

Correlations between Syntactical Knowledge and Writing Performance among Japanese English Learners

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Abstract

For Japanese learners of English, it is appropriate to spend time and energy establishing the foundation of English linguistic structure when considering that the linguistic distance between English and Japanese is the farthest apart. In this respect, it is relevant that grammar instruction remains centralized in Japan's classroom settings, even amidst increasingly prevalent tendencies toward communicative learning through presentations and discussions. In fact, students generally spend a lot of time listening to grammatical explanations or solving grammatical questions. Meanwhile, it is a matter of question whether their metalinguistic knowledge is efficiently transferred into English production. Focusing on English's syntactical features, which are distinctly different from those of Japanese, this study examined the correlations between metalinguistic knowledge (measured using three types of syntactic question types) and writing performance (evaluated using three aspects: accuracy, sentence variation, and clarity of expression). The results showed low-to-medium correlations among these factors. This indicated the need to strengthen a link between metalinguistic knowledge and writing skills. It is hoped that English education in Japan will undergo renovation to build a bridge between students' school-level metalinguistic knowledge, and the practical English they will use in future professions.

Keywords: Syntactical knowledge, argumentative writing, correlations.

1. Introduction

1.1 Background

Many scholars in the field of second language (L2) acquisition have stressed the general importance of grammar for effective communication. Wilkins (1976) contended that “an inadequate knowledge of grammar would lead to a serious limitation on the capacity for communication” (p. 66), while Ellis and Shintani (2014) argued that a range of grammatical structures is crucial for accurate communication. DeKeyser (1995) affirmed that L2 learning starts with explicit grammatical rules, and such knowledge later facilitates spontaneous

performance through continual proceduralization. With regard to the significance of metalinguistic knowledge, Lyster (2007) maintained that metalinguistic instruction is useful for any kind of approach, such as communicative or content-based teaching. In their skill acquisition theory of L2 acquisition, VanPatten & Williams (2015) asserted that learners after the critical period generally rely on explicit metalinguistic knowledge in the early stages of language learning. Furthermore, recent studies have shown a positive association between metalinguistic knowledge and L2 proficiency. According to Hu (1999) and Elder and Manwaring (2004), there is a strong positive correlation of .70-.72 between metalinguistic knowledge and students' productive expertise.

When it comes to English education in Japan, despite the current trend toward communicative learning (which centers on speaking through presentations and discussions), teaching grammar with metalinguistic knowledge remains an established method in classroom settings. A survey by the Benesse Educational Research and Development Institute (BERD; 2015-2018) that asks about activities in English classes showed that 86% of third-year junior high school students focus on solving grammatical questions, while 89.4% and 72.0% of high school students spend the majority of their time learning English on explaining grammar and answering grammatical questions, respectively. This indicates that a large amount of time and effort has been devoted to studying grammar by raising metalinguistic awareness among junior high and high school students before they enter university.

Grammar teaching might well be justified when considering the linguistic distance between Japanese and English (Elder and Davies, 1998; Otani, 2007). Hence, it makes sense that English education in Japan should prioritize teaching grammar to compensate for this discrepancy, instead of relying on other techniques from foreign countries whose native languages are much closer to English. In other words, grammar instruction or teaching metalinguistic knowledge is "locally appropriate" for Japanese English learners.

Although previous studies have proven the effectiveness of metalinguistic knowledge, there is a need for Japanese English learners to be able to adequately transfer their metalinguistic knowledge to practical English use. Taking into account Japanese university students' future careers, it will likely be necessary for them to build their English proficiency, which could be helpful in their respective professions. Thus, English learned at school should be reflected in social and international activities. In this sense, English education at universities in Japan could serve as a bridge to practical English use. In other

words, the question of “what is required in industry” should naturally lead back to “what should be learned at universities.”

Based on these assumptions, it is of much concern whether metalinguistic knowledge learned at schools in Japan has thus far been adequately reflected in practical writing skills, which are increasingly in demand (Matsuda, 2003; Tsuji, 2014; Kurosaki, 2014) due to the acceleration of written communication in electronic form.

1.2 Study objectives

As described in the previous section, many preceding studies have stressed the importance of metalinguistic grammatical knowledge, which is far more applicable for Japanese English as a foreign language (EFL) learners, whose mother tongue has a completely different linguistic structure from English. Among various grammatical features, this study focuses on the syntactical aspects of subject-verb (SV) structure, post-modification, and conjunctions, all of which underscore the distinctions between English and Japanese, and examines how the syntactical metalinguistic knowledge (with regard to those three syntactical factors) and writing skills correlate with each other. Although the role of metalinguistic knowledge for Japanese EFL learners is generally believed to involve cognition, the empirical research on the subject is rather limited. Thus, it is critical to determine whether metalinguistic knowledge is effectively transferred to practical writing. Hence, this study investigates the relationship between metalinguistic syntactical knowledge and practical writing ability through correlation analysis, supported by a questionnaire. The results provide pedagogical implications for future English education in Japan. The research questions are as follows:

RQ1: What are the correlations between Japanese English learners’ metalinguistic syntactical knowledge and their writing performance?

RQ2: How do the students respond to the process of writing?

2. Method

2.1 Participants

This study was originally attempted with 58 third and fourth-year undergraduate students with intermediate to upper-intermediate English proficiency. It was necessary to deal with missing data, for which the author employed “listwise deletion” by which “cases

with missing scores on any variable are excluded from all analyses” (Kline, 2011, p. 57), rather than “pairwise deletion” in which “cases are excluded only if they have missing data on variables involved in a particular analysis” (Kline, 2011, p. 57). Kline argued that listwise deletion has the advantage of analyzing all data with the same number of participants. Accordingly, the author excluded data for eight participants with missing data, resulting in a final number of 50 respondents.

In addition, since the author gathered the data from three different classes, the author paid careful attention to make the research environment as identical as possible in terms of practical classroom management, including the use of personal computers and allotted time. The participants gave their written permission to use the data.

2.2 Metalinguistic syntactical knowledge

To gauge the level of metalinguistic syntactical knowledge, the author formulated three types of syntactical questions (see Appendix A) with reference to commercially available grammatical drills; the author partially modified them in order to focus on the relevant syntactical aspects. Test 1 contained multiple choice questions (in the format of Part 5 of the TOEIC® Test) and consisted of 30 questions; 9 addressed SV construction, 8 related to conjunctions/ prepositions, 5 involved participles, 4 were about relatives, 3 addressed infinitives, and 1 related to parallel construction. The test was administered during a 15-minute period. Test 2 also had multiple choice questions; the participants were asked to choose the correct sentence from among three provided within a 10-minute period. Test 2 had twenty questions, including 6 about SV structure, 5 about conjunctions/prepositions, 4 relating to relative clauses, 3 involving participles, and 2 concerning infinitives. Test 3 comprised 30 sentences, each with a syntactical inaccuracy; within a 15-minute period, the participants had to locate the syntactically incorrect area in each sentence and revise it with additions, deletions, or changes in order to make it syntactically sound. As a rule for Test 3, no point was given when the sentence was left uncorrected or was corrected in the wrong manner, even if the inaccurate area was properly identified. On Test 3, 10 sentences asked about knowledge of SV structure, 8 concerned conjunctions/prepositions, 6 related to relatives, 4 involved participles, and 2 were about infinitives.

For all of the syntactical tests, pilot tests were carried out with individuals that did not take part in the study, followed by item analysis to prove the tests’ reliability. The author targeted for revision, and subsequently modified tests whose item facility (IF) exceeded .80

and whose item-total correlation (ID) was below .30.

2.3 Writing

This task examined the ability to write and its relationship to metalinguistic syntactical knowledge.

2.3.1 Topics

Nowadays, for most Japanese undergraduate students, reading or even watching the news often seems awkward (in English or Japanese), either on paper or with audiovisual aids. However, many scholars contend that having an interest in international matters in general should lead to higher motivation to learn and use English for cross-cultural communication under rapidly globalizing circumstances. Yashima (2011) affirmed this tendency, deeming it an “international posture.” Schiefele, Krapp, and Winteler (1992) and Hidi and Renninger (2006) also asserted a correlation between learners’ interest and performance. Based on these claims, the author ensured that the participants were constantly exposed to up-to-date, daily global news in the classroom through reading and discussing news items, with a view toward enhancing critical thinking on international matters. The need to argue one’s opinions in writing has intensified in society, as well as on various certification exams, so it seemed appropriate to give the students chances to express themselves in academic writing, rather than through descriptive writing. Given this assumption, the author chose two different topics from current social affairs, “Japan’s energy policies” for 23 students, and “English education in Japan’s elementary schools” for the remaining 27 students, in order to minimize the influence of these subjects on their writing performance.

2.3.2 Writing conditions

Under timed conditions, the students wrote their essays in a room with access to computers. They spent the first 30 minutes gathering data and planning; during this time, they accrued useful information from the Internet and prepared outlines. Then they spent the next 30 minutes writing. They were allowed to use any kind of dictionary, including on the Web, but they were not allowed to use any machine translation engine. Prior to the activity, they were informed of the evaluation criteria: syntactical accuracy, sentence variation (which explores the diversity of sentence types), and clarity of expressions. For syntactical accuracy, those structural aspects examined through three tests were targeted in order to bring to the fore the correlations between the relevant syntactical knowledge and the ability to use it in writing.

2.3.3 Assessment

To rate the students' essays, the author employed an analytic scoring scheme that "provides more detailed information about a test taker's performance in different aspects of writing" (Weigle, 2002, p. 114), versus a holistic scoring scheme, which involves "assigning ... a single score to a script based on the overall impression of [it]" (Weigle, 2002, p. 112). Although many scholars have created numerous criteria according to their respective research goals, overall, it was important to determine the elements most pertinent to this study. Accordingly, based on the study objective, the author employed the above-mentioned criteria (i.e., syntactical accuracy, sentence variation, and clarity of expression) and formulated a rubric for each one (Refer to Appendix B for the rubrics.)

First, the author judged "accuracy" in terms of the precise structure of subjects and verbs, as well as the use of post-modifiers and conjunctions. However, it was anticipated that no (or infrequent) use of post-modifiers or conjunctions would inappropriately raise the accuracy rating. Therefore, the author considered "sentence variation" suitable to check whether the students made adequate attempts to utilize their syntactical knowledge in expressing their opinions. Efficacy has been measured on this assessment scale in previous studies. For instance, Rivers and Temperley (1978) maintained that using varied grammatical structures and patterns is essential for successful writing. Crowhurst (1980) and Gebhard (1978) claimed that more varied sentence structures in an essay generally contribute to better text quality. In addition, Beers and Nagy (2009) affirmed that "good writing requires, among many other things, the effective use of syntactic structure." Then, the author included the third aspect "clarity of expression" to scrutinize how practical argumentative essays are made effective by having syntactical knowledge, or how syntactical knowledge may boost reasoning in writing. It was considered highly relevant as well as the other two aspects of language control (i.e., syntactical accuracy and sentence variation), and thus included as an evaluation factor to assess a writer's views and opinions.

The appraisal of the 50 essays was equally assigned to two raters so that both of them read each text. Luckily, in terms of judging the essays fairly, both raters were able to review all 50 essays consecutively in a relatively short period. The raters were native English speakers; one is teaching comprehensive English communication at a Japanese university, while the other is an experienced professional English writer and proofreader living in the country. Although they come from different fields, it was interesting to see how they evaluated the essays.

All of the data from tests 1, 2, and 3 on syntactical knowledge and the mean of the writing assessment scores were examined for their correlation. Based on this analysis, the relationship between the individual scales was examined and discussed.

2.3.4 The questionnaire

At the end of the semester, the students received a questionnaire that contained the following three questions, and also allowed room for open-ended comments. Question 1 asked about previous experience with argumentative writing; the respondents had to mark the frequency with which they took part in argumentative writing: *always*, *often*, *sometimes*, *rarely*, or *none*. Question 2 related to the difficulties they encountered while writing; they had to select two of six items: (1) vocabulary use, (2) lack of syntactical knowledge, (3) use of syntactical knowledge, (4) use of personal computers, (5) lack of knowledge about social issues, and (6) time constraints. Lastly, Question 3 explored likely challenges for the future; the participants were asked about what areas they need to improve in the future to become more capable writers, and could choose two out of five items: (1) building vocabulary, (2) establishing syntactical knowledge, (3) gaining writing experience, (4) having an interest in social issues, and (5) argumentative skills (either in English or Japanese). All of these results are illustrated in pie charts to help visualize the responses. At the end of the questionnaire, there was a space for open-ended comments (see Appendix C for the original questionnaire in Japanese), which were labeled and coded (Saiki, 2005) to shed light on the dispositions of the statements the students made through conceptualization by the author.

3. Results and discussions

3.1 RQ1

First, this section investigates the possible effect of syntactical knowledge on argumentative writing competence. Table 1 displays the descriptive statistics of the mean of the test scores regarding the questions on syntactical knowledge, as well as the mean of the scales with which the writing was evaluated, according to the three criteria mentioned earlier. In terms of inter-rater reliability, accuracy was .68, sentence variation was .71, and clarity of expression was .69, respectively. Accordingly, the author deemed it appropriate to use the mean value as the final score.

Table 2 presents the correlation among the three scores of the syntactical knowledge tests and the three factors for appraising writing. First, the correlation coefficients between

syntactical knowledge (tests 1, 2, and 3) and accuracy were .40, .51, and .29 respectively, which demonstrates a low-to-medium correlation. This might explain the fact that the participants were not able to adequately transfer the metalinguistic syntactical knowledge they acquired to their writing production. In fact, the author identified a few outstanding cases where students who did well on grammar tests (with means of 26, 17, and 25 for tests 1, 2, and 3 respectively) were rated relatively low regarding the accuracy of their writing (with a mean of 2.3). Distinctive errors included SV agreement, such as the use of the third-person singular present tense, particularly in long sentences. In addition, the author found such mistakes more frequently than expected; despite the students' ability to answer questions about conjunctions, they were confused about the proper use of subordinating and coordinating conjunctions in their actual writing. This sometimes led to fragmented sentences that were dependent clauses lacking principal ones. Meanwhile, the ratio of the correct use of relative clauses was comparatively higher, indicating that the students may have done a good job of transferring metalinguistic knowledge to their writing in this aspect. For participles, only a limited number of essays showed attempts to incorporate post-modifying participles. This should be taken into account for future investigations, as the students' infrequent use of post-modifying participles implied fewer errors, which may have unintentionally led to a higher accuracy rate being assigned.

Next, syntactical knowledge and sentence variation indicated a medium correlation with .42, .40, and .42 for tests 1, 2, and 3 respectively. The results generally suggested that students attempt to incorporate a variety of sentence types when they have syntactical knowledge. Their challenge may have arisen from the prior instruction given to them about the evaluation criteria including sentence variation. Meanwhile, the medium – versus high – correlation coefficients may signal that, due to nervousness about making errors, the students had some hesitation or uncertainty in terms of using a variety of sentence types.

Lastly, the correlations between syntactical knowledge and clarity of expression were .26, .34, and .30 for tests 1, 2, and 3 respectively. The relatively low-to-medium level of correlation illustrated that having metalinguistic knowledge does not sufficiently contribute to effectively communicating one's ideas in writing. Although linguistic knowledge is not directly linked to argumentative skills, if grammar is a "force of expression" (Knapp and Watkins, 2005), we can infer that the participants' linguistic knowledge should be better reflected in their practical communication in writing.

In terms of other significant findings, sentence variation and accuracy showed a

low correlation (.35). This means that attempts to use various sentence types were not adequately successful in terms of their accuracy. On the other hand, accuracy was highly correlated with clarity of expression (.62). This implies that linguistic accuracy is crucial to conveying arguments to a reader. In addition, sentence variation had a medium correlation with clarity of expression (.41). Although it is not more than a moderate correlation, this may substantiate the claim to a certain extent that more varied sentence structure in an essay could contribute to better text quality (Crowhurst, 1980; Gebhard, 1978).

Table 1 Descriptive statistics of syntactical knowledge tests and writing scores by measure ($N = 50$)

	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>α</i>
Syntactical knowledge 1	50	22.30	4.58	12.0	30.0	-0.37	-0.71	---
Syntactical knowledge 2	50	14.80	3.23	6.0	20.0	-0.39	-0.49	---
Syntactical knowledge 3	50	17.50	5.78	10.0	28.0	0.47	-1.25	---
Accuracy	50	2.30	0.44	1.0	3.0	-0.39	0.16	.68
Sentence variation	50	2.45	0.43	1.5	3.5	0.37	-0.27	.71
Clarity of expression	50	2.72	0.62	1.5	4.0	-0.28	-0.65	.69

Note. *α* : Cronbach's coefficient alpha.

Table 2 Correlations among syntactical knowledge test and writing scores by measure ($N = 50$)

	Syntactical knowledge 1	Syntactical knowledge 2	Syntactical knowledge 3	Accuracy	Sentence variation	Clarity of expression
Syntactical knowledge 1	---	.75**	.45**	.40**	.42*	.26
Syntactical knowledge 2		---	.61**	.51**	.40**	.34*
Syntactical knowledge 3			---	.29*	.42**	.30*
Accuracy				---	.35**	.62**
Sentence variation					---	.41**
Clarity of expression						---

Note. Pearson product-moment correlation coefficient. * $p < .05$, ** $p < .01$, $df = 48$

3.2 RQ2

The questionnaire sheet was originally in Japanese, which the author later translated. First, regarding previous experience with argumentative writing, 75% of the respondents

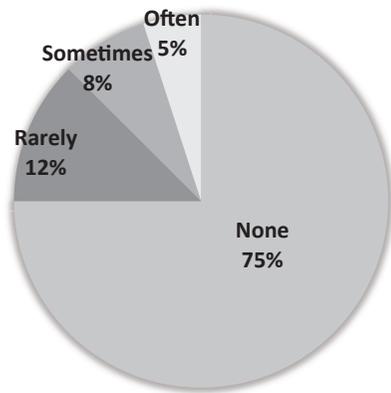


Figure 1. Writing experience.

had no experience, 12% seldom engaged in it, 8% did it a few times, and only 5% frequently took part in it (Fig. 1). The results indicate that the participants' opportunities to argue in their writing are considerably limited. This suggests that they may have excessively focused on arguing rather than writing, thus hindering their concentration on syntactical aspects. The next question involved difficulties in argumentative writing; 21% of the respondents recognized their lack of syntactical knowledge and said they have trouble

utilizing it (Fig. 2). The questionnaire also revealed that 27% believed they lack knowledge of social issues, causing them to fail to organize their ideas. The last question concerned the most critical factor for developing argumentative writing skills (Fig. 3). Forty-two percent of the respondents said they have the need to establish syntactical knowledge. Sixteen percent recognized the need to have more writing opportunities. In addition, 39% selected the need to have an interest in social issues as a future

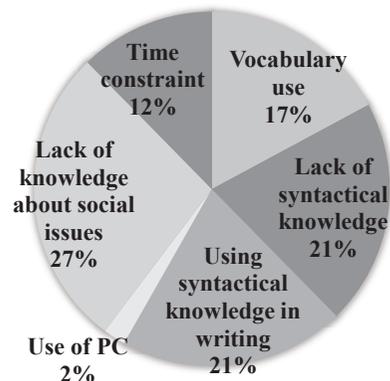


Figure 2. Difficulties in writing.

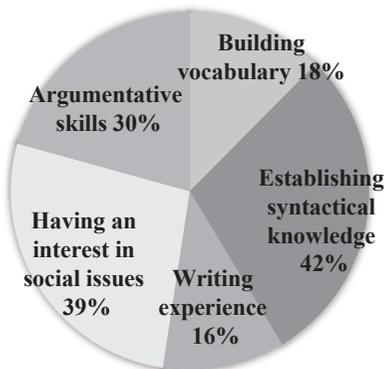


Figure 3. Challenges for the future.

goal, and 30% said they need to develop argumentative skills, either in English or Japanese. The answers to Questions 2 and 3 indicated significant effects of having experience with argumentative essay writing, in the sense that many of the participants came to understand their deficiency in terms of linguistic knowledge, or their competence at using such knowledge in producing English.

Regarding the coded open-ended comments, as shown in Table 3, 18 respondents admitted that

metalinguistic knowledge is important, despite the accelerated tendency toward the communicative approach, which prioritizes speaking. Among them, two respondents added that they became aware of the difference between “having” and “using” knowledge. Meanwhile, two participants revealed apprehension toward emphasizing knowledge, claiming that actual communication should be prioritized instead. This was well predictable taking into account increasing prevalence of communicative teaching focusing on practical communication. For dictionary use, the answers seemed to vary depending on individual familiarity with dictionary use. Although having dictionaries on hand while writing is generally considered helpful, six participants did not find them useful as they ended up wasting time finding appropriate words, or sometimes the dictionaries hindered the flow of their thinking. In the category of motivation, eight students expressed the hope to have more opportunities to write in class under timed conditions in a focused atmosphere. However, two wrote that they might only be driven to write when they find the topics interesting. Finally, nine were inclined to learn grammar, including syntactical knowledge, as a linguistic resource for practical communication. It is an encouraging sign that students reconsider the significance of linguistic resources in relation to practical English use for their future careers.

Table 3 Open-ended comments in the questionnaire

Category	Label	
	Affirmative	Negative
A. Importance of syntactical knowledge	Recognize the importance of syntax in communication (18)	Not sure if explicit knowledge is really necessary (2)
B. Writing conditions	The use of dictionaries greatly facilitates writing (9)	Not enough time to use dictionaries (6)
C. Motivation	Would like to have more opportunities to write (8) Would like to have more linguistic resources for practical communication (9)	Only motivated if the theme is familiar or interesting (2)

4. Conclusions

This study investigated the relationship between metalinguistic syntactical knowledge and argumentative writing skills. With 50 participants eligible to take part, two tasks were implemented. One consisted of syntactical questions to gauge the amount of linguistic

knowledge, which comprised three types of questions. The other task involved writing; the participants were required to argue about a given theme under timed conditions. Two native English speakers evaluated the writing samples based on rubrics that took into account three factors: accuracy, sentence variation, and clarity of expression. Next, the correlations between the mean of the three syntactical tests and the writing assessments were examined. The results demonstrated low-to-medium correlations between syntactical knowledge and argumentative writing skills, despite the general assumption that those with adequate metalinguistic knowledge should be more competent writers. A closer examination revealed a few cases of students with a high level of linguistic knowledge, which led to low scores on the writing assessment.

Such findings evoke questions relating to the general tendency of English education in Japan, where writing exercises might not be implemented in reasonable proportion to conveying knowledge, as illuminated by the survey conducted by BERD (mentioned earlier), regarding classroom activities in junior high and high schools. In addition, the questionnaire administered for this study indicated that 75% of the respondents had no experience with argumentative writing, while 12% rarely engaged in it.

As a practical tool for communication, the ability to write well is more relevant than ever for university students irrespective of their future professions. Many prior investigations have understood the significance of linguistic knowledge, which is far more applicable for Japanese English learners, whose native language differs considerably from English in terms of syntax. Based on this fact, it is appropriate to spend a certain amount of time and energy acquiring linguistic knowledge; however, it is crucial for teachers and schools to connect such linguistic knowledge with practical writing skills. This can be achieved by offering abundant opportunities to write, with evaluation and feedback from teachers. In terms of practicality, it might also be helpful to offer students more chances to think and argue in their writing, instead of focusing solely on producing descriptive writing. It might cost teachers time and labor to revamp conventional curricula by incorporating more writing tasks, considering that judging writing generally requires a great deal of effort. Nonetheless, such a shift would lead to a new kind of English learning environment that bridges classroom activities and the real world.

Despite the findings on the correlations between syntactical knowledge and writing performance, there were some limitations. First, since the study was geared toward students with nearly the same level of English proficiency, it is not appropriate to generalize the

results for university students throughout Japan. Secondly, although the author examined the correlations, the correlation coefficients only demonstrate the level of relationships, not their directions; in other words, the extent of the influence of linguistic knowledge on writing or vice versa. For future research, the influence of linguistic knowledge on writing skills should be considered using quantitative analysis tools (such as structural equation modeling, or SEM) once an adequate number of writing samples can be gathered for examination.

Notwithstanding its limitations, this study may offer pedagogical implications regarding the need to strengthen the link between linguistic knowledge and practical writing by providing students with more writing opportunities (aside from the importance of linguistic knowledge for Japanese English learners). In this sense, in terms of pedagogical innovation, we should strongly encourage teachers to modify conventional ways of teaching. It is hoped that students could be endowed with practical written communication skills reinforced by grammatical competence, and enter the real world as independent English users.

Notes

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References

- Beers, S. F., & Nagy, W. E. (2009). Syntactic complexity as a predictor of adolescent writing quality: Which measures? Which genre?. *Reading and Writing, 22*(2), 185-200.
- Benesse Educational Research and Development Institute (BERD). https://berd.benesse.jp/up_images/research/Tyu3_Eigo_Keizoku_web_all1.pdf (Retrieved on September 3, 2019)
- Crowhurst, M. (1980). Syntactic complexity and teachers' quality ratings of narrations and arguments. *Research in the Teaching of English, 14*(3), 223-231.
- DeKeyser, R.(1995). Learning second language grammar rules. *Studies in Second Language Acquisition, 17*(3), 379-410.
- Elder, C., & Davies, A. (1998). Performance on ESL examinations: Is there a language distance effect?.

- Language and Education*, 12(1), 1-17.
- Ellis, R., & Shintani, N. (2014). *Exploring language pedagogy through second language acquisition research*. New York: Routledge.
- Gebhard, A. O. (1978). Writing quality and syntax: A transformational analysis of three prose samples. *Research in the Teaching of English*, 12(3), 211-231.
- Hidi, S., & Renninger, K. A. (2006). The four-phase model of interest development. *Educational psychologist*, 41(2), 111-127.
- Hu, G. (1999). Explicit metalinguistic knowledge at work: The case of spontaneous written production by formal adult Chinese learners of English. Unpublished doctoral dissertation, Nanyang Technological University, Singapore.
- Hulstijn, J. H., & Hulstijn, W. (1984). Grammatical errors as a function of processing constraints and explicit knowledge. *Language Learning*, 34, 23-43.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*. New York: The Guilford Press.
- Knapp, P., & Watkins, M. (2005). *Genre, text, grammar: Technologies for teaching and assessing writing*. North South Wales: University of North South Wales Press.
- Kurosaki, S. (2014). *Kigyo niokeru eigoshiyo nitsuiteno ichibunseki; Ryutsu kaihatsu gyokai no kesu* [Analysis of English use at corporations: In distribution and development industries]. *Jissen Joshi Daigaku Ningen Shakai Gakubu Kiyo* [Journal of Jissen Women's University Faculty of Humanities and Social Science], 10, 103-122.
- Lyster, R. (2007). *Learning and teaching languages through content: A counterbalanced approach* (Vol. 18). Amsterdam, Netherlands: John Benjamins Publishing.
- Matsuda, P. K. (2003). Second language writing in the twentieth century: A situated historical perspective. In B. Kroll (Ed.), *Exploring the dynamics of second language writing* (pp. 15-34). Cambridge, UK: Cambridge University Press.
- Otani, Y. (2007). *Nihonjin nitotte eigotoha nanika: Ibunkano arikata wo tou* [What is English for Japanese?: Considering cross-cultural understanding]. Tokyo: Taishukan.
- Rivers, W. M., & Temperley, M. S. (1978). *A practical guide to the teaching of English as a second or foreign language*. New York: Oxford University Press.
- Saiki, C. S. (2005). *Shitsuteki kenkyu hoho zeminaru: Guraundiddo seori wo manabu*. [Seminar on qualitative analysis: Learning grounded theory]. Tokyo: Igakushoin.
- Schiefele, U., Krapp, A., & Winteler, A. (1992). Interest as a predictor of academic achievement: A meta-analysis of research. In K. Renninger, S. Hidi, & A. Krapp (Eds.), *The role of interest in learning and development* (pp. 182-212). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Sorace, A. (1985). Metalinguistic knowledge and language use in acquisition-poor environments. *Applied Linguistics*, 6, 239-254.

- Tsuji, K. (2014). Research on English education needed for the optimization of English communication at corporations. Retrieved from Grant-in-Aid for Scientific Research (C) No. 23520779. Website: <https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-23520779/23520779seika/>
- VanPatten, B., & Williams, J. (Eds.). (2015). *Theories in second language acquisition: An introduction*. New York: Routledge.
- Weigle, S. C. (2002). *Assessing writing*. Cambridge, UK: Cambridge University Press.
- Wilkins, D. A. (1976). *Notional syllabuses*. Oxford, UK: Oxford University Press.
- Yashima, T. (2011). *Tabunka wo ikiru chikara to eigo komyunikeishon* [Living in a multicultural society and English communication]. *Kokusai Rikai Kyoiku Kenkyu Senta Nenpo* [Annual Publication of the Research Center for Understanding International Education], 6, 1-14.

Appendix A: Samples of syntactical tests

Test 1 (Nos. 1-30): Select the best word or phrase to complete the sentence.

No. 1. Employees must receive prior approval for any travel ___ by the company.

- (A) will be reimbursed
- (B) to reimburse
- (C) that will be reimbursed
- (D) will reimburse

No. 2. In addition to fine dining, the elegant Rocky Inn provides every amenity ___ for small or large business meetings.

- (A) which is necessity
- (B) necessarily
- (C) necessary
- (D) to necessitate

Test 2 (Nos. 31-50): Select the correct sentence.

No. 31.

- (A) Maya chosen by the executive team to head the new public relations department.
- (B) Maya chosen by the executive team head the new public relations department.
- (C) Maya was chosen by the executive team to head the new public relations department.

No. 32.

- (A) Chris was among the outstanding candidates considered for the Thomas Award for exceptional police service.

- (B) Chris was among the outstanding candidates who considered for the Thomas Award for exceptional police service.
- (C) Chris was among the outstanding candidates considering for the Thomas Award for exceptional police service.

Test 3 (Nos. 51-80): Find the error in each sentence and complete it by deleting, adding, or revising a word as necessary.

No. 51. All three towns affected by the earthquake they have applied for federal aid and other emergency relief.

No. 52. Library visitors often find that there are too few staff members available to assist them, especially as funding for libraries have been cut back.

Appendix B: Rubrics for the writing assessment

Accuracy

4	Highly accurate in SV structure, and use of post-modifiers and conjunctions
3	Generally accurate in SV structure, and use of post-modifiers and conjunctions
2	Sometimes accurate in SV structure, and use of post-modifiers and conjunctions
1	Seldom accurate in SV structure, and use of post-modifiers and conjunctions

*Judgment criteria for accuracy

SV structure

✓ A sentence has a subject and a verb in their accurate forms

Use of post-modifiers

✓ Post-modifiers (relative clauses, participles, infinitives, and adjective phrases) are used accurately.

Use of conjunctions

✓ Both coordinating and subordinating conjunctions are used accurately in form and meaning.

Sentence variation

4	Essay uses a large variety of sentence types
3	Essay uses a variety of sentence types
2	Essay uses a limited number of sentence types
1	Essay does not vary in sentence type

Clarity

4	<p>Essay is highly comprehensible (Reader can always understand what the writer is trying to communicate, with global grammatical accuracy)</p> <p>Major viewpoints are addressed clearly and effectively. (Essay clearly and effectively addresses the assigned topic with concrete ideas and appropriate data)</p>
3	<p>Essay is acceptably comprehensible (Reader can understand most of what the writer is trying to communicate, with general global grammatical accuracy)</p> <p>Major viewpoints are generally addressed (Essay generally addresses the assigned topic with ideas and relevant data)</p>
2	<p>Essay is not comprehensible enough. (Reader can understand less than half of what the writer is trying to communicate, with limited global grammatical accuracy)</p> <p>Major viewpoints are not identified clearly enough. (Essay somewhat addresses the assigned topic, but with limited ideas and data)</p>
1	<p>Essay is barely comprehensible (Reader can understand little of what the writer is trying to communicate, with poor global grammatical accuracy)</p> <p>Major viewpoints are poorly addressed (Essay poorly addresses the assigned topic)</p>

Appendix C: The questionnaire

1. これまで argumentative writing（意見、主張を述べるライティング）の経験はありましたか？

- 常時
- 頻繁
- 時々
- ほとんどない
- ない

2. 今学期の argumentative writing で難しかった点は何でしたか？（2つ選んでください）

- 語彙の選定
- 文法（構文）知識の不足
- 文法（構文）知識をライティングに活用すること
- PCの使用
- テーマ（社会問題）に関する知識が不足していること
- 時間制限があること

3. Argumentative writing を通して、必要性を認識したことは何ですか？（2つ選んでください）

- 語彙習得
- 文法知識構築
- ライティング体験
- 社会問題への関心
- 自分の意見の構築

コメント

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