**A Corpus-based Study of Academic Words in Physics Research articles**

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**Abstract**

This paper reports a corpus based study of most frequently used academic words in physics research articles (RAs). A frequency and range- based Physics academic word list (PAWL) was compiled based on a corpus of 1046000 running words of physics RAs from scientific papers published in physics journals. The researchers had access to 30 journals from Shiraz University at the time of doing this study. From these journals, 10 journals were selected randomly. From each journal, 12 volumes published from 2010 to 2015 were selected randomly and 180 issues were finalized for analyses Swales (1990) an article is composed of introduction, method, result and discussion (IMRD format). Given that, the researchers considered this format and eliminated the articles that did not follow this format. Additionally, only pdf articles were selected to be converted to text files and be analyzed through computer software. PAWL including 325 word families was developed to accelerate and enhance the quality of academic writing and reading and assist non-native English student in publishing academic physics papers. Findings of this study illustrates the significance of high frequency words in physics RAs and vouch the idea of developing field-specific academic word list for EFL students targeting exclusive needs in each and every discipline. Pedagogical implications for students and material designers were discussed in detail.

Keywords: academic word list, physics, research article, academic writing.