

Thesis Title Study of Discourse at the Sentence
Level in Research Articles in
the Field of Chemical Engineering

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ABSTRACT

This research investigated the frequency of occurrence of complex sentences compared to simple sentences in research articles in the field of chemical engineering. The investigation also examined complex sentences in different environments in research articles and classified the subtypes of complex sentences in order to describe their characteristics and communicative functions.

The corpus used in this research was research articles in the field of chemical engineering published in a reputable international journal. The analysis was conducted by employing the framework developed from Quirk et al.(1972).

The findings of the study indicate that:

1. Complex sentences occur more frequently than simple sentences in every article investigated, accounting for 75 and 25% respectively.

2. Higher numbers of complex sentences also occur in all 5 environments of the articles including abstract, introduction, methodology, result, and conclusion.

It is also found that the proportion of complex sentences increases with the total number of sentences in the environment.

3. Using Quirk et al.'s framework, complex sentences occurring in research articles in the field of chemical engineering can be classified into 21 subtypes and those that most frequently occur are complementary participial clauses, nominal that-clauses, to-infinitive clauses, nominal-ing clauses, relative clauses, clauses of purpose, and clauses of time.

4. Complementary participial clauses occur most frequently in all environments of research articles.

The implications of the study for language teaching and learning are as follows:

1. Complex sentences are linguistic features that should be emphasised in the teaching and learning of scientific English since, from previous studies, they cause some problems for science

students both in writing and reading.

2. Teaching formal grammar should be carried out simultaneously with communicative discourse or rhetorical functions in order to develop learners' communicative competence.