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Research Article

English Tense Analysis in Civil Engineering Book Using AntConc Application

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Abstract.
Civil engineering, as a discipline, depends on accurate communication to deliver complex design specifications, construction methodologies, and structural analyses. English tenses in technical writing contributes to a crucial role in ensuring that information is not only conveyed accurately, but also comprehensively understood by students within the learning processes. Since most of the learning books in civil engineering field use English, thus students' comprehension of English also becomes necessary. One of the approaches to improve the English learning process in the classroom is by utilizing technology, namely AntConc 4.2.0 Software. This study aims to observe the frequency of sentences in the AntConc related to the present tense used in the civil engineering book. The method used in this study was a mixed-method design. The quantitative method was used in the early stages of research to obtain data to be studied, involving the selection of a relevant civil engineering e-book. Moreover, qualitative method was used to analyze sentences that have been grouped into using simple present tense to obtain general linguistic patterns. The finding reveals that the most used tense in civil engineering book chosen is the simple present tense. Furthermore, it also demonstrates how AntConc 4.2.0 Software facilitates vocabulary acquisition and reveals patterns of language usage within the context of civil engineering literature.

Keywords: AntConc, civil engineering, simple present tense

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1. Introduction

As one of the crucial elements in the process of learning, language needs to be mastered by students in order to enhance their knowledge of certain learning scope. In the field of civil engineering, English becomes the language that is used in most of the introductory books. According to Ahmadi [1], technology can be utilized to motivate students in learning language while also provide many authentic materials for them to learn. In addition, Tomlison [2] and Gençlter [3] propose that computer-based learning activities give students appropriate internet materials and rapid information, thus they

are more motivated to learn and engage in the learning processes. One of the computer-based media that can be used by students to learn language is called AntConc.

AntConc is an application widely used in the field of linguistics and text analysis. AntConc is a powerful and user-friendly software tool designed to assist researchers, linguists, and students in analyzing large collections of textual data, known as corpora. Developed by Laurence Anthony, an expert in corpus linguistics, AntConc offers a wide range of features and tools that facilitate in-depth investigations into language patterns, word frequencies, collocations, and more. One of the key advantages of AntConc is its ability to handle vast amounts of text efficiently. It supports various file formats, such as plain text, HTML, XML, and Microsoft-Word documents, allowing users to import their corpora effortlessly. Once imported, the application generates a concordance, which is a list of selected words or phrases with their surrounding context, enabling researchers to explore language usage in detail.

Antconc is an application that has specific function in the scope of corpus analysis that can also be used for classroom activities. This application provides several features, including effective concordancer, generator for word and keyword frequency, feature for the analysis of word cluster and lexical bundle, and plot for word distribution. There are several tabs in AntCont application, namely:

1.1. Word list

In analyzing corpus data, we first need to know what words, how many words, and how often words appear in the text. To get this data, we can use the work list function in the menu bar. After we upload the data, we can enter the word list menu, then click start which is located at the bottom. By using this function, we will know our text profile through word frequency configuration. After that, we can see the words used in the text shown in series based on the words that are used the most.

1.2. Concordance

This menu is used to display a list of sentences containing the particular word we are looking for. We can search for the word we want by entering the word in the search box located at the bottom, then after clicking start, a list of sentences will appear with that word in the highlight.

1.3. File view

If we want to see the entire text, we can use this menu to show all the text and the word we are searching for in the highlights. For example, if we enter the word “match” in the view file column, we can see all sentences and “match” is highlighted so that readers can find it easily.

1.4. Concordance plots

This menu aims to display the word we are looking for. For example, in the same file when we want to see how the word “is printed”, we can see the sketch of the word and the number of occurrences. Based on the following figure, it can be seen that “printed” appears four times and appears twice at the beginning and twice in the middle of the text.

According to the research of Khairas [4], it shows that the majority of the students who become respondents (41.3%) say that AntConc is very useful and beneficial for them to learn languages. This study also shows that AntConc can be used to learn part of speech, sentence construction, sentence type, collocation, vocabulary, and sentence voice materials. Another similar research that utilizes AntConc to investigate language features is conducted by Iswari et. al. [5] who use Concordance in AntConc to produce academic words compilation that is taken from journal articles in applied linguistics [5]. However, there is still quite little research related to use of AntConc to analyze tenses in Civil Engineering book.

Simple present tense is a form of tenses that used to express events that occur as habits, routines, or happen in the present time. Present tense is the form of the verb according to the time period and used when someone wants to express an event or general fact that is happening at this time. In addition, the present tense is also used in conditional sentence type 0 and conditional sentence type 1, followed by the simple future tense.

In this study, the authors took the object in the book “Managing Risk Measurement in Building and Civil Engineering” by Peter Williams. This scope includes the application of AntConc, present tense, and also related books. This study certainly purposes to examine the frequency of sentences in the AntConc related to the present tense.

2. Methods

Before the application of AntConc could be used, it must be downloaded from its official website (https://www.laurenceanthony.net/software/antconc/) and then installed. This application could be performed on several software systems, including Windows, MacOS, and Linux. However, AntConc could only be operated in computers, and it was not compatible to be operated in tablets or phones. After the AntConc was downloaded and installed, it then could be opened and the tab appearance could be seen in the Figure 1 below.

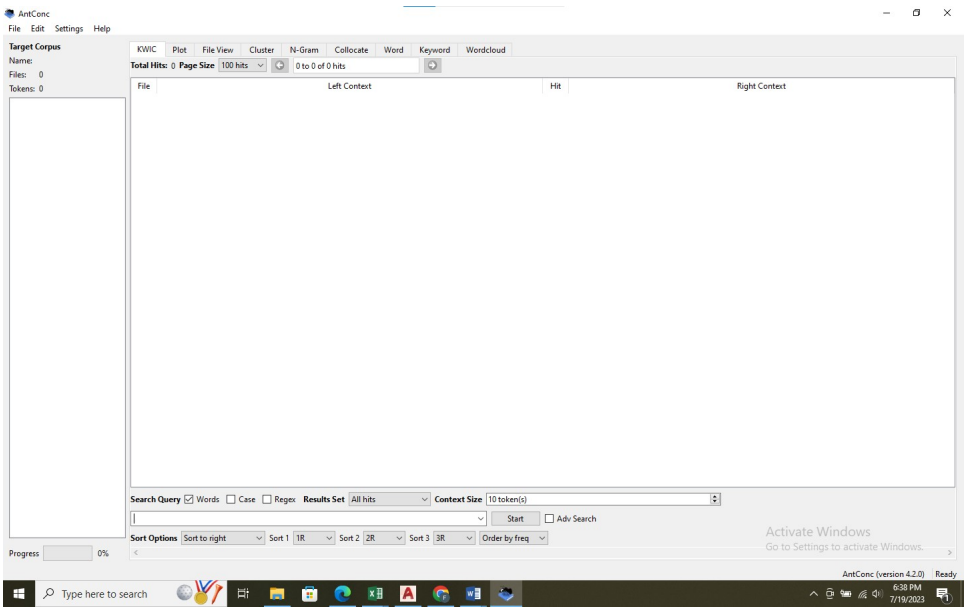

Figure 1: The appearance of tabs in AntConc application.

Among the tabs in AntConc application, the text file that was used as the object of research was converted into the format of plain text (.txtfiles) and it was imported and listed on the white column on the left side named “Corpus Files”. In addition, the other tabs in AntConc could be used to perform different kind of analysis. After that, the outputs of this analyses were saved and exported as plain text files. To make it easier, a folder was also created where all the files that wanted to be imported were compiled in one place. Once the folder was made, we could go to File > Open Directory > select the folder. It could be seen on Figure 2 where all the text files were listed on the left-hand column.

The last step taken was clicking the column next to “start” in order to find out the present tense sentences in the book used as the research object. Keywords were also applied to help searching the present tense sentence.

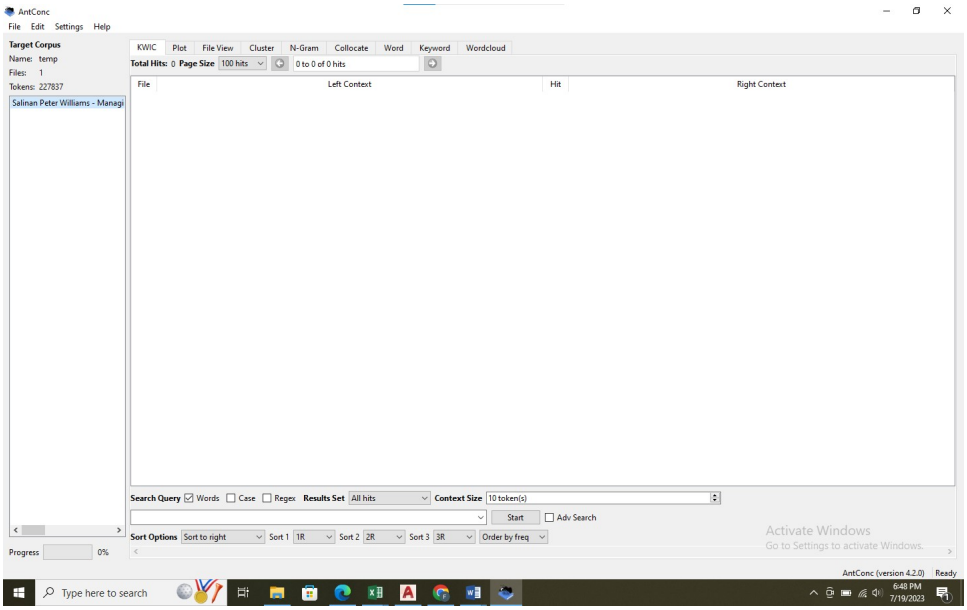

Figure 2: The text files uploaded to AntConc.

3. Findings

The frequency of the present tense in the book “Managing Measurement Risk in Building and Civil Engineering” is as follows:

3.1. The present tense that uses the formula ``He (Subject) + verb 1 + es + complement''

There are 6 (six) sentences found that uses the formula “He (Subject) + Verb 1 + es + Complement”.

From Figure 3, it can be seen from the hit result that the most frequent present tense use applies the formula “He (Subject) + Verb 1 +es” with a total of 6 (six sentences). As shown, the sentences in the book “nnn” found that applies this formula starts with “he argues”, “he chooses”, “he decides”, “he does”, “he exercises”, and “he prices”.

3.2. The present tense that uses the formula ``they (Subject) + do + not + verb 1 + complement''

There are 6 (six) sentences found that uses the formula “They (Subject) + do + not + Verb 1 + Complement”.

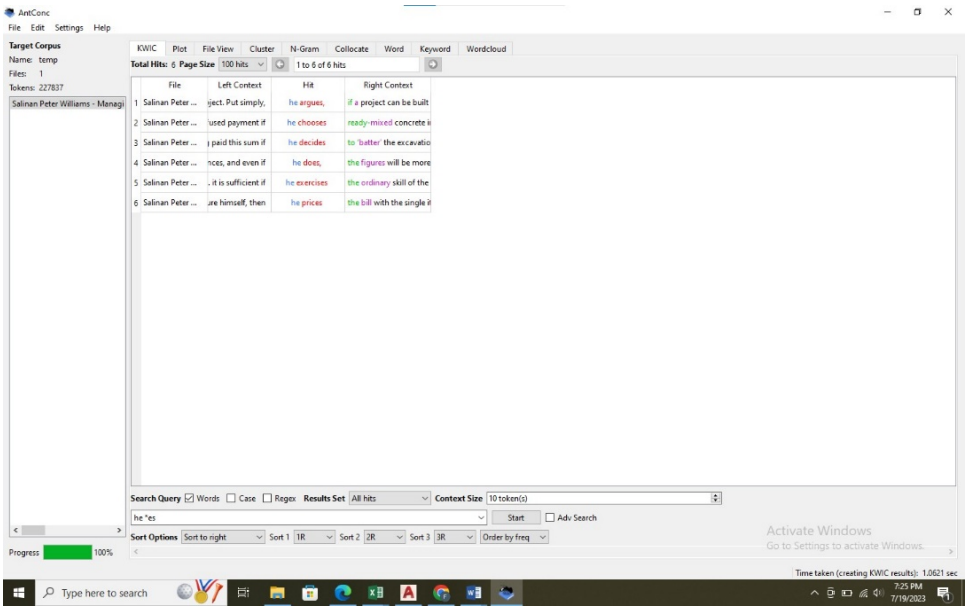

Figure 3: Result of the formula He (Subject) + Verb 1 + es + Complement.

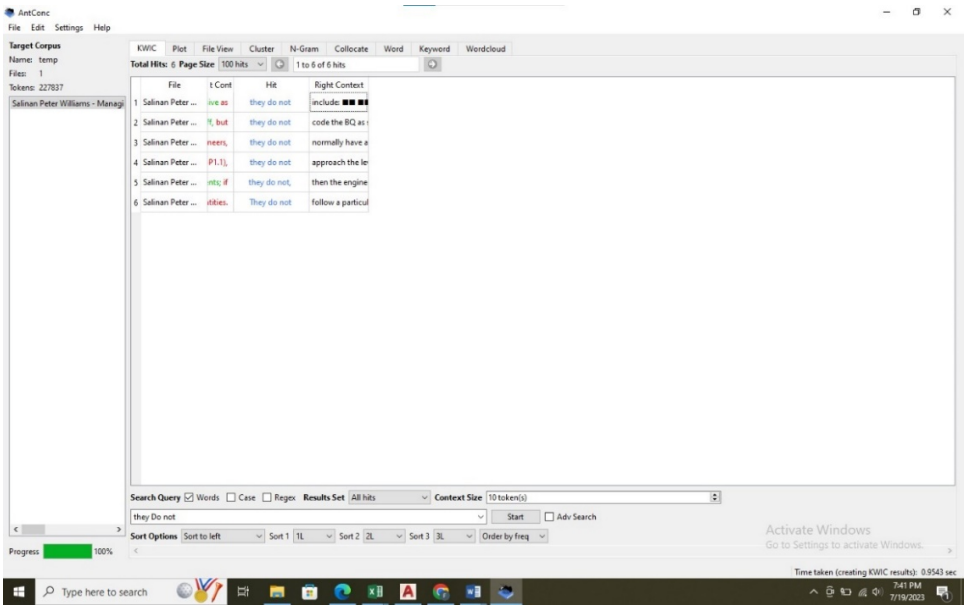

Figure 4: Result of the formula they (Subject) + do + not + Verb 1 + Complement.

From Figure 4, it can be seen from the hit result that another most frequent present tense use applies the formula “They (Subject) + do + not” with also a total of 6 (six sentences). As shown, the sentences in the book “Managing Measurement Risk in Building and Civil Engineering” found that applies this formula starts with “They do not”.

3.3. The present tense that uses the formula She (Subject) + verb 1 + es + complement

There is 1 (one) sentence found that uses the formula “She (Subject) + Verb 1 + es + Complement”.

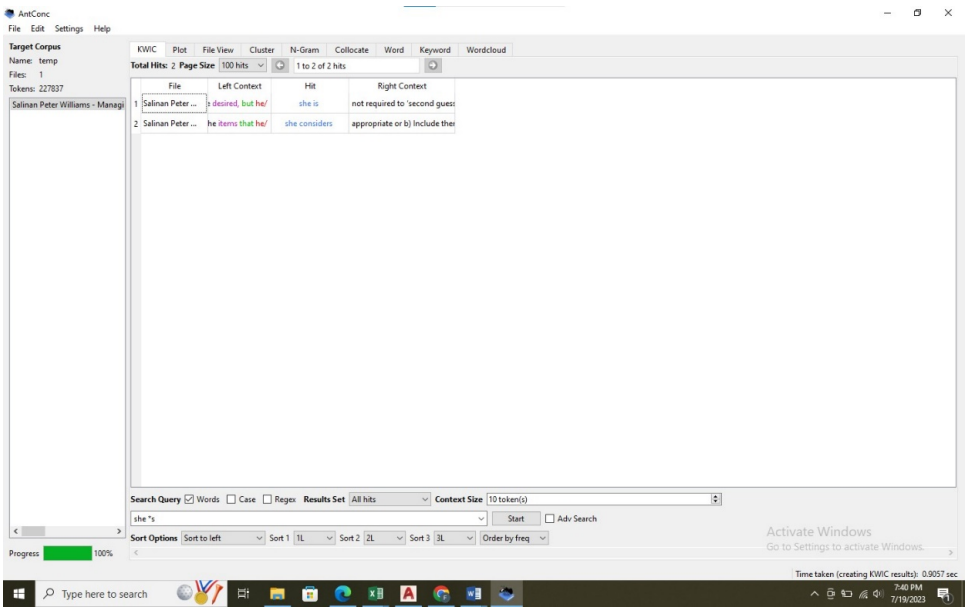

Figure 5: Result of the formula she (Subject) + Verb 1 + es + Complement.

From Figure 5, it can be seen from the hit result that the least frequent present tense use applies the formula “She (Subject) + Verb 1 + es” with a total of 1 (one sentence). As shown, the one sentence in the book “Managing Measurement Risk in Building and Civil Engineering” found that applies this formula starts with “she considers”. Even though in the hit result presents there are 2 (two) result, the other one cannot be included into this formula since it does not apply the formula required, but using “She (Subject) + Verb 1 (to be)” with “She is”.

4. Conclusion

Based on this research, it can be concluded that AntConc is a useful tool to explore language patterns in which we, as readers, sometimes have a hard time to identify them. Several small words like pronouns “I, he, she”, articles “the, a, an”, and modals “will, have, must” are particularly difficult to be always paid attention to by the readers since they are very commonly abundant. Moreover, computer application like AntConc is also great to track another language feature, such as the tenses used. To sum up,

AntConc can be considered as a very powerful and effective searching tool to help academicians and researchers to identify language patterns in a more detailed manner that previously they probably are not aware of them.

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