英語の自由作文における学生の文法精度に関する長期的な考察

A Longitudinal Study of Students' Grammatical Accuracy during Their Production of Unscripted English

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要旨：この研究は本学の英語強化プログラム内で行われている、時間制限を設けた自由作文において、学生が表現する文法精度の進捗度を調査したものである。この自由作文の訓練の主な目的は、学生が自らを素早くスムーズに表現することであるが、そこから彼らの文法精度の概観を見ることもできる。一学期のプログラムの間では、これらの作文課題における精度は予測したほどには進歩しなかった。進捗度比較には、学期前後に行われる英検スコアを用い、統計上（p=0.00005）、総合的な進歩が見られたが、文法セクションでは見られなかった。一貫性のある文法精度を習得し、自然に使えるようになるには、他の能力よりも時間がかかることが自由作文と英検スコアに反映されていると思われる。
【キーワード】書く、能力、評価

Abstract：In this study the authors examine progress in grammatical accuracy expressed in timed free compositions ("free writing") over the course of the Intensive English program at Tottori University of Environmental Studies. The primary purpose of these writing exercises is to increase students' ability to express themselves quickly and smoothly, but they also provide a snapshot of students' grammatical accuracy. Gains in accuracy evinced by these writing assignments were lower than expected during the course of the program. Pre- and post-test Eiken scores were also examined in order to compare progress as measured by a standardized test, and it was ascertained that while overall progress was statistically significant (p=0.00005), gains in the grammar section of the test were not. The authors hypothesize that consistent grammatical accuracy requires more time to become internalized and automatic than other skills, and that this is reflected both in free writing and Eiken scores.
【Keywords】 writing, competence, assessment

1．IE and Free Writing

The Intensive English program at Tottori University of Environmental Studies is currently a three-semester program designed to improve the English ability of first- and second-year students. It is comprised of Reading and Writing, Grammar and Translation, and Speaking and Listening. This improvement is expected to appear in improved Eiken scores.

One of the essential components of the current program is the use of *free writing,* a ten-minute activity in which students are asked to quickly write all their thoughts on an assigned topic without attention to grammatical or orthographic accuracy and without the aid of dictionaries. It is expected that at a certain level of overall English competence, students will come to produce writing that is both fluent and grammatically accurate without conscious attention to grammar; that is, that rules of expression will become internalized

and automatic. Free writing was chosen because it allows students to produce connected discourse, allowing the authors to examine a specific marker of discourse competence, i.e., grammatical accuracy. Samples of student free writing in textbooks and on notebook paper were collected and analyzed in this study in order to evaluate both the effectiveness of free writing in fostering accuracy, and the utility of this type of statistical analysis for measuring changes in students' English proficiency, in both volume of writing and accuracy, over the course of the program.

Hymes (1972) advanced the notion of *communicative competence*, which encompassed the four areas of *linguistic, sociolinguistic, discourse* and *strategic* competencies. The authors of the present study expect that all four of these would develop in tandem as second-language study advances; that is, they should support each other as the student's competence improves, with fluency and grammatical accuracy improving together.

2．Motivation

In order to evaluate the overall effectiveness of the Intensive English (hereafter, IE) program, search for possible shortcomings and improve the program, the authors hoped to find to what extent students' overall English ability has improved by the end of the three-semester program. The IE program already employs reading speed and comprehension tests to document improvements in these facets of second-language (hereafter, *L2*) progress, but does not have a means of evaluating production. If patterns of usage and expression and error ratios could be demonstrated, free writing analysis could prove useful in measuring progress and isolating areas for improvement.

With a clear idea of student strengths and weaknesses, teachers can make more informed decisions concerning adjustment of syllabi and curricula in response to specific areas to be improved. As an example, relatively high rates of native-language (hereafter, *L1*) substitution in some class groups may mean these groups would benefit from more vocabulary-enhancing activities than other groups. Likewise, collocation misuse may signal weaknesses in linguistic competence.

3．Method

Free writing was done at strategic intervals throughout the course of each semester at a ratio of approximately one free writing session to every three class periods, with some variation by class group level and teaching style. Broughton et al (1978) define free writing as *free compositions* in that "only the title is provided, and everything else is done by the student." The IE program dictates the following rules for free writing:

☆ Write about the topic
☆ Write everything you are thinking.
☆ Write without stopping your pen.
☆ Relax and write as much as possible.
☆ Use a pen.

★ Don't stop writing.
★ Don't erase or cross out anything.
★ Don't worry about grammar.
★ Don't worry about mistakes.
★ Don't let your pen stop moving.
★ Don't use a dictionary.

（Reprinted from *Welcome to Intensive English and Your Reading and Writing Class*, 2012）

IE students are taught paragraph format and specific rules for composition, such as avoiding the use of coordinating conjunctions to begin sentences, but outside of adherence to format rules, students are discouraged from editing their compositions during the time allotted for free writing, consistent with the distinction between fluency and accuracy indicated by Broughton et al (1978) and the premise that error correction should be discouraged during fluency-building exercises.

Students in the free writing analysis portion of this study were divided into three groups based on their pre-test Eiken scores (see Table 1). Students took the STEP Institutional Placement Test B（英語能力判定テスト B）in early April, 2012. Test B is designed for students expected to score in the Eiken test range of level 3 to level 2. According to STEP (STEP, 2013) these placement test scores accurately correlate with

Table 1：Group Divisions by Eiken Score

Group level	Eiken Institutional Placement Test Score Range	Eiken level (STEP, 2013)
low	269-408 (n=47)	STEP 5〜4
intermediate	311-408 (n=48)	STEP 4〜3
high	408-632 (n=52)	STEP 3〜2

the standard Eiken STEP scores.

　These groups represented both the faculties of Business Administration and Environmental Studies. Data from students not present for all free writing sessions were omitted from the analysis. Initial considerations for markers of accuracy included the degree to which collocations were used in the manner used by native speakers (such as the use of the unnatural collocation, "write a picture") and errors in connotation and denotation of vocabulary, but it was determined that evaluation of these is open to a degree of subjective interpretation (Suzuki, 1978). As a result, the authors chose to focus on grammatical accuracy. Several types of grammatical errors were observed, including misinterpretation of part of speech ("a very good remember"), subject-verb disagreement ("my brother have a dog") and lack of congruence in the use of pronouns ("He's name is Kenji"). However, as these mistakes are purely grammatical and students were specifically instructed not to "worry about grammar," it cannot be said that these are necessarily the indicators of lack of grammatical awareness. In other words, it cannot be said that reflection on, and correction of, compositions by the students would not demonstrate a degree of grammatical knowledge, but rather, these types of errors in unscripted writing show that grammar rules have not been internalized to the degree that they became automatic.

　This study focused on two types of errors the authors believe can measure English competence because their analysis is objective and easily quantifiable: 1) correctness in use of coordinating conjunctions, and 2) incidence of L1 substitution in relation to total word count. It should be emphasized that the authors' experience in teaching IE courses has demonstrated that grammatically and contextually appropriate use of coordinating conjunctions is a particularly difficult skill for students to master. The authors postulate that automaticity in appropriate conjunction use should be fairly late to develop.

　The degree to which each of the above categories of error was present was measured for change over the course of three semesters and compared between group levels, with an eye to determining to what extent improvement had been made and, ultimately, to determine the utility of this type of analysis as a diagnostic tool.

4．Initial Hypothesis

　The authors had hoped to find significant improvement in length of text students were able to produce in ten minutes concurrent with a simultaneous reduction in rate of errors as a proportion of each text. It was also assumed that a quantitative analysis of student errors versus length of text produced would demonstrate concrete differences between classes of different academic levels, as well as steady progress over the course of the program.

5．Free Writing Analysis and Interpretation

　Figure 1 below illustrates the variance in average number of words counted in student free writing by group and arranged by topic. Classes generally covered a different topic each week. The data below reflect
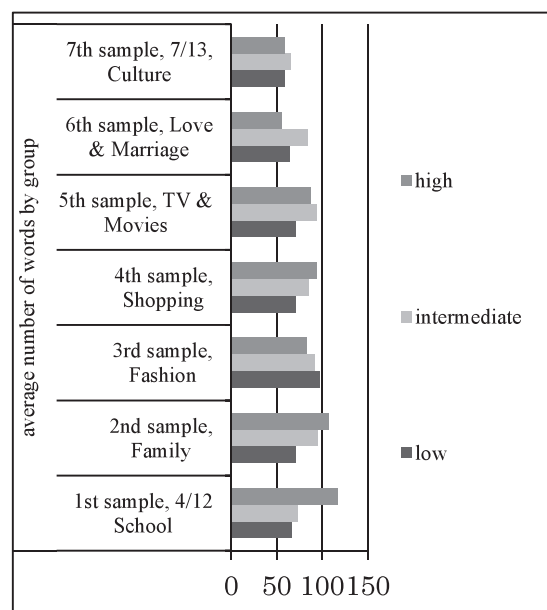

Figure 1：Average Number of Words by Group

only the five topics done by all class groups throughout the three-semester program and counts only those students who were present for every session.

The surprising conclusion from our analysis of the two markers of accuracy in free writing was the absence of statistically significant change over the course of three semesters. In cases where the number of errors increased, it is possible that this was the result of attempts to use vocabulary or grammar presently beyond students' abilities, in which case more error may not necessarily indicate a lack of progress.

5-1 Mistakes in the use of logical connectors appear most difficult to eradicate. It was repeatedly emphasized to students that coordinating conjunctions should never be used to begin sentences. One of the challenges in the IE program has been securing a consistent standard for which rules to focus on and teach and which to downplay or ignore. One that we have endeavored to focus on consistently is the protocol for avoiding beginning sentences with the conjunctions *and, but, or, so,* and *because*. These five items have proved the most difficult for students to remember to use in the way taught, though it was hoped that extensive free writing concurrent with an emphasis on this protocol would reduce the incidence of incorrect use of these conjunctions.

This type of error was repeatedly commented on by teachers during class explanations and in corrections given in writing in the context of other assignments, which were evaluated for adherence to format as prescribed in the official curriculum.

It can be seen from these Tables 2 and 3 that with one exception, the lower-level students, there was no

Table 2：Coordinating Conjunction Use in April 2012

Group	Number of attempts to use coordi-nating conjunctions	% used correctly	Ratio of correct conjunction use to length of writing
Low	37	62%	0.056
Intermediate	44	53%	0.050
High	77	61%	0.051

Table 3：Coordinating conjunction use in July, 2013

	Number of attempts to use coordi-nating conjunctions	% used correctly	Ratio of correct conjunction use to length of writing
Low	109	72%	0.074
Intermediate	26	62%	0.039
High	107	63%	0.055

significant gain in either accuracy or amount. As noted in the context of TOEIC study（Saegusa, 1985）and others, students with lower starting levels are generally able to make more rapid gains, so this result could perhaps be expected.

5-2 Incidence of L1 substitution includes items written in Japanese script（*kanji, hiragana* and *katakana*）as well as romanized Japanese such as, "My mother work in *tetsudou* company," and, "She is *genki*."

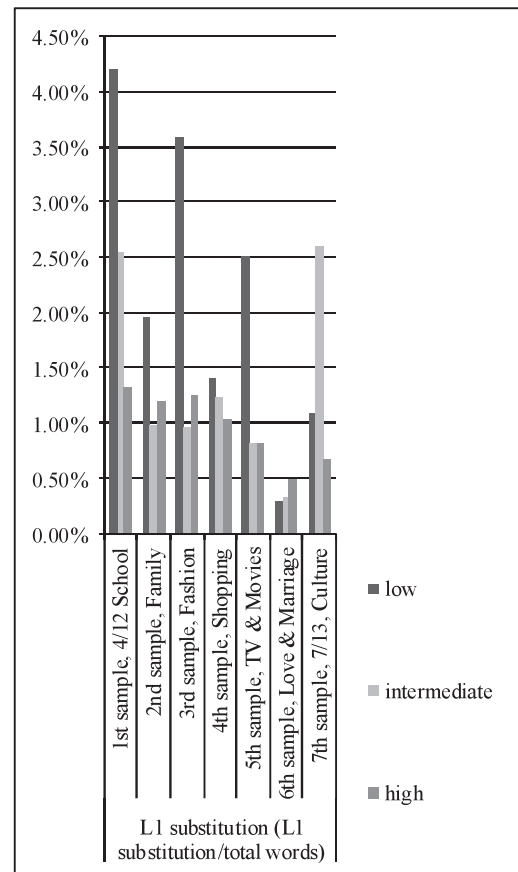Figure 2 shows a decrease in L1 substitution, but

Figure 2：L1 Substitution by Topic

not in a consistent pattern. As noted above, it is possible that specific topics induced students to draw on their native language to a greater degree than others. The lower groups appear to have had more difficulty using English to express concepts relating to school, fashion and entertainment, while the intermediate group demonstrated a remarkably high rate of L1 substitution while also producing significantly less text (see Figure 1). These results were counterintuitive.

5-3　It was expected that instructors adhered to and enforced the guidelines for free writing as prescribed in the curriculum, including keeping sessions to ten minutes, determining that students did not use dictionaries, etc., and indeed, adherence to these strictures must be as strict as possible to yield the most accurate results. Rigid control of when and how many times free writing was done, however, would preclude the flexibility necessary to adjust syllabi to meet particular class needs, and so there is some variation in sample size among different groups. In addition, among the three markers of accuracy we have chosen to evaluate, there may be differences among individual instructors in terms of the degree to which they reinforced these aspects of writing, particularly in the case of coordinating conjunctions. Ferris (2002) explores the lack of consistency in error correction made by different instructors at different times and concludes that problems with the specific process of correction undercut student progress in accuracy. Citing a previous study of a large number of student texts in which errors were marked by teachers, Ferris finds a significant lack of accuracy in the teachers themselves as well as a small but significant proportion of unnecessary correction, which may interfere with more necessary correction. Indeed, the authors here find varying degrees of emphasis on the specific markers of accuracy selected for this analysis.

6．Test Scores Analysis and Interpretation

From the outset there were concerns over the presence of any statistically verifiable correlation between progress evinced by free writing and increase in standardized test scores. Saegusa (1985) found that the number of hours of study required to gain one point on the TOEIC, for example, increased as students' scores increased; with a TOEIC score of 250, for example, only an hour of additional study was needed to gain one point, whereas a starting score of 850 required an additional four hours of study. It may be estimated that by the time of entry into the TUES IE program, students have undergone six years of public schooling with between three and four classes per week. However, when students took the Eiken pre-test (英語能力判定テスト B), it was found that students in this study had lower scores than would be expected after six years of study. Although MEXT has set a goal of Eiken Level 3 by the end of middle school, approximately two-thirds of students in this class had scores below this at the time of admission to university. The authors found this somewhat surprising.

The authors were also disappointed to find that there were not larger changes in students' ability to use grammar accurately and produce fluent English (as measured by volume) after three semesters of study in the IE program.

The IE program began in 2001 as a three-times-a-week program for first and second year students. In 2005, the second year became an elective class for some departments. In 2010 the second year classes were further reduced to twice a week. In academic year 2012, the program was cut from four semesters to three; that is, second year students only study English in first semester. The authors believed that a comparison of data from students taking the four-semester program might show a greater improvement in accuracy and fluency than that found in the three-semester group. To explore this, Eiken pre- and post-test scores for the last group of students to take the four-semester program and the scores for the first students to complete the three-semester program were analyzed.

In the four-semester program, students received 240 hours of instruction, compared to a maximum of 180 in the three semesters; three *koma* per week for the first and second semesters, and two *koma* per week for the third semester. The authors postulated that one cause for the lower-than-expected improvement was simply

Table 4：Overview of STEP Test（STEP, 2013）

Test B		No of problems
Vocabulary & Grammar		30
Sentence Structure Cloze（Grammar）		5
Reading	Short conversation（Q&A）	5
	Longer reading passages	10
Listening	Short conversation questions	15
	Longer sentence questions	15
total		80

a lack of sufficient class hours in the courses taken by students completing the three-semester program. To explore this premise, data from the final year of the four-semester program were compared with the data from the first year of the three-semester program. Data were obtained from the Eiken Institutional Placement Test B. This test is a multiple-choice standardized test comprised of four sections: vocabulary and grammar, sentence structure（multiple choice cloze-style）, reading, and listening as seen in Table 4 below.

In order to see if students made progress in grammatical accuracy and/or fluency as measured by a standardized test, Eiken pre- and post-test scores for the four-semester program students（April 2011 and February 2013）were compared with pre- and post test scores for three semester program students（April 2012 and July 2013）. The three-semester program students' reading section scores showed the largest gain, increasing 13.6% at the 95% confidence level, but grammatical accuracy as measured by this test was disappointing. Tables 5 and 6 below analyze data from these two groups, beginning with pre- and post- test results（n=131）for 2011 intake students in the final year of the four-semester program（Table 5）.

Table 5：STEP Results for Four-Semester Program

	4/2011 pre-test	2/2013 post-test
Mean（M）	351.1	374.1
a	0.05	
T	4.79	
two-tail T value	1.98	
p（T≤t）two-tail	4.4×10^{-6}	

Table 6：STEP Results for Three-Semester Program

	4/2012 pre-test	7/2013 post-test
Mean（M）	387.32	416.77
a	0.05	
T	9.75	
two-tail T value	1.97	
p（T≤t）two-tail	2.22×10^{-19}	

Looking at these results it can be said with 95% confidence that the four-semester IE program did result in a statistically significant improvement in overall test scores. However, looking at each test component it was determined that the results for the vocabulary and grammar section did not increase significantly.

Next, examination of the results for 2012 intake students taking the same test in the first year of the three-semester program（n=265）, data were determined as outlined in Table 6.

Again, p supports the hypothesis that the IE program improves students' English as measured by this particular test. In this case, all test sections except the sentence structure cloze problems showed significant improvement. It seems that in fact the three-semester program can be said to be effective, although the authors were disappointed to find less improvement in accuracy and fluency in students' free writing.

The test score data from the two groups reveal a 23.0 point gain among the four-semester students and a 29.45 point gain among the three-semester students. It could be postulated that the three-semester program implies greater gains than the four-semester; however, neither group displayed statistically significant progress in grammatical accuracy.

Consistent with Saegusa's（1985）findings that "the difficulty of raising a TOEIC score is considerably greater at the upper end of the scale than at the lower end," it might be inferred that the relatively higher academic level of the 2012 intake students influenced slower progressive gains. Wolfe-Quintero et al（1998）examined extensive samples of L2 compositions and found that automaticity of grammatical competence

was particularly slow to develop. The authors of the present study postulate that internalization of grammatical rules（automaticity）is one of the last components of competence to develop; for this reason the authors expect that a greater length of time than the three semesters under study may be required to evince substantial gains in this area. The second objective in this study, "to evaluate the utility of this type of statistical analysis," requires more data, i.e., a larger sample size, measured over a longer time.

7．Conclusion

Statistical analysis of certain markers of accuracy in student free writing indicated no great improvement in student English accuracyover the course of three semesters, but the apparent absence of measurable progress was disproved by the results of standardized test scores. Although Eiken scores demonstrated significantgains at the end of the three-semester program, similar gains were not found in fluency or grammatical accuracy expressed in student free writing. In consideration of the incongruence of the two different sets of data, the authors tentatively postulate that four semesters of study may lead to an increase in grammatical accuracy as expressed in free composition independent of that shown by the standardized tests. In addition, with reference to this incongruence in results between Eiken and the free writing analysis, as noted above, the method of analysis of grammatical accuracy in free writing seems to require additional refinement before the authors will be satisfied. One goal of English education in Japan is to foster human resources capable of functioning in English; in other words, capable of using English in a practical way. Although the significant Eiken test score gains are laudable, and in particular the rather dramatic improvement in both groups' reading comprehension shows that students are indeed making progress, the lack of improvement in production of English means that students have not yet reached the point of being able to use English. The authors believe that because of the greater amount of time required for grammar to become internalized and automatic, four semesters of study would be beneficial in making the transition from "test English" to the ability to write, and by extension, speak English.

Both types of analyses—that of changes in markers of accuracy evident in free writing over time, and statistical changes in standardized test scores—may be used in conjunction to isolate specific areas of student progress and weakness. It is hoped that further research will reveal more pronounced patterns in these areas and assist IE teachers in developing strategies to further boost student progress.

Sources

1 ） Begole. B.（2012）*Welcome to Intensive English and Your Reading and Writing Class.*, in-house textbook, 95.

2 ） Broughton, G., Brumfit, C., Flavell, R., Hill, P. and Pincas, A.（1978）*Teaching English as a Foreign Language*. London: Routledge, 118, 130-31.

3 ） 英語能力判定テスト pamphlet, page 8 of 24（URL：2013年 8 月26日現在）
http://www.eiken.or.jp/test/booklet/

4 ） Ferris, D. R.（2002）*Treatment of Error in Second Language Student Writing*. Ann Arbor: U of Michigan, 12-13.

5 ） Hymes, D. H.（1972）"On Communicative Competence." In Pride, J. B. and Holmes, J.（eds）*Sociolinguistics: Selected Readings*. Harmondsworth: Penguin, 269-93.

6 ） Saegusa, Y.（1985）"Prediction of English Proficiency Progress." *Musashino English and American Literature*, Vol. 18. Tokyo: Musashino Women's University.

7 ） STEP（2013）"Eiken Grades." Eiken Foundation of Japan（URL：2013年 8 月26日現在）
http://stepeiken.org/grades

8 ） Suzuki, T.（1978）*Words in Context*. Tokyo: Kodansha, 14-24.

9 ） Wolfe-Quintero, K., Inagaki, S., and Kim, I.（1998）*Second Language Development in Writing: Measures of Fluency Accuracy, and Complexity*. Manoa: U of Hawai'I, 13-33.