UNIVERSITI TEKNOLOGI MARA

A CORPUS-BASED STUDY OF MORPHOLOGICAL PRODUCTIVITY OF ENGLISH LANGUAGE CHEMICAL ENGINEERING TEXTBOOKS

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Candidate's Declaration

I declare that the work in this thesis was carried out in accordance with the regulation of UiTM. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referred work. This topic has not been submitted to any other academic institution or non-academic institutions for other degree or qualification. In the event that my thesis be found to violate the condition mentioned above, I voluntarily waive the right of conferment of my degree and agree to be subjected to the disciplinary rules and regulations of UiTM

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Abstract

The effective teaching of word identification requires the acquisition and mastery of specific word identification skills. The aim of this study is to determine the patterns of complex words which, because of the large number of meanings signalled by word derivations, are the foundation for decomposition skills. It also aims to develop lexical knowledge of words with complex composition through the study of morphologically productive affixes in chemical engineering textbooks. It seeks to find the most productive morphological categories in the specialized corpus created and to find the density of complex words and their morphological patterns.

A corpus of Chemical Engineering Level 1 (CEL1) textbooks used at Universiti Malaysia Pahang (UMP), Malaysia was designed to capture a range of linguistic features in actual language use for more effective teaching and learning. This study focuses on theories on word recognition which proposed that reading consists of decoding and linguistic comprehension which are necessary for reading success. Baayen's Morphological Productivity Measurement is used to determine the most productive affixes which will be the base for materials development for teaching and learning processes.

The study looks at the frequent patterns of morphologically complex words which might enable language instructors to design reading materials based on actual language use. It was found that 75.57% of the affixed words in the corpus are single-affixed words while the most complex word has six affixes attached to it. The most frequent prefixes in the corpus are *un-, re-, de-,pre-* and *dis-* while for suffixes, the most frequent occurrence are *ion-,-ly, -er, -al, -able/ible.* For prefixes attached to technical words, *dia-, hydro-, poly-, iso-,* and *thermo-* are found to be the most frequently used.

The findings from this study are potentially beneficial for developing ESP materials to meet the linguistic needs of students in engineering and related disciplines. The findings have pedagogical implications for language teaching and learning enabling teaching materials to be produced with the information from the CEL1 corpus. Teaching materials can be designed using the complex word patterns and presented to allow multiple exposure, thus enhancing word recognition skills.

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