

# A Corpus-Driven Study of Science Lab Reports

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Drawing upon the recent development of academic written English corpora such as the British Academic Written English (BAWE) in the context of the British higher education (Nesi, 2011) and the Michigan Corpus of Upper-level Student Papers (MICUSP) in the American educational setting (Römer & Wulff, 2010), the current research explores South Korean college students' lab reports as a genre of written English. English is considered as 'lingua franca' in many Asian countries. In South Korea, a growing number of colleges have mandated English as the only language for lectures, i.e., so-called "English-only lectures." With the expanding interest in such lectures and the increasing number of college lectures delivered in English, it is not only necessary to evaluate the usefulness of maintaining such a policy, but also to assess students' achievement in order to provide better English-mediated instruction in such settings. Therefore, the current research investigates how Korean undergraduate students in a science- and technology-focused university use English in their lab reports, in order to evaluate their general written English proficiency; as well as to diagnose their English for specific purposes of lab reporting.

Lab reports of the college students have been collected from biology, physics, and chemistry courses to compile a research corpus. Each collected report is annotated by identifiers such as their author and assignment information. The collected research samples are analyzed and compared through keyword analysis (Archer, 2008; Scott & Tribble, 2006; Scott, 2010). The analysis is carried out by a statistical comparison of the students' lab reports against larger corpora such as BAWE and MICUSP for the genre comparison and against reference corpora for the stylistic diagnosis. According to Scott and Tribble (2006), the keyword analysis can extract salient features that can provide the 'aboutness' of a text. In addition to the aboutness, with which researchers can explore the content of the corpus, the analysis also provides ways of extracting stylistic indicators.

The keyword analysis of the college students' science lab reports is expected to reveal their salient features, which may be considered characteristic of the Korean students studying in the English-mediated lectures. The extracted features are also compared with Biber's (1988) dimensions and features of genres to estimate the dimensional locations of the lab reports. It is expected that the results of the study can be a useful source, first for diagnosing South Korean ESL science lab reports; and second, for developing writing instruction programs for English for specific purposes of lab report writing.

Granted that the South Korean public education does not provide English-mediated courses at the secondary level, the university students have very few opportunities to use English for academic and specific purposes of writing lab reports. For that reason the lab reports written for the college course assignments may contain L1 Korean specific errors and/or unacceptable errors for the lab report genre.

## References

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