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Unveiling the subtle distinctions between *change* and *alter*: A corpus-based investigation of the English synonyms

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ABSTRACT

This corpus-based study examines the subtle similarities and differences between *change* and *alter*. Drawing on the Corpus of Contemporary American English, the findings show that these verbs tend to co-occur with overlapping noun and adverb collocates, confirming the existence of a robust semantic similarity. With respect to the semantic preference, the noun collocates of these verbs were distributed similarly in all the discourse domains, which again accentuated the appreciable semantic similarity between these two verbs. However, the specificities in their collocational and semantic preference make their interchangeability in all contexts impossible. The findings are of value for EFL teachers and learners as they uncover clear distinctions between these two verbs.

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1. Introduction

There has been a broad consensus among scholars (e.g. Schmitt, 2010; Webb & Nation, 2017; Phoocharoensil, 2022) that sophisticated knowledge of vocabulary is essential for efficient communicative proficiency in the English language. This notion is persuasively established by Wilkins (1972: 111) in his words, "without grammar very little can be conveyed, without vocabulary nothing can be conveyed." Further refining this

perspective, Carter and McCarthy (1988) reported that building solid vocabulary skills helps non-native learners of English to communicate efficiently and accurately.

To develop a substantial stock of vocabulary, a priority should be given to the learning and teaching of synonyms (Yang, 2022). The importance of synonyms in facilitating vocabulary learning is confirmed by Liu and Espino (2012: 198), who highlighted that acquiring a great deal of synonyms enables learners "to convey meanings more precisely and effectively." Niwesworakarn et al. (2023) lent credence to this notion by claiming that gaining an advanced level of English proficiency is attributed to an accumulative expertise of synonyms.

Despite the acknowledged advantages of synonyms as a means of smooth communication in English, a cohort of researchers (e.g. Aroonmanakun, 2015; Petcharat & Phoocharoensil, 2017; Phoocharoensil, 2022) accentuated the learners' confusion in differentiating between synonymous words. The apparent similarities of meaning among synonyms seem to trap the learners into mistakenly using synonymous words interchangeably and thus yielding unnatural language (Phoocharoensil & Kanokpermpoon, 2021; Kruawonga & Phoocharoensil, 2022). This confusion has been the destiny of not only beginners, but also of learners who have considerable knowledge of English (Ahmad et al., 2019; Phoocharoensil, 2020). Evidently, resorting to the learner's intuition or the dictionary data to uncover the subtle differences among these synonyms has proved unproductive in that only partial explanations of the words in question can be attained (Aroonmanakun, 2015).

The issue of empirically exploring the differences among the English synonyms through corpora has been recommended by a number of scholars (e.g. Biber et al., 1998; Moon, 2010). Recent studies (e.g. Hunston, 2022; Liu, 2023) explain that corpus-based studies of synonyms are highly effective in revealing the differences among the synonyms in several aspects, such as collocations and semantic preferences.

In this study, two English synonymous verbs, namely *change* and *alter*, were investigated in terms of collocations and semantic preferences using the Corpus of Contemporary American English (COCA). This corpus contains approximately one billion words distributed evenly across eight genres. The rationale for selecting these target verbs is that they occur with high frequency in everyday discourse. Specifically, the two verbs are listed among the top 1000 to 3000 most frequent spoken and written words in the *Longman Dictionary of Contemporary English* (2014) (LDOCE, 2014). In the *Oxford Advanced Learner's Dictionary* (2020) (OALD, 2020), the top 3000 core words are assigned ranks from A1 to B2. Within this list, *change* is categorized as an A1 elementary word, while *alter* appears in the B2 group among the 3000 essential words. Furthermore, the similarity between these synonymous verbs, as presented in dictionaries, often leads non-native learners of English to use them interchangeably in contexts where only one can be used.

To make the analysis comparable, prior to considering COCA data, the dictionary definitions and examples of the target verbs were provided in Table 1 and discussed below.

Table 1: Definitions and examples of *alter* and *change*

	(OALD, 2020)	**(LDOCE, 2014).**
Alter	To become different; to make somebody /something different e.g. 1. Prices did not *alter* significantly during 2019. e.g. 2. He had *altered* so much I scarcely recognized him.	To *change* or to make someone or something *change* e.g. 4. Her face hadn't *altered* much over the years.
Change	To become different/ to make somebody /something different e.g. 3. Rick hasn't *change*d. He looks exactly the same as he did at school. Fame hasn't really *changed* him.	To become different; to make somebody /something different e.g. 5. Susan has *changed* a lot since I last saw her.

Upon closer inspection of the dictionary definitions in Table 1, it was observed that *change* and *alter* overlap in the sense that something becomes different or something/somebody makes something/somebody different. Thus, it can be concluded that these verbs are near-synonyms. Presumably, the similar dictionary definitions of both *alter* and *change,* reinforced by similar examples such as examples 2 and 3 in Table 1, may contribute to the ESL and EFL teachers' and learners' misconception that these verbs can be used interchangeably in all contexts. With respect to collocations, the limited number of examples provided with the definitions of both target verbs offers only a faint indication of what collocates might emerge most frequently with each verb. Hence, with limitations of dictionary evidence in mind, it is hoped that this corpus-based study will efficiently unveil the subtle distinctions between the target verbs in terms of collocations and semantic preferences and thus help the non-native teachers and learners of English to safely differentiate between the two verbs. The next section introduces the literature review concerning this study.

2. Literature review

2.1. *Synonyms*

A considerable number of scholars have conceptualized synonymous words as being virtually identical in meaning, overlooking the substantial, subtle differences among these synonyms that have been recently unveiled through corpus-based tools. By way of illustration, Carter (2012: 34) defined synonymy as "symmetrical sense relation in which more than one linguistic form can be said to have the same conceptual or propositional meaning." Similarly, Jackson and Amvela (2007: 92) defined synonymy as "a relationship of the sameness of meaning that holds between two words." Taylor (2002) illustrated this notion further by defining synonymy as the phenomenon in which

one sense is shared by two or more distinct lexical items. However, other linguists accentuated the existence of differences among the synonyms, aside from the similarities. Taylor (2002), for example, claimed that synonymous words share both semantic similarities and differences. More recently, O'Grady and Archibald (2016) pointed out that, despite their similarity in some contexts, synonyms tend to exhibit appreciable differences in other contexts. Recent corpus-based studies on synonyms (e.g. Li, 2019; Jarunwaraphan & Mallikamas, 2020; Chaengchenkit, 2023; Panrat & Yanasugondha, 2024) lent weight to this notion by unveiling the similarities and differences among English synonyms based on various corpus-based criteria such as collocations and semantic preferences.

By drawing on the above definitions, two types of synonyms have been recognized. Firstly, absolute synonyms were defined by Lyons (1995: 61) as "a pair of synonyms in which all meanings are identical in all contexts and semantically equivalent on all dimensions of meaning, descriptive and non-descriptive." This view is supported by a line of scholars (e.g. Cruse, 1986; Phoocharoensil, 2020) who argued that absolute synonyms are characterized by similar denotations and interchangeability in roughly all contexts. However, a number of scholars (e.g. Clark, 1992; Palmer, 1997) challenged the existence of absolute synonyms in the English language. Clark (1992), for example, confirmed that the existence of two absolutely similar synonyms might lead to the eradication of one of these two synonyms. Similarly, O'Grady and Archibald (2016:182) stated, "Because it would be inefficient for a language to have two words or phrases with absolutely identical meanings, perfect synonymy is rare, if not impossible." In addition, Taylor (2002: 246) stated that "perfect synonymy is vanishingly rare, methodologically proscribed, or a logical impossibility; what we frequently do encounter are pairs of words that are near synonyms."

Contrary to absolute synonyms, there has been a consensus among scholars (e.g. Xiao & McEnery 2006; Jackson & Amvela, 2007; Phoocharoensil, 2020) that virtually all English synonyms should be labeled as near-synonyms given that they differ in many linguistic aspects which make it impossible to use them interchangeably in all contexts. Cruse (1986: 237) stated that near-synonyms are "lexical items whose senses are identical in respect of central semantic traits but differ in minor or peripheral traits." Divjak and Gries (2006: 24) also stated that "even if synonyms name one and the same thing, they name it in different ways; they present different perspectives on a situation." Given that dictionaries are inadequate to unveil the differences among the English near-synonyms (Boontam & Phoocharoensil, 2022), recent corpus-based studies of English near-synonyms have presented significant evidence for the functionality of corpus analyses in uncovering the differences among the English synonyms in terms of frequency, genre, collocation, and semantic preferences (e.g. Selmistraitis, 2020; Panrat & Yanasugondha, 2024).

2.2. *Criteria for distinguishing near-synonyms*

Recent corpus-based research into near-synonyms established that the collocations and semantic preferences of the target words can effectively demonstrate the differences among the near-synonyms. For better analysis, both criteria should be simultaneously employed in the analysis of near-synonyms, given that the semantic preference of a target word is recognized through the word's common collocates (Szudarski, 2018; Li, 2019; Selmistraitis, 2020).

2.3. *Collocations*

The meanings of words depend largely on how they naturally combine with other adjacent words. Firth (1957: 14) clarified this point by stating, "You shall know a word by the company it keeps." For Lewis (1997: 8), collocation is "the readily observable phenomenon whereby certain words co-occur in natural text with greater than random frequency." Evidently, near-synonyms tend to have both distinct and overlapping collocates. Distinct collocates create specific meanings all together. The meaning can change when any distinct collocate is replaced with its near-synonym. This is evident in the case of the synonymous adjectives fast and quick. While fast tended to appear with noun collocates characteristic of movement, such as ride, car, and boat, quick appeared with noun collocates such as answer, breakfast, and tip, which denote actions performed in a short period of time. Therefore, using these two synonyms interchangeably in this context produces unacceptable phrases such as fast answer or quick car (Aroonmanakun, 2015). However, overlapping collocates provide evidence for the semantic similarity among the near-synonyms. The high number of overlapping collocates signifies the existence of a strong semantic similarity among the near-synonyms. This is exemplified in the work of Chaokongjakra (2023), in which *important* and *crucial* had a strong synonymous status given that they appeared with an appreciable number of overlapping collocates. In contrast, *crucial* and *significant*, as well as *important* and *significant*, showed weaker synonymous status, as they shared relatively few noun collocates.

2.4. *Semantic preference*

Stubbs (2001: 65) defined semantic preference as "the relation between a word and lexical items sharing the same semantic properties." Semantic preference is also defined as the phenomenon that exists when node words collocate within their immediate semantic environment (Weisser, 2016). For Cheng (2012: 114), it is "the tendency for lexical items to be restricted to identifiable semantic fields." Semantic preference usually encompasses an association between node words and all their collocates that share the same semantic properties (Stubbs, 2001). The significance of realizing the association between a node word and its collocates highlights the differences among the near-synonymous words and thus helps EFL learners distinguish one synonym from another. By way of illustration, Chaengchenkit (2023) revealed that *halt*, *cease,* and *stop* tended to

emerge with different semantic preferences. To clarify, *halt* collocates were grouped mainly under transportation and law themes, while *cease* collocates tended to appear in war conflict, and damage themes. In contrast, *stop* collocates were categorized under the change and action themes. It was thus concluded that these synonymous verbs cannot be used interchangeably in all contexts.

Based on the previous studies, utilizing corpus tools as a method to differentiate synonyms has substantial efficacy. Considerable distinctions between synonyms can be unveiled by investigating some aspects such as collocations and semantic preferences in the corpus data. The corpus findings are highly significant since they uncover information concerning the synonyms, which is absent in the contemporary dictionaries. Up to now, there has not been a corpus-based study that investigates the synonymous verbs *change* and *alter* in terms of collocations and semantic preferences. The present study, therefore, aims to investigate the two synonymous verbs. The research questions are presented below:

1. What are the differences between *change* and *alter* in terms of collocation and semantic preference?
2. What are the similarities between *change* and *alter* in terms of collocations and semantic preference?

3. Methodology

3.1. *Target words*

This study aims to investigate the similarities and differences between the English synonymous verbs *change* and *alter*. The rationale behind targeting these synonymous verbs is that, firstly, these verbs share a basic meaning which, according to OALD (2020) and LDOCE (2014), denotes the action of change and the sense of becoming or making something different. This semantic similarity plunges non-native learners of English into utter confusion when it comes to using each of these synonymous verbs safely in its due context. Secondly, these verbs exist among the most frequent basic words that have a priority over other words in the early stages of learning English.

Thirdly, the dictionary data has proved inadequate for accentuating the differences between these synonyms in terms of collocational and semantic preference. Thanks to the leading-edge corpus tools, the similarities and mainly differences between these synonymous verbs can now be easily investigated and therefore help non-native learners of English to use each of these synonymous verbs in its due context.

3.2. *The corpus of the study*

The updated version of the Corpus of Contemporary American English (COCA), which is available online at http://English-corpora.org, is selected as a source of data in this study. COCA is recognized as one of the best, most resourceful, and most widely used corpora of authentic American English. Being a mega corpus, which contains over a

billion words, including approximately 25 million words being added annually from 1990 to 2019, COCA can provide highly reliable information about words (Schmitt, 2010). The balance in COCA across the eight genres from year to year ensures that the data provided is highly reliable and is relatively distinct from data provided by other corpora that are not genre-balanced. Moreover, due to the constant update of COCA by adding new texts annually, it is recognized as a monitor corpus which monitors the progress of American English diachronically (Phoocharoensil, 2021).

3.3. *Procedures and data analysis*

This study aims to answer the two research questions stated above. To answer the first question, the Collocate function in the COCA interface was used to explore the target verb collocates. As the target words in this study are verbs, the most frequent nouns used as subjects or objects were considered in the data retrieval process. Additionally, the most frequent adverb collocates that tended to modify these verbs were also considered. To include all the significant collocates of the target verbs regardless of their forms, a lemma search was conducted for each verb. The span of the collocate search was set to four words on both the left and right side of each verb. According to Sinclair (1991), collocates that exist beyond the four-four span are not considerably associated with the target word. With regard to the statistical measurements, the mutual information (MI) value of ≤ 3 is required for each collocate to be considered in the analysis. This value is indicative of the significant association between the collocates and the node words (Cheng, 2012). However, Hunston (2022) commented that there are some cases when collocates that appear with very low frequency have a high MI value. This phenomenon is attributed to the fact that most of these few appearances are strongly associated with the node words. Therefore, to ensure the inclusion of significant collocates in analysis, both an MI value of ≤ 3 and a minimum frequency threshold of < 20 are to be considered. Greaves and Warren (2010) recommended that, for a collocate to be significantly associated with its node word, it must appear in the proximity of the node word at least 20 times per million words. The retrieved collocates of the target verbs were moved to spreadsheets so that they could be filtered based on their frequency from highest to lowest. Focus was placed on overlapping collocates, which suggest semantic similarity between the target verbs. Samples of these overlapping collocates in their concordance lines were also explored with a view to confirming the similarity between the target verbs or accentuating the differences.

In responding to the second research question, the 100 most frequent noun collocates of each verb with an MI value of ≤ 3 and a minimum frequency threshold of ≤ 13 were recruited for the analysis of the verb semantic preferences. Following Hardiman and Nuraniwati (2023), the noun collocates were automatically categorized into semantic fields using the UCREL (University Centre for Computer Corpus Research on Language) Semantic Analysis System (USAS). This system provides semantic tags to English words. It is an annotation program designed for automatic analysis based on dictionary content (Archer et al., 2002). Developed by Lancaster University, this tool automatically classifies the English words into 21 main semantic domains (see Figure 1)

and 232 semantic sub-domains. It can be accessed online at http://ucrel.lancs.ac.uk/usas/pdf (Archer et al., 2002). In order to compare and contrast the semantic preferences of the target verbs, the semantically annotated data was moved to spreadsheets in which Pivot Tables were utilized in summarizing and displaying the data under similar semantic domains.

A general and abstract terms	**B** the body and the individual	**C** arts and crafts	**E** emotion
F food and farming	**G** government and public	**H** architecture, housing and the home	**I** money and commerce in industry
K entertainment, sports and games	**L** life and living things	**M** movement, location, travel and transport	**N** numbers and measurement
O substances, materials, objects and equipment	**P** education	**Q** language and communication	**S** social actions, states and processes
T Time	**W** world and environment	**X** psychological actions, states and processes	**Y** science and technology
Z names and grammar			

Figure 1: USAS semantic tags (http://ucrel.lancs.ac.uk/usas/pdf)

4. Results and discussion

4.1. *Collocational analysis of the target verbs*

This section presents the noun collocates that tended to commonly emerge with both *change* and *alter*. All these collocates appeared with a significant MI value of ≤ 3 and a frequency threshold ≤ 20. It is worth noting that the noun collocates of these verbs were lemmatized. Simply put, in case both the singular and plural forms of a noun collocate occurred, the MI and frequency values of both nouns are averaged, and then only the lemma is presented in the analysis.

Notably, the target verbs, namely *change* and *alter*, obtained a substantially high number of overlapping noun collocates listed in Table 2. To clarify, 25 noun collocates tended to overlap between the two verbs. In other words, 25 noun collocates of both *change* and *alter* tended to reflect the semantic similarity between these two verbs. All these overlapping collocates are significantly associated with both verbs given their MI value of < 3 and frequency threshold of ≤ 20. Remarkably, among the shared noun collocates, *climate, rule, composition, landscape, pattern, behavior, perception, outcome, appearance,* and *lifestyle* emerged as the most interchangeable between the two verbs given their highest frequencies. Several scholars (e.g. Petcharat & Phoocharoensil, 2017; Lertcharoenwanich, 2023) established that the more collocates the words share, the more

robust synonymous status exists between them and vice versa. Therefore, it could be concluded that *change* and *alter* share a very strong synonymous status.

Table 2: The overlapping collocates of *change* and *alter*

NO	Overlapping collocates	*change*		*alter*	
		Freq	MI	Freq	MI
1.	climate	1622	3.88	165	4.39
2.	rule	2692	4.17	106	3.27
3.	composition	257	3.32	108	5.84
4.	landscape	929	4.28	243	5.97
5.	pattern	631	3.45	265	4.06
6.	behavior	2710	3.76	400	4.74
7.	perception	1033	4.08	232	5.57
8.	outcome	502	3.21	120	4.59
9.	appearance	490	3.15	168	5.28
10.	lifestyle	591	3.85	66	4.26
11.	setting	574	3.77	27	3.28
12.	circumstance	649	3.31	44	3.09
13.	attitude	2071	3.96	50	4.17
14.	habit	952	5.14	52	4.82
15.	diet	574	3.11	36	3.05
16.	priority	307	3.82	23	3.92
17.	stance	230	3.39	24	4.12
18.	mood	518	3.49	85	4.4
19.	dynamics	416	4.32	58	5.19
20.	outlook	333	3.96	33	4.53
21.	equation	268	3.68	22	3.84
22.	trajectory	229	4.57	75	6.47
23.	wording	131	4.59	22	5.79
24.	configuration	88	3.24	25	5.04
25.	permission	35	3.73	70	4.9
Freq = Frequency , MI = Mutual information score					

Upon closer inspection of the concordance lines in COCA, it was observed that both *change* and *alter* in relation to the overlapping noun collocates tended to behave similarly in terms of denotational and colligational aspects in some contexts and differ in others. A good illustration of similarity is when both *change* and *alter* tended to appear as transitive verbs followed by noun collocates, e.g. *behavior*, *trajectory,* and *equation* as objects. Given that *change* and *alter* appeared in the same colligational and denotational situation, it could be claimed that they can be used interchangeably within this context. For example, replacing the verb *alter* with *change* in concordance lines 1 and 3 or replacing the verb *change* with *alter* in concordance lines 2 and 4 will not bring a semantic change in the sentence. Instead, the same semantic concept is retained. This finding

lends weight to the concept that overlapping collocates indicate the existence of semantic similarity among near-synonyms.

(1) *Weather Service indicate that they do raise awareness among the public but often do not alter behavior because people do not sense a threat to themselves….*
(2) *People are not what they do. They can change behavior and performance but they can't change who they are…..*
(3) *can't be happening in the near future either. Cultural and technical innovations can certainly alter the trajectory of individual human lives. But, while human beings continue to reproduce…*
(4) *m just pointing out that unless there is some kind of miraculous singular event which changes the trajectory of public opinion, it's not going to be possible for the….*

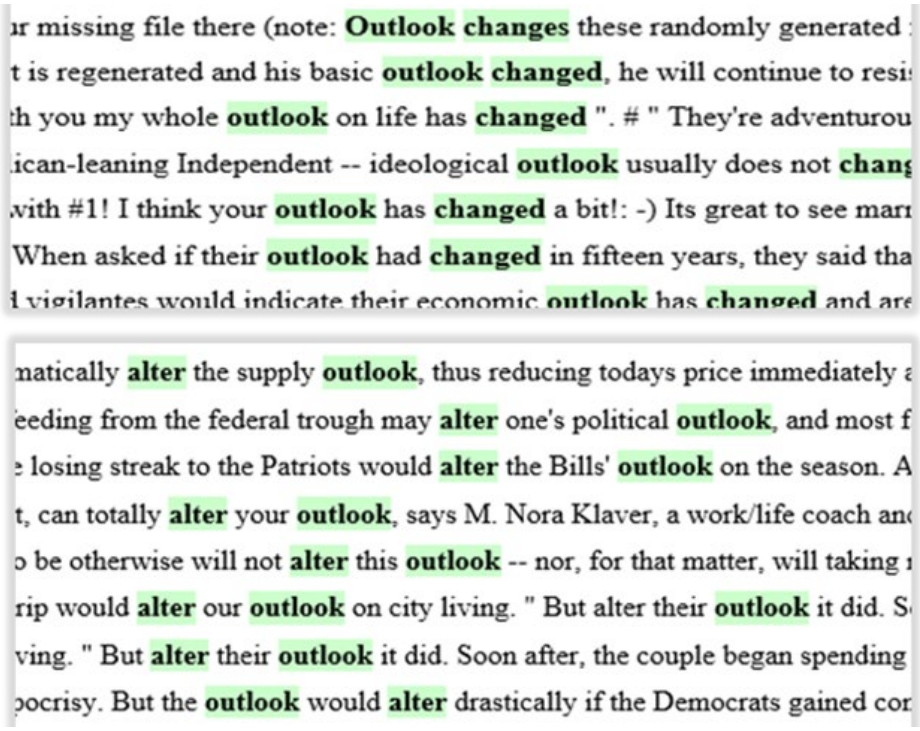


Figure 2: The concordance lines of *change* and *alter* collocating with the noun outlook in COCA

Of the distinctions, the deep investigation of the concordance lines exhibited that, apart from a few similarities, *change* tends to appear as a transitive verb preceded by noun collocates such as *circumstance, outlook, habits, landscape, perception, lifestyles, mood, dynamics, pattern* and *rules* used as subjects. In contrast, *alter* was inclined to emerge as a transitive verb followed by the same noun collocates as objects of the sentences. The evidence of this can be clearly seen in Figure 2 in which *change* is used as an intransitive

verb preceded by *outlook* as a subject, whereas *alter* is used as a transitive verb followed by *outlook* as an object in virtually all the concordance lines.

In closing, the investigation of the target verbs in relation to the overlapping collocates in concordance lines uncovered that both similarities as well as distinctions between these verbs do exist. While the similarities lend support to the existence of a strong synonymous status between the two verbs, the distinctions led to the conclusion that overlapping collocates cannot be considered indicative evidence of the interchangeability of the near-synonyms unless empirical investigation of their similar denotational and colligational existence in concordance lines has proved so. Moreover, despite the similarities, the distinctions underscore the occurrence of these synonymous verbs in complementary distribution which makes it impossible to use them interchangeably in all contexts.

These findings are in keeping with previous research (e.g. Sumonsriworakun, 2022; Chaengchenkit, 2023; Chaokongjakra, 2023; Lertcharoenwanich, 2023; Panrat & Yanasugondha, 2024) in that synonymous words tend to share overlapping collocates. In addition, the distinctiveness of each target verb in this study lent credence to the view that near-synonymous words cannot replace one another in all contexts (e.g. Edmonds & Hirst, 2002; Jarunwaraphan & Mallikamas, 2020; Phoocharoensil & Kanokpermpoon, 2021; Chaengchenkit, 2023; Narkprom, 2024).

However, these findings are prominently different from the previous research in that, firstly, a remarkably substantial number of noun collocates tended to overlap between *change* and *alter*. To guarantee the significance of these noun collocates, the significant MI value of ≤ 3 (Cheng, 2012) and the frequency threshold of ≤ 20 (Greaves & Warren, 2010) were considered. In contrast to this, related previous studies exhibited that a few noun collocates tended to overlap, although the frequency threshold included insignificant collocates that appeared only two times (Phoocharoensil, 2021) and four times (Narkprom, 2024). A notable example of this is the synonymous verbs *teach* and *instruct*, which were inclined to appear with only two noun collocates in common (Kruawonga & Phoocharoensil, 2022). Another example can be seen in the case of the synonymous verbs *predict* and *foresee,* which tended to share only three nouns in common (Phoocharoensil, 2021). The inconsistency between the findings in this study and the previous research may be explained by methodological differences. While the current study's statistical measurements (MI ≤ 3, frequency threshold ≤ 20) were set to recruit all significant noun collocates in the analysis (93 of *change* and 107 of *alter*), previous research limited the number of noun collocates to the top 14 (Phoocharoensil, 2021), top 25 (Sridhanyarat & Phoocharoensil, 2023), or top 30 (Narkprom, 2024). This limitation might have led to the exclusion of collocates that are significantly associated with the node words, and thus only a few collocates tended to overlap among these near-synonyms. Therefore, in order to fully demonstrate the similarities and differences between English near-synonyms, it is advised that future corpus-based research should adopt statistical measurements that guarantee the inclusion of all significant collocates in the analysis.

4.2. *Adverb collocates of the target verbs*

This section discusses the overlapping adverb collocates that occur with the target verbs. It is worth reminding that the adverb collocates were filtered based on the following criteria. Firstly, only adverbs with a significant MI value of ≤ 3 are considered in the analysis (Cheng, 2012). Secondly, these adverbs must have emerged at least twenty times around the target verbs (Greaves & Warren, 2010).

Table 3 is quite revealing in several ways. Firstly, 18 adverbs of a high frequency ≤ 20 and a significant MI score ≤ 3 tended to commonly appear with both *change* and *alter*. This finding lends weight to the findings discussed in the previous section, which confirmed that *change* and *alter* have a common ground of collocational similarity, making them strong near-synonymous verbs.

The data in Table 3 demonstrates that the adverbs that collocate with both *change* and *alter* are highly significant. Putting these adverbs into similar semantic domains, it appears that the first group of adverbs, namely *dramatically, drastically, radically, profoundly, substantially, considerably,* and *greatly*, are adverbs of degree which signify that the act of change is great, sudden, impressive, and of a great effect and amount. The second group of adverbs, namely *completely, significantly, materially,* and *fundamentally*, define the act of change as complete and of great value and importance. Additionally, the third group of adverbs, namely *permanently, forever,* and *irrevocably*, signifies that the act of change is permanent and irreversible. Thus, it could be claimed that both *change* and *alter* have a tendency to denote great, sudden, permanent, and impressive change in something that is characteristic of great value and importance.

Table 3: The overlapping adverb collocates of *change* and *alter*

Adverb Collocates	***Change*** Freq / MI	***Alter*** Freq / MI	**Adverb Collocates**	***Change*** Freq / MI	***Alter*** Freq / MI
forever	2431/ 5.37	236 / 5.67	gradually	251 / 3.5	20 / 3.7
dramatically	2171/ 6.82	273 / 7.55	greatly	204 / 3.09	61 / 5.06
completely	1355/ 3.43	114 / 3.52	considerably	201/ 4.07	30 / 5.08
radically	970 / 7.05	316 / 9.2	permanently	192 / 4.1	129 / 7.35
significantly	950 / 4.14	346 / 6.42	irrevocably	148 / 7.1	50 / 9.22
fundamentally	901/ 6.23	351/8.62	accordingly	125 / 3.23	25 / 4.71
drastically	895 / 7.25	171 / 8.67	subtly	104 / 4.89	45 /7.35
substantially	277 / 4.43	116 / 6.94	materially	60 / 4.99	41 / 8.18
profoundly	274 / 5.26	98 /7.49	chemically	20 / 3.29	33 / 7.78

4.3. *Semantic preference of the target verbs*

A further understanding of the similarities and differences between *change* and *alter* requires an investigation of the target verbs' semantic preferences. Thus, this section offers an answer to the second question. In the process of semantic preference analysis, one hundred noun collocates of each verb were explored and categorized into semantic fields. These collocates were recruited for analysis considering their high frequency with

the target verbs, together with an MI score of $\leq$ 3. It is worth pointing out that the categorization of the noun collocates into semantic fields was achieved automatically using the online UCREL Semantic Analysis System (USAS) semantic tagger. Developed by Lancaster University, this tool contains 21 main discourse fields (see Figure 1) and 232 sub-fields (Archer et al., 2002).

Table 4 displays the distribution of the one hundred noun collocates of each target verb in the semantic domains of USAS. It is worth pointing out that the semantic domains in Table 4 were tabulated based on the number of collocates each domain scored from highest to lowest. Generally, the overall findings are highly encouraging in that strong evidence of similarity between *change* and *alter* was unveiled. It appeared that the majority of the noun collocates of both verbs amounting to 152 which is 76 % have a tendency to appear in seven discourse domains, which is one third of the 21 USAS discourse domains, namely "Psychological Actions, States and Processes", "Substances, Materials, Objects and Equipment", General and Abstract Terms", "Social Actions, States and Processes", The Body and The Individual", "Movement, Location, Travel and Transport" And "Numbers and Measurement".

Table 4: The distribution of the 100 noun collocates of the target verbs in the USAS discourse domains

No	Discourse Domains	*Change*	*Alter*
	Psychological Actions, States and Processes	15	18
	Substances, Materials, Objects and Equipment	14	11
	Social Actions, States and Processes	11	14
	General and Abstract Terms	8	17
	The Body and The Individual	13	11
	Movement, Location, Travel and Transport	5	5
	Numbers and Measurement	5	5
	sum	71	81
	The World and Our Environment	3	7
	Linguistic Actions, States and Processes	7	2
	Life and Living Things	4	2
	Govt. and The Public Domain	3	2
	Science and Technology	2	1
	Emotional Actions, States and Processes	2	1
	Entertainment, Sports and Games	2	1
	Sum	23	16
	Architecture, Buildings, Houses and Home	1	1
	Food and Farming	1	1
	Money and Commerce	2	0
	Education	0	1
	Arts and Crafts	1	0
	Time	1	0
	Names and Grammatical Words	0	0
	Sum	6	3
Sum		100	100

Also noticeable is the fact that a few collocates of the target verbs amounting to 39 which is 19.5 % (see Figure 2) emerged to be distributed in another third of discourse domains which include the "Linguistic Actions, States and Processes", "The World and Our Environment", "Life and Living Things", "Government and the Public Domain", "Science and Technology", "Emotional Actions, States and Processes and Entertainment", and "Sports and Games". Additionally, the noun collocates of the target verbs tended to scarcely appear in the last third of the discourse domains, which include "Architecture, Buildings, Houses and Home, Food and Farming, Money and Commerce, Education, Arts and Crafts, Time and Names and Grammatical Words". To illustrate, only 9 out of 200 collocates, which is 4.5 % (see Figure 2), appeared to associate with target verbs in the last third of the USAS discourse domains. Notably, the consistent distribution of the noun collocates of both *change* and *alter* in the 21 discourse domains is a strong confirmation of the robust synonymous status between the two verbs. In line with this, Lertcharoenwanich (2023) explained that the strength of the synonymous status is defined by the extent of the overlapping semantic preferences; the more semantic domains the words share, the stronger their synonymous status is, and vice versa.

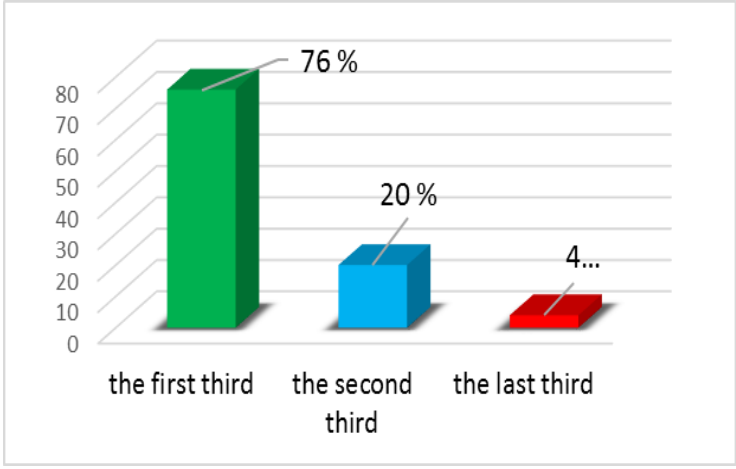


Figure 2: The percentage of the noun collocates distribution in the USAS discourse domains

The similarities and differences between the target verbs can be further seen by exploring the overlapping as well as distinctive noun collocates in their semantic domains. To exemplify, row 1 in Table 4 displays that 15 noun collocates of *change* and 18 collocates of *alter* belong to the Psychological Actions, States, and Processes domain. The collocates of *change* included *outcome, mind, browser, mindset, subject, perception, ways, patterns, dynamics, tactics, scenery, tastes, attitude, outlook,* and *readiness*. *Alter* collocates belonging to this domain included *ability, outcome, expectations, incentive, memory, perception, pattern, dynamics, procedure, technique, meaning, attitude, belief, outlook, plan, policy, schedule,* and *strategy*. It becomes apparent that *change* and *alter* have collocates,

e.g. *outcome, dynamics, perception, pattern, outlook,* and *attitude,* that tended to belong to the same semantic subfields of this domain. However, the other noun collocates of both verbs tended to belong to different subdomains.

Another example can be seen in the Substances, Materials, Objects and Equipment domain in which *change* and *alter* scored 14 and 11 noun collocates, respectively. *Change* collocates belonging to this domain included *color, brightness, bulb, lightbulb, plug, circumstance, posture, configuration, lock, gear, clock, shape, linen,* and *thing*. *Alter* collocates included *characteristic, structure, condition, image, circumstance, mechanism, shape, protein, configuration, chemical,* and *temperature*. Notably, the collocates, namely *circumstance, configuration,* and *shape,* tended to appear in the subdomains of this field with both *change* and *alter*. The other collocates were inclined to emerge in different subdomains.

A further example is seen in the Social Actions, States and Processes domain in which *change* and *alter* scored 11 and 14 collocates, respectively. *Change* appeared with noun collocates which included *behavior, habit, lifestyle, demeanor, demographics, allegiance, demography, fatherhood, prerequisite, permission*, and *courage*. *Alter* emerged with noun collocates which included *behavior, lifestyle, habit, intervention, character, identity, human, personality, trait, rule, status, destiny, interaction,* and *fate*. It appeared that *change* and *alter* had three noun collocates belonging to the same subfields of this domain, namely *behavior, lifestyle,* and *habit*. The other collocates tend to belong to distinctive subdomains.

Overall, although the synonymous verbs in this study shared a strong similarity in their semantic preference, a deeper investigation of the distribution of the noun collocates in the semantic fields of the USAS 21 domains show that the collocates of these verbs may not belong to the same semantic subfield. This view is supported by Sridhanyarat and Phoocharoensil (2023), who pointed out that synonymous words might share different collocates that belong to the same semantic preference. In other words, this finding is consistent with Phoocharoensil (2022), and Jarunwaraphan and Mallikamas (2020), who reported that due to the differences that emerge among synonymous words in linguistic aspects such as collocations and semantic preference, it is impossible to assume that these synonyms can be used interchangeably in all contexts.

Most of the previous related studies have only included a small number of collocates in the semantic preference analysis of the near-synonymous words. To illustrate, several scholars (e.g. Chaengchenkit, 2023; Chaokongjakra, 2023; Lertcharoenwanich, 2023; Panrat & Yanasugondha, 2024) included only the top 30 collocates in the semantic preference analyses of near-synonyms. This limitation might have led to the exclusion of a great deal of significant collocates, and thus only partial semantic preferences were unveiled among the near-synonyms. Narkprom (2024) highlighted that the inclusion of more collocates beyond the top thirty will result in the appearance of more overlapping themes among the near-synonyms. With this limitation in mind, this study included all the significant noun collocates in the semantic preferences analysis of *change* and *alter* (100 noun collocates for each verb). This, in turn, exhibited a remarkably appreciable semantic preference overlap between *change* and *alter*. Thus, it is recommended that future corpus-based studies on near-synonyms should employ statistical measurements

that ensure the inclusion of all significant collocates. Another limitation of the previous research is that a line of researchers (e.g. Chaengchenkit, 2023; Chaokongjakra, 2023; Lertcharoenwanich, 2023; Sridhanyarat & Phoocharoensil, 2023; Narkprom,2024) grouped the collocates into semantic fields manually based on their background knowledge of English words. Unlike the previous research, this study is unique in that it employed the USAS semantic tagger to automatically categorize the 200 noun collocates of *change* and *alter* into semantic fields. Hardiman and Nuraniwati (2023) reported that the USAS semantic tagger is a functional and effective tool that should be used to automatically annotate English words into semantic fields and subfields.

5. Conclusion

This corpus-based research aimed to investigate the similarities and differences between the synonymous verbs *change* and *alter* in terms of collocations and semantic preference. By drawing data from dictionaries and the Corpus of Contemporary American English (COCA), the study highlighted that COCA contains significant information which is not available in contemporary dictionaries. This notion has been proved by scholars (e.g. Phoocharoensil, 2021; Supanfai, 2022) who reported that corpus analysis unveils a great deal of information not available in contemporary dictionaries.

With respect to the noun collocates, the findings in this study demonstrated that *change* and *alter* have a remarkably high number of overlapping noun collocates, which evidently confirmed the existence of a robust synonymous status between these verbs. However, an exploration of these overlapping collocates in concordance lines uncovered that in some contexts, both *change* and *alter* tended to have similar denotations and appeared in similar colligational patterns. In such cases, these verbs can be used interchangeably, retaining similar meanings. However, in other contexts, *change* and *alter* tended to display different colligational and denotational behavior. Thus, it was concluded that overlapping collocates are not a true representation of the synonymous status among verbs unless they have been proved similar through exploration of the concordance lines. Moreover, the specificities that each target verb exhibited in the concordance lines highlighted that these verbs cannot be used interchangeably in all contexts.

In line with the findings mentioned above, a substantial number of adverb collocates tended to emerge with both verbs, providing further evidence of the robust synonymous status between these verbs. Additionally, a closer examination of the overlapping adverb collocates in COCA revealed further characteristics of both *change* and *alter* which are overlooked by both LDOCE 6th ed and OALD 10th ed. To clarify, it was established that both *change* and *alter* have a tendency to signify a great change characteristic of pronounced importance.

Turning to the semantic preference findings, it was found that the target verbs in this study had a tendency to share substantial similarity which is reflected not only in that they all had most of their noun collocates distributed with roughly the same totals in the first third of discourse domains but also in that they had few collocates in the second

third of discourse domains and a fairly absolute absence of noun collocates in the last third of discourse domains. Despite this similarity, a scrutiny of the distribution of the noun collocates in the semantic sub-fields highlighted the existence of some differences.

Since only COCA is employed as a source of the data in this study, the research findings may only reflect the American use of the target verbs in this study. Xiao and McEnery (2006) pointed out that using two comparable corpora ensures more reliable results. Therefore, adopting other corpora such as the British National Corpus (BNC) could yield further clarifications of how the near-synonyms *change* and *alter* are similar and different in terms of collocation and semantic preference.

The findings of this study can be insightful for researchers to target a wider set of frequently used near-synonymous verbs in English other than the target verbs in this study. Additionally, future studies might achieve comparative analyses of the native speakers' use of the target verbs in this study with the EFL learners' in terms of collocations and semantic preference. It is suggested that teachers and learners should get acquainted with applying corpora such as COCA in their learning environment. It is also advised that course designers should include the application of corpora in the yearly educational plans and development projects.

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