Patterns of the 'Current Relevance' Meaning of the Present Perfect in Real Use and Textbooks: A Corpus-driven Perspective

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Abstract

The present study adopts a corpus-driven perspective to an analysis of the 'current relevance' meaning, a central meaning of the present perfect, in general and textbook corpora. The term 'current relevance' refers to a meaning of the present perfect, in which a past action or event is shown to be connected with the present time in some ways. The relevance to the present, however, is in many cases implicit (Downing & Locke, 2006). This might pose a problem to EFL learners as they may fail to see the link between actions in the past and in the present time and hence use other tenses in English, e.g. the past simple tense or the present simple tense, instead of the present perfect. Adopting a corpus-linguistic perspective, which highlights the pattern-meaning relationship, the present study examines two English general corpora, BE2006 and AME2006, to explore if the 'current relevance' meaning of the present perfect can be realized on textual surface. The analysis suggests that the meaning under study can be expressed textually in four patterns: (1) 'completion', (2) 'cause-effect', (3) 'purpose', and (4) 'sequences of action'. These formal categories are then explored in an investigation of English language textbook samples in Thailand. The comparison between patterns found in the general and textbook corpora reveals that the four textual patterns are shared by both corpora but with different ratios. That is, the pattern 'completion' is found to occur more frequently in the sampled textbooks while the patterns 'purpose' and 'cause-effect' show a significantly lower frequency than that in the general corpora. The study offers a new light on the description of the present perfect's central meaning 'current relevance' in terms of the pattern-meaning relationship and also provides pedagogical implications for development of textbooks and teaching materials.

Keywords: English present perfect, Current relevance, Patterns and meanings, Corpus-driven approach, Textbooks

Introduction

The English present perfect (henceforth PP) has received a great deal of attention in linguistic studies because of its complex nature of verb forms (Kearns, 2011) and several meanings that the tense can be used to convey. One of the central meanings of PP is the 'current relevance' meaning, which is addressed in several accounts (see e.g. Quirk et al., 1985; Rastall, 1999; Downing & Locke, 2006; Declerck, Reed & Cappelle, 2006). This use of PP makes links between a past action or event and the present time. The relevance between the past and present is, in many cases, implicit (Downing & Locke, 2006). The possibility of implicit meaning relations between the past and present can pose some difficulty for EFL learners because they

may not be able to perceive the past-present connection and hence convey this PP meaning in other tenses, e.g. the past or present simple tenses.

Take a corpus linguistic perspective, which sees that meanings in language are tied to observable patterns, the present study, however, hypothesizes that there are surface patterns that can explain the 'current relevance' use of PP in communicative context. The hypothesis is examined via analyses of general corpora, BE2006 and AME2006. The results from general corpora were compared with those found in English language textbooks used in universities in Thailand. This is in order to investigate whether patterns and the 'current relevance' meaning, which can be observed from general corpora, correspond to learners' input, i.e. textbooks. To operationalize these objectives, the following research questions are asked:

1. To what extent and in what ways is the 'current relevance' meaning of PP realized formally on textual surface?
2. What are frequencies of the different patterns of the 'current relevance' meaning of the PP found in general corpora?
3. To what extent do frequencies and patterns of the meaning found in general corpora correlate with those found in textbooks used by Thai universities?

The following section describes the 'current relevance' meaning of PP in more details before the corpus-driven theoretical framework is outlined. These are followed by the methodology used in the present study, and results and discussion are presented before a conclusion is given.

The 'current relevance' meaning of the present perfect
As mentioned above, PP is the construction that can be used to convey several meanings, for example 'continuing action/ event/ state from the past to the present', 'result states', 'experiential states', 'repeated action/ event', and 'recent action/ event' (see e.g. Comrie, 1975; Quirk et al., 1985; Eastwood, 1995; Biber et al., 1999; Greenbaum and Nelson, 2002; Kearns, 2011). Many of these involve the link between the past and the present time. 'Current relevance' is therefore considered as a central meaning of PP in general and has been addressed in several accounts (see e.g. Comrie, 1975; Downing & Locke, 2006; Kearns, 2011). As Downing and Locke (2006: 364) put it, the 'current relevance' refers to a past event "[which] is psychologically connected to speech time, and has some (implicit) relevance to it". This means that the central meaning, 'current relevance', ties the past and the present time to contexts of production, which have some kind of relevance to the present, and the relevance may or may not be spelled out.

Some accounts of PP associates the 'current relevance' meaning with the 'result states' reading. That is, the relevance of a past situation is shown in the present in terms of results of something in the past. Comrie (1975), for example, emphasized that the clearest manifestation of the 'current relevance' meaning can be observed in the 'result states' reading. In his explanation, the result state is expressed when "a present state is referred to as being the result of some past situation" (Comrie, 1975: 56). For instance, the sentence "John *has arrived*" indicates the result of John's arrival and it is relevant to the present time because it implies that John is still here.

Kearns (2011: 182) also gave a definition of 'current relevance' as a past event "[which] is currently relevant because its consequences are still in force". Like Comrie (1975), Kearns (2011) also attributes the 'current relevance' meaning to the cause-effect relationship. Examples were given as follows:

> a. Jill won't need that checkout job, she *has won* the lottery?
> (Jill is now rich.)
> b. Henry can't dance the pas seul, he *has pulled* a tendon.

(Henry is now injured.)
c. Kane *has broken* into our files, so we'll have to whack him.
(Kane now knows our secret.)

(Kearns, 2011: 182)

It can be seen from Kearns' examples that the current state/ action may not be stated explicitly but have to be inferred. For instance, in example (a), the fact that "Jill is now rich", is inferred on the basis of the reference to her winning the lottery, which occurred before the speech time but is expressed in the PP construction.

Based on these two accounts, it seems that the 'current relevance' meaning is somehow linked to the 'result states' reading; in other words, it often implies the cause-effect relationship. However, looking at the example from Downing and Locke (2006: 364) cited above, where 'They *have been* out' is said to imply that they are back, the 'current relevance' meaning does not always imply the cause-effect relationship because we cannot say that "They are back" is the effect of 'They *have been* out'. This suggests that the 'current relevance' sense of PP are broad and can have implications other than the 'result states' meaning.

Because of these, EFL learners may have difficulty understanding and using the PP tense as they may not be able to see the implicit link between the past and present time and may eventually convey the PP meaning in other tenses, e.g. the present or past simple tenses. As found in previous studies, e.g. Karpava and Agouraki (2014), Yoshimura et al. (2014), Han and Hong (2015), and Thumvichit (2016), EFL learners are likely to have difficulties mastering the PP tense. However, taking a corpus linguistic perspective, which maintains that meanings are related to patterns, the present study hypothesizes that the 'current relevance' meaning of PP can be discovered from surface textual patterns, and that it is associated with several patterns other than the cause-effect. This theoretical view is explained below.

Theoretical framework: The relationship between linguistic patterns and meanings

The pattern-meaning interface has been at the heart of corpus linguistic research. Many previous corpus linguistic studies have explored the relationship between patterns and meanings in English (Hunston and Francis, 2000; Römer, 2005; Römer, 2006; Römer, 2009; Partington et al., 2013). In corpus linguistics, where lexis is prioritized (Mahlberg, 2007), 'pattern' is defined by Hunston and Francis (2000: 37) as follows:

> The patterns of a word can be defined as all the words and structures which are regularly associated with the word and which contribute to its meaning. A pattern can be identified if a combination of words occurs relatively frequently, if it is dependent on a particular word choice, and if there is a clear meaning associated with it.

From the definition above, we can say that a pattern involves words and structures which occur repeatedly. The recurrent strings of words or structures must have a clear meaning related to them as well, so that patterns in a language can be identified. Therefore, it can be said that there is an interconnectedness between patterns and meanings in language.

Sinclair (1991, 1996) explored the relationship between patterns and meanings in language and proposed two principles, i.e. the 'open-choice principle' and the 'idiom principle'. As Sinclair (1991: 109) put it, the 'open-choice principle' is "a way of seeing language text as a result of a very large number of complex choices". This means that we have many complex choices of words and structures to choose in order to produce language. Nonetheless, according

to Sinclair (1991, 1996), the choices of words are not entirely free and open-ended. They are somehow constrained, and this is called the 'idiom principle'. Sinclair (1991: 111) explained that one of the features of the 'idiom principle' includes a co-occurrence pattern, i.e. the way words or phrases co-occur with particular groups of lexical items in its close environment. As an example, the phrase 'set eyes on' frequently co-occurs with a temporal conjunction, e.g. 'the moment', 'the first time', or an adverbial, e.g. 'never'. The principle of idiom is thus considered important in the explanation of how meaning in text arises from co-occurrence patterns (Sinclair, 1991: 112).

Francis (1993, 1995) and Hunston and Francis (2000) also found the relationship between patterns and meanings. In their studies, they discovered that "certain patterns 'select' words of particular meanings" (Hunston and Francis, 2000: 29). As an example, Francis (1995) argues that the pattern *it + is + hard + to + verb* selects only verbs relating to mental process to be filled in the verb slot, e.g. 'It is hard to *believe'* (Francis, 1995 as cited in Hunston and Francis, 2000: 29).

Based on the theoretical frameworks above, the present study examines how recurrent patterns of verbs and co-occurrences contribute to the 'current relevance' meaning of PP. Specifically, the present study investigates how the PP construction, i.e. HAVE + past participle verb, selects some particular groups of verbs (following Hunston and Francis, 2000) in the construction and co-occurs with particular (groups of) lexical items in its close environment (following Sinclair, 1991, 1996) in expressing the 'current relevance' meaning. These frameworks therefore form the basis of the analysis of patterns and meanings in the present study.

Methodology

The present paper is part of the main study where all meanings and patterns of PP are identified (Chareonkul, 2018). However, only the 'current relevance' meaning is a focus of the present paper. Details on corpus data and compilation and data analysis are provided below.

Corpus data and compilation

Two types of corpora are used in the study: (1) general corpora, i.e. corpora which contain "texts from different genres and domains of use including spoken and written, private and public" (Kennedy, 1998: 20), and (2) a corpus of PP in textbooks.

General corpora

Two general corpora, i.e. British English 2006 (henceforth BE2006) and American English 2006 (henceforth AME2006), were employed. The two corpora, compiled by Paul Baker from Lancaster University, are available at Lancaster CQP web system. BE2006 is a corpus of 500 contemporary British English written texts, which contains 1,147,097 tokens. AME2006 is a comparable American English corpus of BE2006. It is an electronic collection of 500 American English written texts containing 1,175,965 tokens in total. Therefore, data from general corpora are based on approximately 2,000,000-token database of two major varieties of English.

Both British English and American English corpora were employed in the present study because it is related to the comparison with English textbooks. Most of the English language textbooks in Thailand are from UK and USA publishers, e.g. Cambridge University Press, Oxford University Press, Pearson ELT, and Cengage Learning. Therefore, both BE2006 and

AME2006 were chosen in order to compare the 'current relevance' meaning of PP in authentic English with that in English textbooks used in Thailand.

It must be noted that the data in BE2006 and AME2006 are all written. Spoken data in the corpora are from fictional prose. Although they are not authentic spoken texts, it has been argued that fictional dialogues can to a large extent portray natural language conversation (Oostdijk, 1990).

English textbooks

The PP samples in textbooks (Henceforth TB) were collected from English language textbooks of the foundation English course in the top ten universities of Thailand according to 2017 QS Asia University Rankings. Textbooks used in the foundation English course were chosen because the course is normally required for all first-year students in universities in Thailand. The sampled textbooks analyzed in the present paper therefore cover the same level, i.e. the intermediate level. (See Appendix A for a list of the sampled textbooks.) It must be noted that only the commercial textbooks were collected and compiled as sampled textbooks used for the analysis. In-house textbooks and other teaching materials, which can also be other sources of exposure for learners, were not included in this study. This is because the use of a commercial textbook as a main teaching material is shared by the ten universities in Thailand in the present study. Thus, a corpus of textbooks used in this study contain only commercial textbooks.

A corpus of ten textbooks in the present study contain approximately 70,000 tokens and yield 1,360 present perfect instances. All of these instances were extracted from the present perfect descriptions in the lessons, examples of uses, reading texts, dialogues, exercises, and transcriptions of the audio or video files. All of them were digitized and converted to plain text (.txt file) in order to create an electronic corpus of the present perfect samples in textbooks.

Data analysis

Data from general and textbook corpora were analyzed from a corpus-driven perspective. As explained by Tognini-Bonelli (2001: 87), a corpus-driven approach is an approach used "to derive linguistic categories systematically from the recurrent patterns and the frequency distributions that emerge from language in context". A corpus-driven study gives priority to data, and the analysis of data will lead to the generalization of rules, in which it finally brings new linguistic categories or theories (see e.g. Biber, 2009; Tognini-Bonelli; 2001; Granger and Paquot, 2015 for examples of corpus-driven studies). The present study adopts this inductive approach to investigate patterns and the 'current relevance' meaning of PP in general and textbook corpora. The meaning was thus interpreted on the basis of textual surface found in the corpora under study.

Analysis of 'current relevance' in BE2006 and AME2006

The first step in the analysis was extracting PP concordance lines from BE2006 and AME2006. Query expressions of PP were set with both non-contracted and contracted forms:

1. have + past participle verb
2. has + past participle verb
3. 've + past participle verb
4. 's + past participle verb

Table 1 shows the query expressions for searching the PP construction. The concordance lines with the present perfect continuous and modal verbs were excluded as the focus of the present

study is on the present perfect simple. The concordances were then thinned to 680 concordance lines each (1,360 concordance lines in total). This is in order to match the total number of 1,360 PP samples found in TB. After all data were filtered and thinned, each concordance line was studied in terms of its meanings. Concordance lines which express the 'current relevance' meaning were put together and examined in terms of the verbs in the PP construction (following Hunston and Francis, 2000) and co-occurrences of the tense (following Sinclair, 1991, 1996). This is to examine formal patterns that associate with the 'current relevance' meaning and to find out if the concordance lines share any common features.

It should be noted that verbs in the PP construction were analyzed according to Vendler's (1967) verb categorization, which classifies verbs in terms of three main characteristics, i.e. dynamism (dynamic or non-dynamic), duration (durative or non-durative), and telicity (telic or atelic). Table 2 below presents how the four types of verbs are categorized.

Table 1 *Query expressions of the PP construction in general corpora*

Forms	Query Expressions
have + past participle verb	have <<2>> *_VVN
	have <<2>> *_VBN
has + past participle verb	has <<2>> *_VVN
	has <<2>> *_VBN
've + past participle verb	've <<2>> *_VVN
	've <<2>> *_VBN
's + past participle verb	's_VHZ <<2>> *_VVN
	's_VHZ <<2>> *_VBN

Note: <<2>> represents a query for searching a maximum of two items within a specified range of another
        *_VVN represents a query for searching the past participle form of lexical verbs
        *_VBN represents a query for searching the past participle form of the verb BE: been
        's_VHZ represents a query for searching the shorten form of the verb HAVE

(Hoffmann et al., 2008)

Table 2 *Vendler's (1967) four aspectual classes*

Verb types	Dynamism	Duration	Telicity
State	-	+	-
Activity	+	+	-
Accomplishment	+	+	+
Achievement	+	-	+

Analysis of 'current relevance' in TB
A corpus of PP samples in textbooks was analyzed in comparison with those in the general corpora. The 1,360 instances of the present perfect in TB were generated through AntConc (Anthony, 2014). These include both non-contracted and contracted forms:

1. have + past participle verb
2. has + past participle verb
3. 've + past participle verb
4. 's + past participle verb

Similar to the analysis of BE2006 and AME2006, PP samples, which express the 'current relevance' meaning in TB, were put together and examined in the same way. Results from TB were then compared to those from general corpora to see if patterns of the 'current relevance' meaning in the general corpora and in the sampled textbooks correspond with one another.

It should be noted here that apart from the researchers, co-raters who are native speakers of English also took part in identifying meanings of PP concordance lines. The percentage agreement in the present study is at 86.09% for BE2006 and AME2006 and at 84.72% for TB, which is higher than the acceptable rate at 75% (Mackey & Gass, 2016). In addition, in order to find out whether differences in frequency of the 'current relevance' use between general corpora and TB are significant, the chi-square goodness-of-fit test was conducted. The significance level (α) in the present study is at $p \leq 0.05$.

Results and Discussion

This section presents findings from general and textbook corpora. Different groups of the 'current relevance' meaning and their patterns are reported and discussed, followed by frequencies of each pattern and meaning.

The 'current relevance' of PP and its patterns in general and textbook corpora
Out of 1,360 concordance lines in BE2006 and AME2006, 617 cases (45.37%) were found to exhibit the 'current relevance' meaning. This group of meaning can be realized formally through an accomplishment verb -- a semantic type of verbs classified as telic, durative, and dynamic, i.e. the verb which has a finishing point, occupies time, and is not stative (Vendler, 1967). An accomplishment verb can indicate an action or event which has already finished or completed. When an accomplishment verb is used in the PP construction, it can indicate relevance of a past action or event to the present time.

While the 'current relevance' meaning, as mentioned earlier, is often deemed implicit, the bottom-up analysis of corpus data in the present study reveals that relevance of a past action or event to the present time can be identified textually mainly on the basis of the rhetorical structure of the text, in which the PP is embedded. Different patterns were found in association with the meaning. These groups of patterns were labelled ad hoc as follows: (1) 'completion', (2) 'cause-effect', (3) 'purpose', and (4) 'sequences of action'.

1. Completion
'Completion' is a group of meaning which indicates a completed action or event in the past. However, the past action or event is linked to present time because it is relevant to the current point of discussion. This can be realized formally through the use of an accomplishment

verb in the PP construction surrounded by sentences in the present tense. PP with an accomplishment verb shows that an action or event has already completed, but the fact that it co-occurs with the present tense suggests that the completed action or event is relevant to the present time. The pattern of 'completion' can be manifested as follows:

HAVE + Past participle accomplishment verb + co-occurrence with the present tense

Examples (1) – (3) demonstrate the PP samples of the group 'completion'.

(1)   This paper *analyses* the problem of expertise matching and *presents* a RDF-based solution to the problem. This approach **has been tested** through a case study that can assist Ph.D. applicants to the School of Computing, University of Leeds, locate the potential supervisors with the required expertise. (BE2006, J23; emphasis added)

(2)   In particular, Messick *argues* that followers are often given vision, protection, and achievement by leaders. These *are* among the task effectiveness dimensions that **have been discussed** by past theorists. (AME2006, J28; emphasis added)

(3)   The children **have made** loads of biscuits. *Do* you *want* to take some home with you? (TB; emphasis added)

Example (1) shows that the action of 'testing' was already completed in the past because of the accomplishment verb 'tested'. Nevertheless, it is used in the PP construction to show that the test is still relevant to the present, specifically to the 'solution', which the paper discusses.

In Example (2), the verb 'discussed' is an accomplishment verb; and, thus, the action of 'discussing' was already completed in the past, but it still has relevance to the present in that it is important to the writer's argument.

Thus, it can be concluded that the 'completion' sense of the 'current relevance' can be manifested through the type of verb and the present tense in the surrounding contextual information.

Example (3) is from the PP samples in TB. It can be seen that the PP construction with the accomplishment verb 'made' co-occurs with the present tense as well. Thus, it can be said that the action of 'making' is relevant to the current point of discussion.

2. Cause-effect

As mentioned above, some accounts of PP in the previous studies often link the 'current relevance' meaning to the result states or the cause-effect relationship. The present study also found patterns expressing the 'cause-effect' meaning. Specifically, the 'cause-effect' group in the present study indicates relevance of an action or event in the past to the present in terms of cause and effect. In most cases, past actions or events are a cause of a particular event in the present. The meaning of 'cause-effect' can be realized formally in terms of an accomplishment verb in the PP construction, which co-occurs with a subordinating conjunction indicating cause and effect, e.g. 'because'. It can also co-occur with a word or a phrase indicating a cause-effect relationship, e.g. 'result in' and 'cause'. This is summarized in the pattern below.

HAVE + Past participle accomplishment verb + co-occurrence with a coordinating/subordinating conjunction, e.g. 'because', or with a phrase indicating cause-effect, e.g. 'results'

Examples (4) – (6) demonstrate the PP samples of 'cause-effect'.

(4) Full circle Back in the Chilterns, red kites **have bred** *so* successfully *that* numbers have soared from zero in 1990 to around 2,000 today. (BE2006, E13; emphasis added)

(5) Some observers have wondered whether a significant share of the dramatic appreciation reflected in the OFHEO HPI **has been** *caused* by home remodeling activity as opposed to fundamental price increases. (AME2006, H09; emphasis added)

(6) **I've run** twenty kilometres *and* I'm very tired now. (TB; emphasis added)

In Example (4), 'bred' is an accomplishment verb, and it is used in the PP construction to indicate that the action of breeding is a cause of some situation. This cause-effect relationship is signaled textually through the conjunction 'so…that'. Thus, the PP construction in (4), 'have bred', indicates the 'current relevance' in terms of 'cause-effect'.

It can be seen that the PP construction in (5) selects an accomplishment verb, i.e. 'caused'. Thus, it suggests a cause-effect relationship in that the current situation, i.e. a significant share of the dramatic appreciation, is an effect of a past situation as reflected in the PP construction.

Example (6) shows that a similar type of verbs and co-occurrence patterns can also be observed in TB. That is, 'run', which is embedded in the PP construction, is an accomplishment verb and co-occurs with a coordinating clause indicating the relationship between the past and present in terms of 'cause-effect'. That is, the action of running is already finished, but its effect, i.e. being tired, is in the present.

3. Purpose

'Purpose' is a group of meaning which indicates an action or event that is accomplished in the past in order to serve a purpose of the present situation. This group of meaning, again, can be realized through the co-occurrence among an accomplishment verb in the PP construction, a present tense co-text, and a to-infinitival phrase. The pattern of 'purpose' can be manifested as follows:

HAVE + Past participle accomplishment verb + co-occurrence with a to-infinitival phrase and a present tense co-text

This is illustrated in Examples (7) – (9).

(7) *To better understand the issue involved in the design of RDF-based expertise matching*, the following case study **has been chosen**. This case study *is* about a brokering system, which *matches* Ph.D. (BE2006, J23; emphasis added)

(8) As of this writing, terminal operators *are* 30 percent ahead of expected emissions reductions. In addition, they **have tested** a variety of means *to further reduce emissions*, such as alternative and low-sulfur fuels, post-combustion catalysts and particulate filters. (AME2006, J72; emphasis added)

(9) Sonia and Carlos Silva **have saved** enough money *to buy a sailboat*. (TB; emphasis added)

It can be seen from Examples (7) and (8) that 'chosen' and 'tested' are accomplishment verbs. Both of them are embedded in the PP constructions, which suggest that these activities have been completed in order to fulfill a particular purpose of the state of affairs under discussion, which also relates to the present moment. Example (9) illustrates that the group 'purpose' in TB occurs

with accomplishment verbs, i.e. 'saved'. Similar co-occurrence patterns, i.e. to-infinitival phrase, are also found. However, because the example from TB is isolated from the context, the present tense co-text cannot be found from this example.

4. Sequences of action

'Sequences of action' is a group of meaning which indicates a sequence of actions in which the previous action is framed in the PP construction, and that action also relates to the subsequent action. With an accomplishment verb and the present tense co-text, this group of meaning is also found to co-occur with a conjunction indicating sequences, e.g. 'before', 'after', 'until', and 'then'. This can be illustrated in the pattern as follows.

HAVE + Past participle accomplishment verb + co-occurrence with a conjunction indicating sequences and a present tense co-text

Examples (10) – (12) illustrate the pattern.

(10) The lecturer *reveals* how many students **have voted** for each option and *then* there *can be* a debate about which *is* the correct answer. (BE2006, J67; emphasis added)

(11) Who would have thought he could best himself with an epic and unflinching film about World War II, especially *after* so many noteworthy war movies already **have been made**? … It [the film] *is* one of the year's best films and perhaps the finest modern film about World War II. (AME2006, C05; emphasis added)

(12) Continue *until* everyone **has used** all the words at least once. (TB; emphasis added)

The verb 'voted' in (10) is framed in the PP construction with the conjunction 'then' showing the sequences of action after the event of voting. This is similar to Example (11), where the PP construction with an accomplishment verb 'made' co-occurs with the conjunction 'after', showing the sequences of action after the previous situation is finished. Example (12) shows that 'used', which is an accomplishment verb, is embedded in the PP construction co-occurring with a subordinating conjunction 'until'.

The four textual patterns above illustrate the relationship between patterns and meanings as argued by such corpus-driven research as Hunston and Francis (2000) and Sinclair (1991, 1996). That is, the PP construction, i.e. HAVE + past participle verb, selects some particular groups of verbs, i.e. an accomplishment verb, and co-occurs with particular groups of lexical items in its close environment to express a particular meaning, e.g. the sub-group 'purpose' co-occurring with the to-infinitival phrase.

To conclude, the analysis of corpus data in the present study reveals that relevance of the past action to the present time can be realized textually through the following propositional relations: (1) 'completion', (2) 'cause-effect', (3) 'purpose', and (4) 'sequences of action'. These sub-categories extend what has been addressed in the literature on PP in that they point to possible kinds of relationship between the past and present time that emerge in authentic communication, which have not been explicitly nor systematically tackled in previous research.

Distribution of the 'current relevance' of PP in general and textbook corpora

While the previous section shows that textbooks contain instances of PP with similar patterns and meanings to those found in the general corpora, it is found that the 'current relevance' meaning of PP is significantly uncommon in TB. According to Table 3, while 617 out of 1,360 concordance lines (45.37%) in the general corpora exhibit the 'current relevance' meaning, 332 out of 1,360 PP samples (24.41%) in TB are found to associate with this group of meaning (p<0.001, α=0.05). This suggests that while the 'current relevance' meaning seems to be a major use of PP, with almost 50% occurrences in the BE2006 and AME2006 samples, textbooks do not seem to feature this central meaning of PP (see Chareonkul (2018) for other corpus-informed meaning groups of PP).

The significant discrepancy is also found in the occurrences of some sub-groups of the 'current relevance' meaning. That is, it is found that 'completion' is the most common sub-group of the 'current relevance' both in the general corpora and TB (see Table 3). Nonetheless, although it is likely that TB presents the meaning group 'completion' more frequently than in the general corpora, the representation of this notional group in two types of corpora is not significantly different (p=0.112, α=0.05).

While in TB, the 'completion' sense is more common than in the general corpora, the groups 'purpose' (p=0.001, α=0.05) and 'sequences of action' (p=0.046, α=0.05) are significantly rare (see Table 3). From a pedagogical point of view, the scarcity of these two sub-groups in TB suggests that textbooks are not likely to present these uses of PP to learners. At the same time, the marked predominance of 'completion' noted above also suggests that learners are likely to have more opportunities to learn the use of PP for expressing the 'completion' than the 'purpose' and 'sequences of action' meanings from textbooks.

It might be argued that because 'purpose' and 'sequences of action' are not major uses of the 'current relevance' meaning, with their relatively low frequencies in the general corpora, textbooks are likely to provide learners with more instances of the 'completion' group, which has a higher frequency. However, low frequency patterns are "important in moving the language learner from intermediate to more advanced levels of proficiency" (Barlow, 1996: 11). The presentation of these less frequent groups of meanings and patterns in textbooks is therefore important if we want to improve learners and aim towards a more advanced level.

Table 3 *Distribution of four sub-groups of the 'current relevance' use*

Sub-groups	General corpora		Textbooks		*P*-value
	Frequency	%	Frequency	%	
1. Completion	476	77.15	316	98.14	0.112
2. Cause-effect	33	5.25	12	3.61	0.739
3. Purpose	81	13.13	3	0.90	0.001*
4. Sequences of action	27	4.38	1	0.30	0.046*
Total	617		332		

Note: - The significance level is at p≤0.05.
*   - * indicates the group which is significantly different form each other.*

Conclusion

The present study adopts a corpus-driven approach to the interface between meanings and patterns of the 'current relevance' use in general and textbook corpora. While the 'current relevance' meaning in the previous studies can be implicit and is often described in terms of the cause-effect relationship (Comrie, 1975; Kearns, 2011), the present study has found that the 'current relevance' meaning of the present perfect can be realized textually in terms of propositional relations categorized in four sub-groups, i.e. (1) 'completion', (2) 'cause-effect', (3) 'purpose', and (4) 'sequences of action'. The relationship between these four textual patterns and the 'current relevance' meaning of the present perfect also illustrates the importance of co-text and discourse patterns in the study of grammar. This is in line with Stubbs (2000), who argues that the study and teaching of grammar should not be separated from rhetoric.

Moreover, the present study demonstrates qualitative similarity and quantitative discrepancy between general and textbook corpora. That is, the BE2006, AME2006 and textbook corpora exhibit a correlation between patterns and the 'current relevance' meaning of the PP, but some uses of the 'current relevance' meaning are significantly predominant and uncommon in textbooks. That is, the group 'completion' is predominant in the sampled textbooks while the groups 'purpose' and 'cause-effect' show a significantly lower frequency than that in the general corpora.

With regards to practical applications of the findings from this study, we suggest that the present study provides at least two major pedagogical implications. First, as the study provides the findings on the pattern-meaning relationship of the 'current relevance' meaning of the present perfect, the results can be used to apply to teaching methods in that teachers can draw learners' attention to this relationship in terms of verb types, adverbials, and the importance of the present tense co-texts. The use of 'data-driven learning' in classrooms, which is an inductive approach in teaching and learning, can be supported by the results of the present study as it will allow learners to discover the patterns of the 'current relevance' meaning by themselves. To put it simply, apart from the presentation of the present perfect in textbooks and teaching materials, teachers can provide learners a supplement task with concordance lines of the 'current relevance' meaning in order to allow learners "to read vertically," "to read fragmentarily," and "to focus on repeated events" (Tognini-Bonelli, 2001: 41), so that they become aware of the pattern-meaning relationship of the 'current relevance' meaning of the present perfect.

Second, frequency information provided in the present study is helpful for teachers and textbook developers since it can play a role in decision-making on the weight given to each use of the 'current relevance' meaning to be taught or covered in grammar lessons. To illustrate, the results of the study suggest that 'completion', the common use of the 'current relevance' meaning, should be particularly highlighted to learners at all levels, but at the same time, the less frequent uses, e.g. 'purpose' and 'sequences of action', should receive more attention at a higher level of study because the less frequent use is an important part in moving learners towards a more advanced level.

All these point to the fact that corpus data can be of use in providing frequency information for EFL development of textbooks and teaching materials, as well as an insight into patterns of the PP's 'current relevance' meaning, which involve both patterns of verb types and patterns of co-textual features that are used to express this meaning of PP. Teachers, therefore, can point out how relevance in the present can be realized through surface patterns and which patterns are more frequently used than the others. Nevertheless, it should be noted that the

textbooks analyzed in the present study are all from the intermediate level. Further studies can investigate textbooks with various levels in order to compare how the textbooks from different levels present the 'current relevance' meaning of the present perfect.

Acknowledgements

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Appendix A

List of textbooks used in Thai universities

Title	Year	Author(s)	Publishers
New Language Leader Upper Intermediate	2015	David Cotton, David Falvey, and Simon Kent	Pearson Education Limited
Cambridge English Empower Intermediate	2015	Adrian Doff, Craig Thaine, Herbert Puchta, Jeff Stranks, and Peter Lewis-Jones	Cambridge University Press
Life Pre-Intermediate	2013	John Hughes, Helen Stephenson, and Paul Dummett	Cengage Learning
New Headway: Intermediate B1	2012	Liz and John Soars	Oxford University Press
Stretch 3	2014	Susan Stempleski	Oxford University Press
Cutting Edge Intermediate	2016	Surah Cunningham, Peter Moor, and Jonathan Bygrave	Pearson Education Limited
Four Corners 2	2011	Jack C. Richards, and David Bohlke	Cambridge University Press
Speak Now 2	2012	Jack C. Richards, and David Bohlke	Oxford University Press
Touchstone 3	2014	Michael McCarthy, Jeanne McCarten, and Helen Sandiford	Cambridge University Press
Viewpoint 1	2012	Michael McCarthy, Jeanne McCarten, and Helen Sandiford	Cambridge University Press