Phrasal Complexity in the Writing of Iranian EFL College-Level Students

Hesamoddin Shahriari, Ahmad Ansarifar and Reza Pishghadam (Ferdowsi University of Mashhad, Iran)

Syntactic complexity has been recognized as an important construct in L2 writing instruction and research. Among the list of measures used to analyze syntactic development and complexity in second language academic writing, phrasal embedding has been largely ignored and has only recently been receiving attention from researchers of the field. Studies into syntactic complexity (e.g., Beers & Nagy, 2007; Ellis & Yuan, 2004; Hunt, 1965; Jiang, 2012; Stockwell & Harrington, 2003) have traditionally focused on clausal embedding and subordination measures based on the assumption that academic writing derives its complexity from the elaborate use of clausal constructions (Biber & Gray, 2011). However, a number of studies (e.g., Biber & Clark, 2002; Biber & Gray, 2011; Biber, Gray & Ponpoon, 2011) have found academic writing to be characteristically dense with non-clausal phrases and complex noun phrase constructions, while reporting a relative absence of clausal elaboration. As a consequence, more studies are needed to investigate the role of phrasal embedding in the development of complexity in academic writing. Studies such as Lu (2011), Parkinson and Musgrave (2014) and Biber, Gray and Staples (2014) have shown that phrasal features tend to increase across levels of study in second language writing. Ravid and Berman (2010) and Staples, Egbert, Biber, and Gray (2016) have also found that phrasal features develop during university years in the writing of L1 English students.

Biber, Gray and Poonpon (2011) have argued that those seeking to write academic research articles, both native and non-native alike, should become familiar with this characteristic feature of the genre which often involves the frequent use of lengthy noun phrase structures. This could be attributed to the need to convey a large amount of information in a limited number of words. They also showed that complex noun phrases are much more appropriate measures of grammatical complexity in academic writing as opposed to embedded clauses. In line with these findings, Biber et al. (2011), hypothesized a series of stages predicting development in writing complexity through the increased use of complex noun phrase constituents and phrasal constructions. This developmental index involves five stages. According to Biber et al. (2011), these grammatical features can mainly be grouped according to three major grammatical types: finite dependent clauses, nonfinite dependent clauses, and dependent phrases, which can serve three main grammatical functions (i.e., adverbials, complements, and noun modifiers). The present study aims to investigate the development of noun phrase complexity in the academic writing of Iranian graduate students at different levels of academic study, comparing the observed patterns of use to those of expert writers.

To test this hypothesis, we compared three groups of abstracts: one group by MAlevel L1 Persian writers (using a corpus of 25714 words), a second group by PhD-level L1 Persian writers (with a corpus of 25423 words), and a third by a group of published abstracts by expert writers (with a corpus of 24808 words). In this study, we examined 1. Finite dependent clauses including relative clauses as noun

modifiers, complement clauses controlled by nouns. 2. Nonfinite dependent clauses including, -ing and -ed participles as noun post-modifiers, and preposition + nonfinite complement clauses as post-modifiers. 3. Dependent phrases including, attributive adjectives, participles, nouns as pre-modifiers, possessive nouns, of phrases as noun post-modifiers, other prepositional phrases as noun post-modifiers, adjectives, noun as pre-modifiers, appositives, and multiples prepositional phrases as noun post-modifiers.

These 16 different kinds of noun modifiers in our three sets of data were identified and pre-and post-modifiers were manually coded. As previously noted, since we are examining 16 grammatical features and therefore performing 16 tests simultaneously, we used the Bonferroni correction to avoid spurious positives. This adjusts the alpha value for each comparison to .002 (i.e., .05 /16 = .002). The one-way ANOVA is run to determine whether the normalized frequency for the MA, PhD, and EW groups differ significantly from each other. Our findings showed that out of the 16 types of noun modifiers examined in our study, Iranian graduate students of Applied Linguistics did not differ significantly from expert writers in producing 12 of the categories. Out of four kinds of modification for which significant differences were observed, one could be categorized as nonfinite dependent clauses (-ed participle as post-modifier) and the other three as dependent phrases (premodifying nouns, adjective/ noun combination as pre-modifiers, and multiple prepositional phrases as post-modifier). This is largely consistent with Biber et al.'s (2011) hypothesized developmental stages of syntactic complexity, in which finite dependent clauses are predicted to be acquired at earlier stages of writing development, while nonfinite dependent clauses are said to be mastered at intermediate stages followed by dependent phrases which are predicted to appear in the final stages of academic writing development.

We additionally found that abstracts by PhD-level graduate students better approximated those of expert writers. Of the four categories that turned out to be significantly different across the three groups (i.e., nouns as pre-modifiers, ed participles as post-modifiers, adjective/noun sequences as pre-modifiers, and multiple prepositional phrases as postmodifiers), the PhD group of abstracts, when compared to expert writers, only lacked multiple prepositional phrases as post-modifiers (i.e., the last stage in Biber et al.'s (2011) developmental stages of syntactic complexity). The abstracts by the MA group, on the other hand, fell short in all of the four features when compared to expert writers.

Our results have some useful implications for both L2 writing pedagogy and research. First, awareness of the developmental index of noun phrase complexity, as proposed by Biber et al. (2011), and attention to the favored patterns of noun modification by expert writers could greatly help L2 writing instructors, who stand to benefit from taking these patterns into consideration when teaching and drawing their students' attention to features that are expected to be learned at each stage of development. Our findings are also beneficial for L2 learners who can gain awareness of features distinguishing their writing from those of expert writers in their field of study. Moreover, the findings could also be of great use to writing assessment experts.

References

Biber, D., & Clark, V. (2002). Historical shifts in modification patterns with complex noun phrase structures: How long can you go without a verb? In T. Fanego, M. J. López-Couso, & J. Pérez-Guerra (Eds.), *English historical syntax and morphology* (pp. 43-66). Amsterdam, Netherlands: John Benjamins.

Biber, D., & Gray, B. (2011). Grammatical change in the noun phrase: The influence of written language use. *English Language and Linguistics*, 15(2), 223-250.

Biber, D., Gray, B., &Poonpon, K. (2011). Should we use characteristics of conversation to measure grammatical complexity in L2 writing development? *TESOL Quarterly*, 45, 5-35.

Biber, D., Gray, B., & Staples, S. (2014). Predicting patterns of grammatical complexity across language exam task types and proficiency levels. *Applied Linguistics*. Advance online publication. doi:10.1093/applin/amu059

Lu, X. (2011). A corpus-based evaluation of syntactic complexity measures as indices of college-level ESL writers' language development. *TESOL Quarterly*, 45(1), 3.

Parkinson, J., & Musgrave, J. (2014). Development of noun phrase complexity in the writing of English for Academic Purposes students. *Journal of English for Academic Purposes*, 14, 48-59.

Ravid, D., & Berman, R. (2010). Developing noun phrase complexity at school age: A text-embedded cross-linguistic analysis. *First Language*, 30(3), 3-26.

Staples, S., Egbert, J., Biber, D., & Gray, B. (2016). Academic Writing Development at the University Level Phrasal and Clausal Complexity Across Level of Study, Discipline, and Genre. *Written Communication*, 33(2), 149-183.

Staples, S., & Reppen, R. (2016). Understanding first-year L2 writing: A lexicogrammatical analysis across L1s, genres, and language ratings. *Journal of second Language Writing*, 32, 17-35.