Exploring Grammatical Complexity across Proficiency Levels in Argumentative Essays by Iranian EFL Learners

Farzaneh Shadloo
M.A. Student of Teaching English as a Foreign Language, Ferdowsi University of Mashhad, Mashhad, Iran

Hesamoddin Shahriari Ahmadi [1]
Assistant Professor of Teaching English as a Foreign Language, Ferdowsi University of Mashhad, Mashhad, Iran

Behzad Ghonsooly
Professor of Teaching English as a Foreign Language, Ferdowsi University of Mashhad, Mashhad, Iran

Extended Abstract

1. Introduction

Gaining competence in writing academic texts has been considered as a challenging and important task in the process of second and/or foreign language learning; and "this realization is not surprising, given the similar difficulties related to the development of first language (L1) writing competency" (Whalen & Ménard, 1995, p. 382). As a result, teaching and making language learners aware of common linguistic measures in different kinds of academic registers can be significant and useful. In this regard, Ortega (2003) has suggested that this construct—grammatical complexity—is of significance in "second language research because of the assumption that language development entails, among other processes, the growth of an L2 learner's syntactic repertoire and her or his ability to use that repertoire appropriately in a variety of situations" (p. 492). Ortega (2003) has also noted that "measures of syntactic complexity are important research tools not only in the field of second language acquisition but in a variety of language-related disciplines" (p. 492). In this regard, some studies have demonstrated that clauses and clausal subordination are the best measures of grammatical complexity. Larsen-Freeman (1978), for example, has pointed out that the "percentage of error-free T-units and the average length of error-free T-units, proved to be the best discriminators among the five levels of ESL proficiency" (p. 439). However, Lu (2011) has noted that previous studies have only analyzed a limited number of measures and therefore there is not enough

---

1. Corresponding Author: h.shahriari@um.ac.ir

information available on the best measure(s) for analyzing syntactic complexity in academic prose. Lu (2011) has subsequently classified 14 syntactic complexity features in five categories. These include length of production, sentence complexity, subordination, coordination, and particular structures. As few studies have examined these 14 syntactic complexity measures proposed by Lu (2011), the aim of the present study is to analyze these features in a corpus of argumentative essays written by learners of English as a foreign language (EFL).

2. Methodology

The present study has made use of a corpus of argumentative essays by EFL learners from three levels of proficiency (upper-intermediate, intermediate, and pre-intermediate). Following this, for analyzing the measures of syntactic complexity, the online L2 syntactic complexity analyzer which is designed by Lu (2010) was employed. Considering its function, this analyzer "produces frequency counts of nine linguistic units in the text—word, sentence, clause, dependent clause, T-unit, complex T-unit, coordinate phrase, complex nominal, and verb phrase—and generates 14 indices of syntactic complexity for the text" (Yang, Lu, & Weigle, 2015, p. 58). In the next stage, the data was entered into the SPSS software and a one-way ANOVA was run.

3. Discussion

The statistical results of the one-way ANOVA revealed that five features of grammatical complexity show significant differences ($p < 0.05$). The results also show that features that are related to phrasal complexity can be regarded as a better criterion for assessing grammatical complexity in essays compared to features of subordination, coordination, or sentence complexity. The results of the present study are in line with the findings of Biber and Gray (2013) and Biber, Gray, and Poonpon (2011) who underscored the importance of phrasal and noun phrasal complexity in academic prose. In analyzing three types of texts, namely argumentative, descriptive, and narrative texts, Lu (2010) also found that mean length of T-unit, mean length of clause, complex nominals per T-unit and complex nominals per clause show a statistically significant difference. Therefore, Lu (2011) has suggested that there is a need for more studies to analyze phrasal complexity.

4. Conclusion

The results of the current study are of considerable significance for the evaluation of argumentative essays written by EFL learners. Therefore, becoming more familiar with grammatical complexity measures of academic

writing may lead to more comprehensive and thorough assessment. Moreover, writing instructors can make their learners aware of the importance of noun phrasal complexity in their writing. It could also be of great benefit if material developers and language instructors were to highlight the differences among various registers of academic writing while teaching grammar lessons. In this regard, Biber, Conrad, and Reppen (1994) have mentioned that there is no "single register that can be identified as 'general English', and that advanced instruction based on our intuitions about 'general' or 'core' English is not likely to provide adequate exposure to the actual linguistic patterns found in the target registers" (p. 183). As a result of this suggestion, future studies are recommended to concentrate on features of grammatical complexity in different registers of academic writing.

Keywords: academic writing, corpus studies, argumentative essays, grammatical complexity, noun phrasal.

References

Ai, H., & Lu, X. (2013). A corpus-based comparison of syntactic complexity in NNS and NS university students' writing. In A. Díaz-Negrillo, N. Ballier, & P. Thompson (Eds.), *Automatic treatment and analysis of learner corpus data* (pp. 249–264). Amsterdam/ Philadelphia: John Benjamins. *Applied Linguistics, 15, 2*, 169–185.doi:10.1093/applin/15.2.169

Beers, S., & Nagy, W. (2010). Writing development in four genres from grades three to seven: Syntactic complexity and genre differentiation. *Reading and Writing*, *24*(2), 183–202. doi:10.1007/s11145-010-9264-9

Biber, D., & Gray, B. (2013). Being specific about historical change: The influence of sub-register. *Journal of English Linguistics*, *41*(2), 104–134. doi: 10.1177/0075424212472509

Biber, D., Conrad, S., & Reppen, R. (1994). Corpus-based approaches in applied linguistics.

Biber, D., Gray, B., & Poonpon, K. (2011). Should we use characteristics of conversation to measure grammatical complexity in L2 writing development? *TESOL Quarterly, 45*(1), 5–35. doi:10.5054/tq.2011.244483

Byrd, P. (1997). Grammar from context: Rethinking the teaching of grammar at various proficiency levels. *Language Teacher-Kyoto-Jalt*, *21*, 7–18.

Crawford, W. J., & Csomay, E. (2016). *Doing corpus linguistics.* New York [u.a.]: Routledge.

Crowhurst, M. (1990). Teaching and learning the writing of persuasive/ argumentative discourse. *Canadian Journal of Education / Revue Canadienne De L'éducation*, *15*(4), 348–359. doi: 10.2307/1495109

Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. Oxford University Press.

Gardner, S., & Nesi, H. (2012). A classification of genre families in university student writing. *Applied Linguistics*, *34*(1), 25–52. doi:10.1093/applin/ams024

Granger, S., Hung, J., & Petch-Tyson, S. (Eds.). (2002). *Computer learner corpora, second language acquisition, and foreign language teaching*. Amsterdam: John Benjamins.

Grant, L., & Ginther, A. (2000). Using computer-tagged linguistic features to describe L2 writing differences. *Journal of Second Language Writing*, *9*, 123–145. doi: 10.1016/s1060-3743(00)00019-9

Ho, V. L. (2011). *Non–native argumentative writing by Vietnamese learners of English: Acontrastive study* (Unpublished doctoral dissertation).Georgetown University, Washington, DC.

International Journal of Corpus Linguistics, 15, 474–496. doi:10.1075/ ijcl.15.4.02lu.

Kim, J. (2014). Predicting L2 writing proficiency using linguistic complexity measures: A corpus-based study. *English Teaching*, *69*(4), 27–51. doi: 10.15858/engtea.69.4.201412.27

Larsen-Freeman, D. (1978). An ESL index of development. *TESOL Quarterly*, *12*, 439–448. doi: 10.2307/3586142

Lu, X. (2010). Automatic analysis of syntactic complexity in second language writing.

Lu, X. (2011). A corpus-based evaluation of syntactic complexity measures as indices of college-level ESL writers' language development. *TESOL Quarterly*, *45*(1), 36–62. doi: 10.5054/tq.2011.240859

Nippold, M. A., Ward-Lonergan, J. M., & Fanning, J. L. (2005). Persuasive writing in children, adolescents, and adults. *Language Speech and Hearing Services in Schools*, *36*(2), 125–138.doi: 10.1044/0161-1461(2005/012)

Ortega, L. (2003). Syntactic complexity measures and their relationship to L2 proficiency: A research synthesis of college-level L2 writing. *Applied Linguistics*, *24*(4), 492–518.

Voss, J. F., & Wiley, J. (1997). Developing understanding while writing essays in history. *International Journal of Educational Research*, *27*(3), 255–265. doi: 10.1016/S0883-0355(97)89733-9

Whalen, K., & Ménard, N. (1995). L1 and L2 writers' strategic and linguistic knowledge: A model of multiple-level discourse processing. *Language Learning, 45*(3), 381–418.

Wolfe-Quintero, K., Inagaki, S., & Kim, H. Y. (1998). *Second language development in writing: Measures of fluency, accuracy, & complexity.* Honolulu, HI: University of Hawaii Press.

Yang, W., Lu, X., & Weigle, S. C. (2015). Different topics, different discourse: Relationships among writing topic, measures of syntactic complexity, and judgments of writing quality. *Journal of Second Language Writing*, *28*, 53–67.doi: 10.1016/j.jslw.2015.02.002.