

## A corpus-informed study of logical connectors in L2 writing

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### 1. Introduction

Many teachers of English as a second or foreign language have anecdotal evidence that their students tend to misuse and overuse logical connectors, and two decades of work on writing pedagogy has consistently identified these connectors as a source of difficulty for second language writing [1]. Computer text-processing capabilities have provided an opportunity to investigate large samples of learner writing through corpus-based research, and such research has compared learner-created texts with those written by native speakers in an attempt to corroborate these intuitions [2]. The results of this line of research indicate that there are differences between NS and NNS adverbial connector use in writing, but a consistent pattern has not been observed across these studies. Although many studies found that particular connectors are used more or less often in NNS writing than in NS writing (e.g., [2]), no overall pattern of over- or underuse was found. This study presents a preliminary analysis of a corpus of the writing of EFL students enrolled at one of the tertiary institutions of Korea. Some of the techniques of corpus linguistics are employed to investigate a persistent and disconcerting characteristic of EFL students' writing – that is, overuse and misuse of logical connectors. These connectors were extracted from a corpus of timed learner writing. This study suggests how overuse and misuse of logical connectors among EFL students have been exacerbated by inadequate teaching materials and proposes approaches that may help address the current situation.

### 2. Literature review

The concept of text cohesion was first developed in Halliday and Hasan's [3] work on the topic. Halliday and Hasan identified five cohesive relations that can signal relationships between texts. Among these cohesive relations, the fourth type of cohesive relation is conjunction, which makes use of elements such as coordinating and subordinating conjunctions, as well as conjunctive adverbials to make explicit connections between propositions. Conjunction has a larger lexical element than the preceding three because it makes use of a wider set of lexical items, but is also applied with a degree of systematicity that indicates the incorporation of grammatical aspects as well. The conjunctive cohesive devices represent a wider variety of single and multiword expressions, and lexical cohesion can be created by some types of words or phrases.

Following Halliday and Hasan's [3] work, many studies were performed in the 1980s examining the use of cohesive devices in learner writing. These initial studies were inconclusive, but they were conducted without the aid of computers capable of processing large amounts of text and so had relatively small sample sizes. In the 1990s researchers began examining conjunctive adverbials using learner corpora. For example, Milton and Tsang [4] published one of the first of these studies, using a corpus gathered from English learners in Hong Kong. Of the 25 logical connectors included in their analysis, they found that 20 were "overused", contributing to an overall pattern of overuse. Granger and Tyson [2] performed a similar study using the International Corpus of Learner English (ICLE). Granger and Tyson compared French first language (L1) English learners' use of conjunctive adverbials, rather than the wider range of connectors which includes coordinating and subordinating conjunctions, with a corpus of NS writing. Granger and Tyson hypothesized that a certain pattern of overuse would be found in the NNS writing, but the results of the analysis were not conclusive. Altenberg and Tapper [5] compared their analysis of the writing of Swedish L1 English learners to the results reported by Granger and Tyson. Altenberg and Tapper found that the Swedish writers used far fewer conjunctive adverbials because of transfer effects, but with a usage pattern similar to the French L1 learners. Bolton, Nelson, and Hung's [6] study compared the use of connectors in the Hong Kong and Great Britain subsets of the International Corpus of English (ICE) to a sample of published academic writing. The results of the study revealed a tendency for both groups of students, NNSs and NSs, to overuse connectors when compared to published academic writing.

The focus on cohesion has been part of the new direction in communicative language teaching and there has been greater emphasis in language textbooks on the significance of logical connectors. However, cohesion can be abused by relegating it to an ornamental role and making it an end in itself in second language writing classes [7]. Such practices have negative effects on L2 students' ability to compose in writing in English.

### 3. Methods

The corpus was compiled using 60-minute timed essays written by NNS students in the English Writing courses at a large university in Korea. The learners were in their second to fourth semesters, at varying points in the

intermediate band of proficiency as examined by background questionnaires. The essays were written on a variety of topics, all designed to elicit descriptive writing. In the present study, 46 essays were included in the analysis. These 46 essays are part of a larger corpus and were selected at random; the choice to work with a subset of the larger corpus was made to make the initial analysis more manageable in terms of person-hours.

The list of connectors provided by Celce-Murcia and Larsen-Freeman [8] was used as a starting point, and other connectors were added to the list when encountered in the text. According to Celce-Murcia and Larsen-Freeman [8], the logical connectors of English are classified under four broad headings:

- Additive (used to signal addition, introduction, similarity, etc.);
- Adversative (used to signal conflict, concession, etc.);
- Causal (used to signal cause/effect, reason/result, etc.);
- Sequential (used to signal a chronological or logical sequence).

25 single-word logical connectors were selected for concordancing. Table 1 below lists the selected items for this study.

[Table 1] List of the Concordanced Logical Connectors

Logical connector	Concordanced Items
Additive: Addition Emphatic Intensifying Alternative Reference Similarity Identification	also, and besides actually alternatively regarding likewise namely
Adversative: Concession	nevertheless, although
Causal: Effect/Result	Because, therefore, consequently
Sequential: Chronological	Firstly, secondly, finally, lastly

#### 4. Results and Discussion

The aim of the study reported here is to determine to what extent EFL teachers and researchers can extract meaningful data through applying the techniques of corpus linguistics to learner corpora. The findings of the present study contribute empirical evidence to observations that the writing of EFL students is characterized by a certain pattern of connector usage. On the basis of the results, the common problems among L2 writers are thoroughly discussed. This study concludes by presenting practical approaches that may help address the situation.

#### 5. References

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