Age, Morphosyntax and Second Language Writing

Muhammad Asif Qureshi

Northern Arizona University

Abstract

The study attempted to investigate L2 writers' use of morphosyntax in L2 (English) writing. Twenty three essays that were written by level 5 students in a 5-level intensive English language program were collected and codded for the morphosyntactic features contained in three influential studies (i.e., DeKeyser, 2000; Johnson & Newport, 1989; Linebarger, Schwartz, & Saffran, 1983) on age and L2 acquisition. The essays were coded by two Ph.D. students. One of the coders was a native speaker of English. The instrument yielded a staisfactory kappa (.84, $p < .001$, 95% CI = 0.68, 0.99) for coding categories, and for rule violations (kappa = .81, $p < .001$, 95% CI = 0.69, 0.92). Twelve morphosyntactic features were observed to be problematic for L2 writers enrolled in the program. Moreover, the features coded in the study coincide with the features contained in several grammaticality judgment tests (GJTs) (e.g., DeKeyser, 2000; Johnson & Newport, 1989; Linebarger, Schwartz, & Saffran, 1983); hence the coding scheme can be used along with the GJT for assessing L2 writers' performance in L2 writing.

Background

The impact of age on second language acquisition has been widely researched (see for example, DeKeyser, 2000; Johnson & Newport, 1989; Seol, 2005). Motivation for this research comes from the Critical Period Hypothesis (CPH) proposed by Lenneberg (1967). Since Lenneberg propounded his theory several researchers attempted to investigate its implications for various language skills (e.g., morphosyntax, phonology). The studies found a strong negative correlation between age of arrival (AoA) in the target language country and scores on the measures of morphosyntax (see e.g., Abrahamsson, 2012; DeKeyser, 2000; DeKeyser, Alfi-Shabatay, & Ravid, 2010; Johnson & Newport, 1989; Seol, 2005) and phonology (Abrahamsson, 2012; Asher & Garcia; 1969; Moyer, 2009).

However, most of the research that investigated impact of age on morphosyntax depended on Grammaticality Judgment Tests (GJTs) predominantly (DeKeyser, 2000; DeKeyser, Alfi-Shabatay, & Ravid, 2010; Johnson & Newport, 1989; Seol, 2005). One caveat of intuition-based GJTs is that the participants can guess responses correctly just by chance. Moreover, such measures don't inform about participants' ability to use the tested morphosyntactic features in their writing.

An alternative approach that might control for the aforesaid methodological weaknesses is assessing participants' morphosyntactic knowledge in their actual writing samples. Research on ESL and EFL students' writing shows that they report several problems and make a number of mistakes when producing academic papers (see for example Cho, 2009; Ene, 2008; Storch, 2009). However, these studies don't look at the features contained in GJTs rather they investigate accuracy, complexity and completeness of participants' responses.

A better approach should examine the impact of age on L2 writing with a specific focus on the features contained in GJTs. However, doing this would require two things: 1) existence of similar features in L2 speakers' writing, and 2) a coding scheme to identify and categorize mistakes found in learners' writing. In order to check for these features, the present study attempts to explore the following questions,

1. Do the rule types contained in GJTs occur in L2 learners' writing?

2. If yes, what is the frequency of violation per rule type and per learner?

3. Does the coding for rule types and rule violations meet acceptable reliability standards?

Method

Data Collection

Twenty seven essays written by level 5 students in 5 level intensive English program were collected. The essays were argumentative in nature and were written by the participants in their placement test. After preliminary screening, four essays were dropped from further analyses.   Descriptive details about the essays are provided in table 4.

Table 4

Number of Essays, Mean Number of Words, Standard Deviation, Minimum, and Maximum

Number of Essays	M length in words	SD	Minimum length in words	Maximum length in words
23	203	30.85	157	265

Analysis

The essays were coded for morphosyntactic features contained in three influential studies (i.e., DeKeyser, 2000; Johnson & Newport, 1989; Linebarger, Schwartz, & Saffran, 1983) by a Ph.D. student enrolled in Applied Linguistics program. Initially eleven types of mistakes

were identified. After that the mistakes and their coding were reviewed by another native speaker enrolled in Ph.D. program in education. The number of mistakes types was increased to twelve. Moreover, several mistakes and their coding were re-categorized. Here it is important to measure that three rounds of inter-rater coding were run and in the third round a reliable estimate for the coding scheme was obtained. Coding categories had a kappa = .84 (p < .001), 95% CI = (0.68, 0.99), and rule violation kappa = .81(p < .001), 95% CI = (0.69, 0.92).

Results

Results of the study found past tense, plurals, third person, determiners, pronominalization, particle movement, subcategorization, auxiliaries, relative pronoun, main verb, preposition, tense/aspect as the problematic features in L2 writing. Except prepositions and tenses all the features are found in other GJTs (see e.g., DeKeyser, 2000; Johnson & Newport 1989). Based on this analysis it is clear that the morphosyntactic features contained in GJTs are found in L2 learners' writing.

Question 2 of the study explored the frequency of violations per rule type and per learner. It is important to know that the violations are frequent and common among the participants. Details of violation per type and per learner are provided in Tables 1 and 2 below.

Table 1

Problematic Morphosyntactic Features in L2 Speakers' Writing

	Morphosyntactic features	*Problematic occurrences per type*
1	Sub-categorization	29
2	Pronominalization	20
3	Auxiliaries	19
4	Main verb problem	17
5	Plurals	16
6	Preposition	16
7	Third person	15
8	Determiners	15
9	Past tense	14
10	Relative pronoun	6
11	Particle movement	2
12	Tense/aspect	2

Table 1 shows that the most frequently occurring problematic morphosyntactic feature is subcategorization. These items reveal learners' problem with choosing appropriate subcategorization of various verbs. Moreover, the use of pronouns, auxiliaries, main verb, plural and preposition are the most frequently occurring problems in students' writing. Least occurring problematic features appear to be the relative pronoun and past tense. However, the fact that they occur least does not imply that they are the least problematic rather an alternative explanation is that the participants didn't use it frequently. Moreover, present analyses didn't find enough

evidence for the violation of present progressive and found some new problematic categories for example, preposition, tense and aspect, and main verb.

Table 2

Violation of Morphosyntactic Rules per Student

Learners	Mistakes per student
1	9
2	8
3	4
4	5
5	9
6	9
7	7
8	9
9	8
10	6
11	8
12	7
13	4
14	10
15	9
16	9
17	4
18	8
19	12
20	10
21	5
22	3
23	6

($M = 7.3$, $SD = 2.2$)

Table 2 shows that the maximum number of mistakes per student is 12 and the least is 3. On average 7 problematic occurrences of each rule occurred per student. Both Tables 1 and 2

show a considerable number of violations of morphosyntactic features per rule type and per student.

Relevance to PIE

Since data for the study was obtained from students enrolled in the PIE the results of the study have particular relevance to the PIE. Results show that level 5 students at PIE face particular difficulty in the correct use of pronouns, auxiliaries, main verbs, plurals and prepositions. On average they make 7 mistakes in an average 203 word essay. An explicit focus and emphasis on these morphosyntactic features in teaching must help improve the situation.

References

Abrahamsson, N. (2012). Age of onset and nativelike l2 ultimate attainment of morphosyntactic and phonetic intuition. *Studies in Second Language Acquisition, 34,* 187-214.

Asher, J. J & Garcia, R. (1969). The optimal age to learn a foreign language. *The Modern Language Journal, 53*(5), 334-341.

Cho, D. W. (2009). Science journal paper writing in an EFL context: The case of Korea. *English for Specific Purposes, 28*, 230-239.DeKeyser, R. (2000). The robustness of critical period effects in second language acquisition.

Studies in Second Language Acquisition, 22, 499-533.

DeKeyser, R., Alfi-Shabatay, I., & Ravid, D. (2010). Cross-linguistic evidence for the nature of effects in second language acquisition. *Applied Psycholinguistics, 31,* 413-438.

Ene, E. (2008). Developmental stages in advanced SLA: A corpus based analysis of academic writing by ESL graduate students. *International Journal of Applied Linguistics 156,* 53-86.

Johnson, J. S., & Newport, E. (1989). Critical period effects in second language learning:

The influence of the maturational state on the acquisition of English as a second language. *Cognitive Psychology*, *21*, 60-99.

Lenneberg, E. H. (1967). *Biological foundations of language.* New York: Wiley.

Linebarger, M. C., Schwartz, M. F., & Saffran, E. M. (1983). Sensitivity to grammatical structure in so-called agrammatic aphasics. *Cognition, 13*, 361-392.

Moyer, A. (2009). Input as a critical means to an end: Quantity and quality of experience in L2 phonological attainment. In M. Young-Scholten & T. Piske (Eds.), Input matters in SLA (pp. 159–174). Bristol, UK: Multilingual Matters.

Seol, H. (2005). The critical period in the acquisition of L2 syntax: A partial replication of Johnson & Newport, *Educational Psychology, 24,* 77-97.

Storch, N. (2009). The impact of studying in a second language (L2) medium university on the development of L2 writing. *Journal of Second Language Writing*, *18*, 103-118.