCA) for the English language data and *Leipzig Corpora Collection* (LCC) for the *Collocations of verb + time in English and verb + waktu in Indonesian* (Prayogi, et.al)

Indonesian data. The corpora were selected since they are massive (COCA comprises more than 1 billion words, LCC comprises 232 million words) and updated (including language data from 2010s-onward). Both are general reference corpora consisting of data produced by native speakers of English; thus, they are relevant for this study.

This is a preliminary study to explore how speakers of English and Indonesian perceive time, so the word *time* and *waktu* are selected as the queries and nodes for the collocations. In COCA, the collocations were investigated by using the collocates feature. Meanwhile, in LCC, the query was inserted, then proceeded to collocations. For the collocates identification, some criteria were complied with, e.g., frequency and Mutual Information (MI) score. The collocations should occur at least 20 times in the corpus with the MI score above 3. The minimum frequency is 20 occurrences, following the standard set up in COCA. Meanwhile, the MI score should be above three because it shows the strong association between the node and the collocate (Szudarski, 2017). Considering that high-frequency combinations do not always indicate a strong association, therefore the selected association measure is *Mutual Information* (MI). If the MI score is below 3, it indicates a low association, and thus they should not be included as collocations. The collocation window was also adjusted to maximize the valid results by narrowing the left and right windows (R1, L1) in LCC and selecting only the right window in COCA (R1). After the results were generated, the verbs were then identified and listed. The result of English verb collocates and Indonesian verb collocates were compared.

Findings

1. The Most Frequent Verb Collocates of *Time* and *Waktu*

This section discusses the verb collocates of *time* and *waktu* respectively. Table 1 presents the collocates of *time* found in COCA.

Table 1. Verb collocates of *time*

Rank	Collocations	Freq	MI	Example
1	<i>have time</i>	14553	4.41	<i>Like so many, I don't even have time to name them. I'm the one who doesn't have time to waste.</i>
2	<i>spend time</i>	3968	11.25	<i>We understand that many of our associates want to spend time with their families on the holiday. We're happy to spend time together.</i>
3	<i>take time</i>	3336	7.89	<i>But when he had the chance to take time off, he said, he flew to Dubai. Take time to list your gratitude for the day.</i>
4	<i>waste time</i>	1171	10.47	<i>People waste time wanting a life that is not their own. If we waste time looking for life's meaning, we may have no time to live.</i>
5	<i>save time</i>	806	8.91	<i>To save time and money I recommend booking tickets online in advance. Buying pre-cut blank greeting cards can save time too.</i>

6	<i>find time</i>	671	6.32	<i>It was nice of these ladies to find time in their busy schedules to semi-participate in your event. I do still find time to spend with my wife and son and I always take weekends and holidays.</i>
7	<i>make time</i>	658	5.29	<i>If it's important, you make time—just like falling in love. When we are removed from the classroom, we make time to reflect.</i>
8	<i>buy time</i>	422	7.47	<i>They utilize their available options to buy time and evaluate. Analysts said the Fed move was designed to buy time and see how the economy developed during the fall.</i>
9	<i>need time</i>	262	4.41	<i>We are depleted and need time to rejuvenate our creativity and productivity. You'll need time to find things and the different places you'll be using during your voyage.</i>
10	<i>kill time</i>	184	6.43	<i>They say it helps them kill time as well when they're waiting in hotels and airports around the world. They treat it merely as something to help them kill time.</i>
11	<i>invest time</i>	110	8.50	<i>You drop out because a good business means you have to invest time. If you want a happy marriage, invest time and energy in it like you did when you were dating.</i>
12	<i>keep time</i>	104	3.99	<i>Her words seemed to keep time to movement of her head and her mouth. That watch will keep time but for a moment in time.</i>
13	<i>stop time</i>	97	4.46	<i>Now I wish I could stop time and spend a few years with them. Photography is the only way to truly capture and stop time.</i>
14	<i>give time</i>	96	3.67	<i>We don't need death to give time a purpose. It will give time to repair any damage done from all the heated styling.</i>
15	<i>serve time</i>	90	6.16	<i>If he cannot serve time, get treated as a youthful offender. Did you serve time for those crimes?</i>

Table 1 shows that verbs *have*, *spend*, *take*, *waste*, and *save* are the five most frequent verb collocates of *time*, with *have* (*have time*) as the most frequent one (14,553 co-occurrences). This indicates that this collocation is salient in English since it is used frequently. The other verb collocates found in COCA are *find*, *make*, *buy*, *need*, *kill*, *invest*, *keep*, *stop*, *give*, and *serve*. As for the Indonesian counterparts' verb collocates of *waktu* are shown in Table 2.

Table 2. Verb collocates of *waktu*

Rank	Collocations	Freq	MI	Example
1	<i>membutuhkan waktu</i>	37024	5.8	<i>Seekor cheetah hanya membutuhkan waktu 2 detik untuk berlari hingga kecepatan 65 kilometer per jam. Kuku manusia membutuhkan waktu sekitar 6 bulan untuk tumbuh dari dasar ke ujung.</i>

2	<i>memanfaatkan waktu</i>	2638	3.55	<i>Mereka tidak disiplin dalam memanfaatkan waktu. Ia pandai memanfaatkan waktu.</i>
3	<i>memerlukan waktu</i>	17777	5.5	<i>Aku hanya memerlukan waktu beristirahat sebentar. Ternyata pekerjaan itu memerlukan waktu yang cukup lama.</i>
4	<i>mengisi waktu</i>	14715	4.61	<i>Biasanya digunakan sebagai wahana mengisi waktu senggang yang berorientasi pada kesenangan. Maksud hati sekedar mengisi waktu luang, namun Ari justru mendapat banyak hal dari buku-buku yang dibacanya.</i>
5	<i>menghabiskan waktu</i>	12235	7.1	<i>Inilah novel di mana saya menghabiskan waktu paling lama untuk membacanya. Hidup ini terlalu singkat untuk menghabiskan waktu membenci orang lain.</i>
6	<i>memakan waktu</i>	10407	7.4	<i>Penerbangan ke Banjarmasin memakan waktu 1 jam 45 menit. Proses ini sering cukup rumit dan memakan waktu lama.</i>
7	<i>membuang waktu</i>	6615	5.17	<i>Tanpa membuang waktu, petugas segera membekuk IDR dan mengeledah rumahnya. Tidak mau membuang waktu, Shen Shen langsung mengemas barang-barangnya di penginapan.</i>
8	<i>menyita waktu</i>	4931	5.38	<i>Berawal dari kesibukan yang kujalani sehari-hari terasa begitu menyita waktu dan perhatianku. Namun bagaimana jika pekerjaan yang digeluti sekarang begitu menyita waktu?</i>
9	<i>memperpanjang waktu</i>	3474	4.15	<i>Tersentuh oleh ketulusan para inisiat dalam menyebarkan pesan penting ini, MTR memperpanjang waktu iklan dari 20 detik menjadi 27 detik tanpa biaya tambahan. Oleh karena itu, Retno meminta Mendikbud mengkaji secara matang kebijakan memperpanjang waktu belajar di sekolah ini.</i>
10	<i>mengorbankan waktu</i>	2638	3.55	<i>Ia sampai rela mengorbankan waktu liburnya sendiri, menemani Garsini ke beberapa tempat. Mereka rela mengorbankan waktu dan tenaga membimbing mahasiswa agar berprestasi.</i>
11	<i>memangkas waktu</i>	2067	3.85	<i>Bila Tol Bocimi rampung seluruhnya, akan memangkas waktu tempuh Sukabumu-Jakarta dan sebaliknya. Menurut Herry, tujuan transaksi nontunai adalah untuk memangkas waktu antrean kendaraan di gerbang tol, sehingga lebih efisien.</i>

12	<i>melewatkan waktu</i>	1912	4.83	<i>Bahkan hingga saat ini dia tidak pernah melewatkan waktu selepas magrib hingga menjelang isya untuk mengaji. Bahkan mereka sering melewatkan waktu bersama.</i>
13	<i>menyisihkan waktu</i>	1764	5.23	<i>Orang tua harus mencoba menyisihkan waktu khusus untuk memperhatikan anak yang lebih tua sesering mereka bisa. Sayangnya, sepengetahuan saya tidak banyak pelajar yang rela menyisihkan waktu mereka untuk berburu pengetahuan.</i>
14	<i>meluangkan waktu</i>	1478	8.5	<i>Sudah berapa lamakan kita tidak menghabiskan waktu kita untuk meluangkan waktu untuk berbincang dengan ayah ibu kita? Setelah melihat keterangan yang ada, kita harus meluangkan waktu dan berpikir.</i>
15	<i>menyia-nyiakan waktu</i>	1047	5.95	<i>Bila ini terus berlanjut, kita Kembali menyia-nyiakan waktu lima tahun ke depan untuk bangkit dari keterpurukan selama ini. Menyia-nyiakan waktu sama dengan mencuri waktu.</i>

Table 2 demonstrates that the most frequent verb collocates are *membutuhkan* 'need', *memanfaatkan* 'make use', *memerlukan* 'need', *mengisi* 'fill', and *menghabiskan* 'spend'. The verb *membutuhkan* is the most frequent one by co-occurring with *waktu* 37,024 times. The other verb collocates of *waktu* found in LCC are *memakan* 'eat', *membuang* 'throw', *menyita*, *memperpanjang* 'lengthen', *mengorbankan* 'sacrifice', *memangkas* 'cut', *melewatkan* 'pass', *menyisihkan* 'set aside', *meluangkan*, *menyia-nyiakan* 'waste'.

2. Comparison of the Highly Frequent Verb Collocates of Time in English and Verb Collocates of Waktu in Indonesian

Based on the findings, some similarities can be mapped among the collocates of *time* and *waktu*. These collocations exhibit the metaphorical expressions of time in English and Indonesian. However, it is important to consider that these mappings are based only on those 15 verb collocates with the highest frequency of use in COCA and LCC. Therefore, some mappings might be missing or incomplete.

3. Similarities of the Verb Collocates

a. TIME IS MONEY

As an abstract concept, time is usually expressed through something more concrete (Kövecses, 2010; Lakoff & Johnson, 2003; Li, 2015). One of the analogical objects is money, as identified by Lakoff & Johnson (2003). This might be associated with how valuable time is for

English-speaking people, so they mostly refer to money in expressing time. As found in the present study, this is also observable in the co-occurrence of verbs with the word *time*. Verbs like *spend*, *waste*, *save*, *make*, *invest*, *need* metaphorically express things related to money. This is in accordance with some verbs in the Indonesian language, e.g., *menghabiskan*, *memerlukan*, *membutuhkan*. These verbs co-occur with the noun *money*, as proven by the concordances below.



Fig 1: Verb collocates of money in COCA

Figure 2 further shows the concordance lines of *spend money* from COCA.

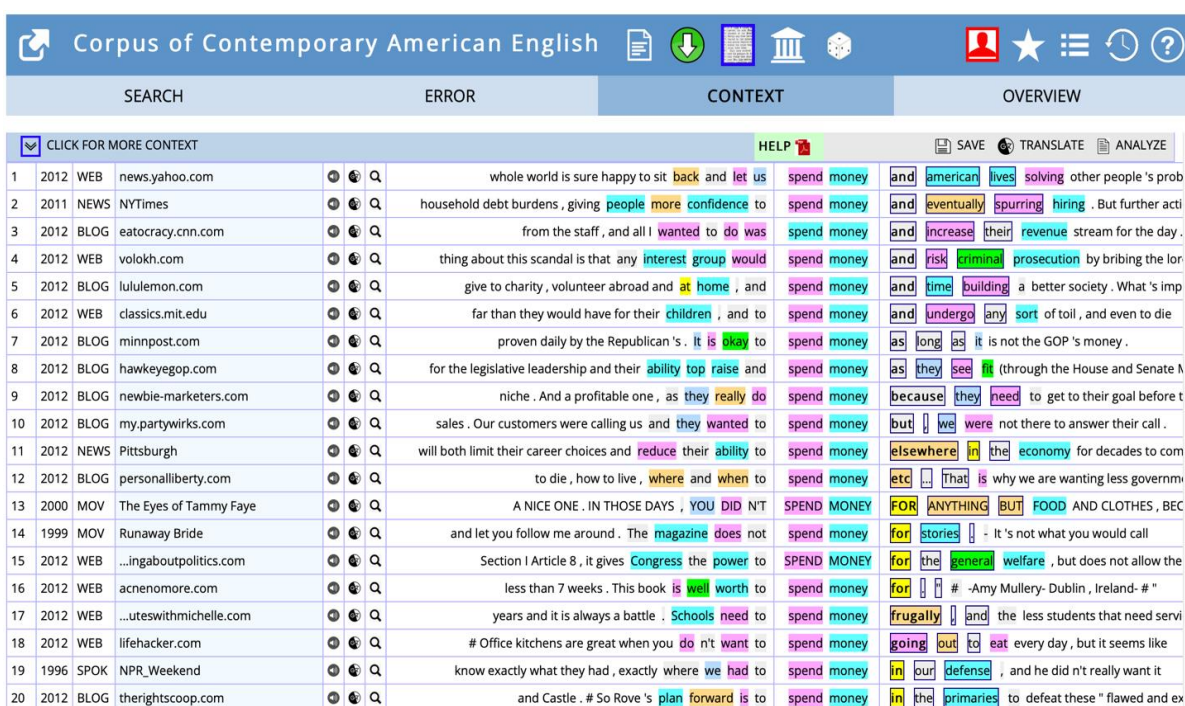


Fig 2: Concordance lines of *spend money*

Figure 1 and Figure 2 prove that *spend money* is a common construction in English, and the verb *spend* is one of the most frequent collocates of *money*. Therefore, the time metaphor TIME IS MONEY is not baseless and scientifically proven based on corpus results.

b. TIME IS A RESOURCE

Time expressions are also associated with resources, as in TIME IS A RESOURCE (Hernández, 2001; Lakoff & Johnson, 2003; Li, 2015). This is proven by the verb collocates such as *have, take, find, give, and keep*, which are related to resources. In Indonesian counterparts, there are also some verb collocates of *waktu* indicating TIME IS A RESOURCE, e.g., *memakan, menyia-nyikan, menyisihkan, memanfaatkan*.

(1) *Take time to list your gratitude for the day.*

(2) *Penerbangan ke Banjarmasin memakan waktu 1 jam 45 menit.*

Both English and Indonesian perceive time as resources. However, Indonesians express time as food as in *memakan waktu* 'eat time'.

c. TIME IS A COMMODITY

Time is also expressed as a commodity. The metaphor of TIME IS A COMMODITY can also be found in the use of the verb collocates in COCA and LCC, i.e., *buy* and *menyita*. These verbs indicate the activities that can be done to commodity and are used to express time.

(3) *They utilize their available options to buy time and evaluate.*

(4) *Berawal dari kesibukan yang kujalani sehari-hari terasa begitu menyita waktu dan perhatianku.*

The metaphorical structure of time showing TIME IS MONEY, TIME IS A RESOURCE, and TIME IS A COMMODITY are common in discussing time metaphors (Hernández, 2001; Li, 2015).

d. TIME IS MOTION

Regarding the three previous metaphors of time, another metaphor that is widely discussed is TIME IS MOTION since time is predominantly reflected through motion or movement (Boroditsky, 2000; Kövecses, 2010; Lakoff & Johnson, 2003). Of all 15 verb collocates identified in COCA and LCC, the verbs *stop* and *melewatkan* 'pass' refers to motion or movement as in examples (5) and (6).

(5) *Photography is the only way to truly capture and stop time.*

(6) *Bahkan mereka sering melewati waktu bersama.*

4. Differences in the Verb Collocates

Despite the similarities, there are also some differences with regard to the verb collocates of *time* and *waktu* as discussed below.

a. TIME IS A BEING (ANIMATE)

In English, time is perceived as a living being since it can co-occur with the verb *kill* in example (7).

(7) *They say it also helps them kill time when they're waiting in hotels and airports around the world.*

There is also a counterpart of this expression in Indonesian, i.e., *membunuh waktu*, but surprisingly it is not listed in the top 15 verb collocates. It is plausible that this *verb + waktu* combination is adopted from the English equivalent *kill time*.

No	Text	Solution 1 to 36	Page 1 / 1
1	lcc1	jalan berduaan . 219884 Karena tak bisa tidur , maka saya harus	membunuh waktu dengan kegiatan yang lebih berfaedah . 219885 Dia menghela napas beberapa kal
2	lcc1	Apapun sebutannya , novel-novel ini memang tercipta untuk menemani mereka yang ingin	membunuh waktu sambil dihibur , bukan dibuat pusing oleh diskursus eksistensialisme atau simulak
3	lcc3	mereka lebih fit untuk level klub . 572584 Mungkin itu dimaksudkan untuk	membunuh waktu selama menunggu pencairan uang yang dijanjikan . 572585 Mungkin itu firasatny
4	lcc4	__UNDEF__ 5) . 499121 Sementara di lokasi musda , sejumlah kader	membunuh waktu dengan berdendang-dendang . 499122 Tadi malam tata tertib selesai disusun . 499
5	lcc7	Polwiltabas) Bandung . 240173 Mereka pelajar sekolah menengah atas yang sedang	membunuh waktu , menunggu tibanya jadwal bimbingan belajar . 240174 Mereka tak rikuh kebut-ki
6	lcc7	satu generasi ke generasi berikutnya . 512716 Ketahuilah bahwa mereka yang sekedar	membunuh waktu di dalam jubah tidak mempunyai kekuatan apapun . 512717 Keterampilan ini timi
7	lcc7	merangsangku habis-habisan , tiba-tiba dia berhenti diam mematung . 558512 Bermaksud ingin	membunuh waktu dengan ngobrol bersamanya , akupun bergegas turun kelantai 4 sambil berharap k
8	lcc7	tubuhnya dari hawa dingin yang membeku , mereka berdua bermain kartu untuk	membunuh waktu . 630762 Dengan menggunakan binokuler , saya dapat mengamati burung gelatik
9	lcc7	747448 Duduk , merentangkan kaki , bersandar , bahkan ada yang	membunuh waktu dengan menjadi pengamat dadakan para penumpang dan penumpang di Bandara .
10	lcc7	ruang bar , di mana para penumpang yang sedang menunggu kereta tengah	membunuh waktu sambil minum-minum . 873542 Sementara itu , di sebelah stasiun kereta terlihat
11	lcc7	pensiun sudah tercukupi , orang seperti ini biasanya berinvestasi dengan tujuan sekedar	membunuh waktu sambil membiakkan duit . 916405 Kebanyakan orang ingin ikut menjajakan Tela
12	lcc6	segala rahasia dalam kehidupan . 467485 Ada yang berjuang untuk melewatinya dengan	membunuh waktu . 467486 Apa rahasia terbesar dalam hidup ini ? 467487 Apa yang
13	lcc6	Pramugari menawarkan makanan . 492831 Dengan tersedianya sumber listrik , mereka dapat	membunuh waktu perjalanan yang berjam-jam dengan peralatan elektronik mereka . 492832 Dia ber
14	lcc6	992639 Untuk masalah sahur , Seme selalu dibangunkan istrinya . 992640 Untuk	membunuh waktu menunggu saat terbuka , Seme lebih memilih nonton televisi atau bermain playst
15	lcc8	mirip dengan desain spaceplane BOR-4 Soviet . 290173 Hal itu digunakannya untuk	membunuh waktu luang di luar atletik . 290174 Hal itu dihapuskan dengan baik pada
16	lcc9	tutup pintu rumah . 49292 Anda tak perlu laptop semahal itu untuk	membunuh waktu di kala sidang ! 49293 Anda tak perlu melakukan latihan yang berat
17	lcc9	besar untuk anda . 175425 Daftar adalah salah satu cara menyenangkan untuk	membunuh waktu . 175426 Daftar Agen Bola Terpercaya di Indonesia Daftar Agen Bola Terpercaya
18	lcc9	Di belakang , beberapa ABK dan tim enviro Newmont tertawa terbahak-bahak dan	membunuh waktu dengan memancing ikan . 232015 Di belakang bodi , tepatnya di sudut
19	lcc9	apa sahabat itu hingga kau senantiasa mencarinya , untuk sekedar bersama dalam	membunuh waktu ? 277246 Gerard Deulofeu akui sangat bahagia karena telah dipermanenkan oleh
20	lcc9	rekomendasikan . 333710 Inilah Game Terbaik Android 2015 Offline yang Cocok untuk	Membunuh Waktu Bagi anda yang gemar bermain game offline maka anda juga hrus menyimak

Fig 3: Concordance lines of *membunuh waktu*

Malay Concordance Project: tidak ditemukan penggunaan *membunuh waktu* pada teks Melayu klasik

Fig 4: The absence of *membunuh waktu* in MCP

b. TIME IS A FLEXIBLE OBJECT

Another noticeable difference in the English and Indonesian verb collocates is the metaphorical structure of TIME IS A FLEXIBLE OBJECT in Indonesian (i.e., *memperpanjang*, *memangkas*). These two verbs indicate the objects are flexible, so we can make them longer or shorter. This is the analogy of time in Indonesian, which is not found in the 15 verb collocates of *time* in English.

- (8) *Tersentuh oleh ketulusan para inisiat dalam menyebarkan pesan penting ini, MTR memperpanjang waktu iklan dari 20 detik menjadi 27 detik tanpa biaya tambahan.*
- (9) *Menurut Herry, tujuan transaksi nontunai adalah untuk memangkas waktu antrean kendaraan di gerbang tol, sehingga lebih efisien.*

c. TIME IS A CONTAINER

Indonesian also demonstrates that the expression of time is related to a container (TIME IS A CONTAINER). It can be proven by the verb collocates such as *meluangkan*, *mengisi* found in LCC. In English's 15 verb collocates of *time*, there is no equivalent verb indicating this metaphorical mapping.

- (10) *Maksud hati sekedar mengisi waktu luang, namun Ari justru mendapat banyak hal dari buku-buku yang dibacanya.*

d. TIME IS A VICTIM

Among the most frequent verb collocates of *waktu*, the verb *mengorbankan* 'sacrifice' means that time is perceived as a victim (to be sacrificed) as in (11).

- (11) *Mereka rela mengorbankan waktu dan tenaga membimbing mahasiswa agar berprestasi.*

Interestingly, the expression *sacrifice time* is not frequent in English, as presented in COCA (shown in Figure 5).

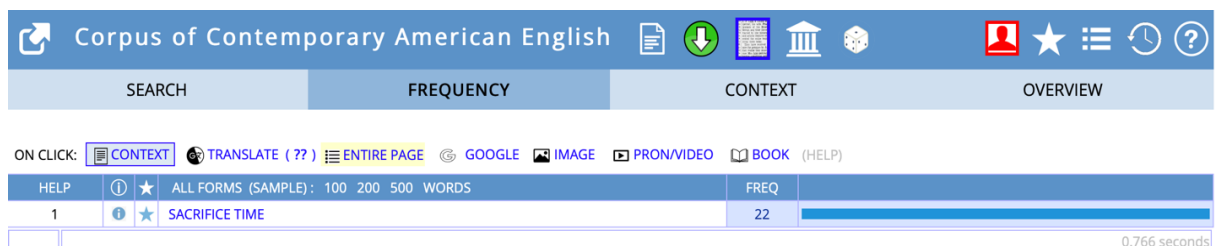


Fig 5: Frequency of *sacrifice time* in COCA

In a massive corpus like COCA, the expression *sacrifice time* occurs 22 times which indicates that this *verb + time* combination is less frequent and different from the result in Indonesian. This result emphasizes the influence of culture on time expressions and time metaphors.

Discussion

The present study has identified 15 most frequent verb collocates of *time* such as *have, spend, take, waste, save, find, make, buy, need, kill, invest, keep, stop, give, serve* as well as 15 most frequent verb collocates of *waktu* such as *membutuhkan, memanfaatkan, memerlukan, mengisi, menghabiskan, memakan, membuang, menyita, memperpanjang, mengorbankan, memangkas, melewati, menyisihkan, meluangkan, menyia-nyiakkan*. This study has also demonstrated some shared metaphorical structures of the verb collocates in English and Indonesian, i.e., *money*, *Collocations of verb + time in English and verb + waktu in Indonesian (Prayogi, et.al)*

resource, commodity, and motion which were also the primary time metaphors in English. This result is in line with Hernández (2001), Lakoff & Johnson (2003), Li (2015). Indonesian also shares the same metaphorical schemes as English, with some exceptions based on the identified verb collocates. The differences include TIME IS A FLEXIBLE OBJECT (as expressed in some most frequent verb collocates of *waktu*, e.g., *memperpanjang, mempersingkat*), TIME IS A BEING (*kill time*), TIME IS A CONTAINER (*mengisi waktu, meluangkan waktu*), TIME IS A VICTIM (*mengorbankan waktu*). Time is also expressed as a living being in English as found in the expression *kill time* which is often translated into Indonesian *membunuh waktu*.

The metaphorical mapping TIME IS MONEY is widely accepted and is also in line with the finding of Prayogi (2013)'s study. However, unlike the present research, Prayogi (2013) also depicted time as in TIME IS JOURNEY and TIME IS A TIE. These differences are not surprising since this study, despite being empirical, focused only on the most frequent verb collocates, while Prayogi (2013)'s study is intuitional. He also identified the time metaphor as TIME IS AN OBJECT, a general category that, according to Hernández (2001), can be classified more specifically into TIME IS MONEY, TIME IS A RESOURCE, TIME IS A COMMODITY, etc.

One of the highlights of this study is the metaphor of time as TIME IS A COMMODITY, as shown by the verb collocates, e.g., *buy, menyita*. Unlike the present study's finding, Indirasari (2017) argued that there is no metaphor for time as a commodity in the Indonesian language. This argument was based on some participants, and it is unfortunately not proven by using *big data* to make it scientifically more valid. Besides, Indirasari (2017) also claimed that time as rubber is not empirically proven, although it is usually attached to the characters of Indonesian. However, it is most likely that time is still quite flexible for Indonesians, considering the possibility of time being extended or cut off as in *memperpanjang waktu* and *mempersingkat waktu* found in the corpus. This study shows that TIME IS A COMMODITY and TIME IS A FLEXIBLE OBJECT as proven by data from the corpus under study. Therefore, it is important to have empirical evidence to prove the claim made by previous studies.

Regarding the comparison of verb collocates in English and Indonesian, it is noticeable that there are some differences in time conceptions perceived by English and Indonesian speakers. Culture holds a crucial role in how people perceive and express time. This is in accordance with Indirasari (2019) pointing out that culture influences time conception which is reflected in time metaphor. More specifically, Indonesians tend to be flexible with time and prioritize social harmonization, as Prayogi & Arimi (2020) claim. This is in line with the finding of this study demonstrating that TIME IS A FLEXIBLE OBJECT. According to Prayogi & Arimi (2020), more traditional societies perceive time alongside social harmonization, while more modern societies

perceive time as something measurable and valuable which is probably influenced by Western cultures (as manifested in TIME IS MONEY).

As widely studied, time is usually conceptualized through space (Boroditsky, 2000; Radden, 2011). Time is abstract and to make it more concrete, it is expressed through spatial conceptualization, which can be found in some languages. Specific to Indonesian, Rajeg et al. (2022) found out that spatial conceptualization can also be found in this language, e.g., LEFTWARD is the metaphorical mapping of the past. This corresponds to the present study's result showing that TIME IS MOTION, which can be found in both English and Indonesian time expressions. The present study identified the verbs *stop* and *melewatkan* which are associated with motion which do not particularly show the direction (left, right, up, down). Considering that there are many languages and cultures in the world, spatial conceptualizations of time can be investigated further.

Overall, based on the findings of verb collocates comparison, it is likely that English and Indonesian share common conceptions of time or Indonesian adopt some time conceptions from English. Therefore, time expressions in English are quite familiar to Indonesians. Oktavianti (2022) reported that some time collocations are familiar to Indonesians (learning English), although some time collocations are less familiar to them. This circumstance is understandable since English is not a second language in Indonesia, so exposure to the language is still limited.

Conclusion

To sum up, this study has shown that the verb collocates of *time* and the counterparts in Indonesian shared some similarities, which might be associated with the metaphorical aspects of the verb + *time* construction. Since time is categorized as semantic primes and functions daily, it is not surprising to find similar time expressions cross-linguistically. Nonetheless, as part of culture, time expressions (i.e., the selection of verb collocates) can also be distinctive, making time appealing to study. In general, the verb collocates of *time* and *waktu* indicate that time can be perceived universally as in TIME IS MONEY, TIME IS MOTION, etc. However, time is also culturally bound, so the selection of verbs preceding *time* and *waktu* may also vary. Suffice to say, this study is intriguing and salient to understanding the culture and the nature of time and human beings. This research can shed light on how English and Indonesian speakers perceive time and how we can bridge the teaching of time expressions in English to Indonesian and vice versa. Therefore, more similar studies should be conducted and revisited in the future. Nevertheless, this study solely focused on a reference corpus for each language under study, which might restrict comprehensive findings. In addition, this study is a sort of preliminary study which must be continued with a deeper and more comprehensive analysis utilizing multiple perspectives. Therefore, future studies are expected to explore larger-size corpora to get more comprehensive

and valid results and employ more perspectives in analyzing time and time expressions. Furthermore, it is also expected to have more languages to compare in future work.

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