

Title	Syntactic Competence and Writing Performance : From Longitudinal Perspective
Author(s)	Tsutada, Kazumi
Citation	大阪大学言語文化学. 2016, 25, p. 63-79
Version Type	VoR
URL	https://hdl.handle.net/11094/77733
rights	
Note	

Osaka University Knowledge Archive : OUKA

<https://ir.library.osaka-u.ac.jp/>

Osaka University

Syntactic Competence and Writing Performance:

From Longitudinal Perspective *

TSUTADA Kazumi **

キーワード： syntactic competence, writing performance, relationship

英語教育の産学連携を視野に、現在、社会において求められる英語力の中で優位を占めるライティング力に注目し、日本人大学生のライティング力向上について検証を行った。様々なライティング指導がある中で、日本人英語学習者にとって必須であるのが構文力習得であるという想定の下、構文力向上がライティング力向上に及ぼす効果をはかることを目的とした。具体的には、単学期において構文力育成プログラムを実施し、その前後にライティング課題を課し、各々の伸び幅の関係を構造方程式モデリング (SEM) によって分析した。結果として構文力向上のライティング力向上に対する強い影響力が示された。構文力育成の手法の一つとして英語ニュースを教材として活用したことにも研究の意義を求めるものであり、事後アンケートではニュース活用による学生の文法学習に対する影響もかいま見ることができた。またライティング力評価において、従来からの文法面での評価に加えて内容の理解度や意見の表現性も評価基準としたことで、現実社会に生かされる実用的なライティングに対する意識の変化という効果もあったとみられ、実際に意見の明瞭性という面では一定の成長がみられた。本研究の結果をふまえると、ライティング指導では構文力という基盤育成が重要であること、および言語面の正確さの評価だけでなく意見表明の明瞭性の重視という状況設定のもとで、社会での運用につながる真の「書く力」を育成することの意義が示唆された。

1 Introduction

1.1 Background

In the midst of increasing attention being paid to industry-university liaisons with respect to the use of English, it is worth investigating how well English education in universities has reflected the needs of society. Previous industrial surveys show a high frequency in the use of writing and reading skills among others (Tsuji 2014), and the

* 構文力とライティング運用力

——縦断的視点から (葛田 和美)

** 大阪大学大学院言語文化研究科博士後期課程

prioritized significance of written communication skill to convey one's thoughts in society (Kurosaki 2014). Rise in demand for writing performance is also claimed by Matsuda (2010), who states that there has been "a growing need for international written communication due to the globalization of economy as well as the dominance of English as a *lingua franca* of international communication" (p. 15).

Incidentally Cummins claims that Cognitive Academic Language Proficiency (CALP) is necessary to deal with highly demanding tasks in real society beyond basic interpersonal communication skills (BICS) (Cummins 2008). From this point of view it is crucial to consider what should constitute the foundation of CALP in writing for Japanese students, whose native language is linguistically farthest from English (Elder & Davies 1998).

1.2 Research Question

The objectives of the present study are

- 1) to investigate on how a rise in syntactic competence affects the development of writing performance.
- 2) to briefly describe students' direct voices on the course content.

In general, "competence refers to knowledge of something, while performance refers to the ability to use the knowledge stored in competence" (Hirvel, 2004, p. 112). In this study syntactic competence is defined as the knowledge to construct the fundamental framework of a correct sentence, and writing performance as the ability to properly use syntactic competence in actual written communication.

2 Literature Review

On the supposition that syntactic competence is indispensable for Japanese learners of English to attain adequate English proficiency, it is worth lending our ears to previous research results which claim the importance of grammar in SLA. Ur (1999), based on the definition that grammar is "the way words are put together to make correct sentences" (p. 75), claims that grammar teaching helps develop English proficiency if it is taught not as an end in itself but a beneficial means to enhance comprehensive skills. Wilkins (1976) asserts that "the acquisition of the grammatical system of a language remains a most important element in language learning" (p.66). He also claims that the capacity for communication is heavily limited if knowledge of grammar is limited (*ibid.*).

With regard to explicitness in grammar instruction, Krashen (1993), from the non-interface position, claims that conscious attention to form is thought to have limited use. From the same point of view, Schulz (1991) asserts that grammar consciousness has little influence on spontaneous English use. On the contrary, the interface position argues that grammatical structure should be first presented explicitly and practiced until it is fully proceduralized (Ellis 2006). De Graaff and Housen (2009) claim that explicit instruction serves as a significant engine for second language development. Swan (2006) also asserts that explicit teaching can assist learners to walk along rough and bumpy roads towards adequately correct production. In addition, Scheffler and Cinciata (2011) recommend that EFL/ESL teachers “invest some classroom time in explicit grammar instruction” (p. 22) with the presentation of explicit grammar rules. In line with these affirmative viewpoints, this study takes the position that explicit grammar instruction would help learners develop spontaneous writing performance.

With reference to what should count in teaching English writing, it became clear in the 1960s that “the knowledge of below-sentence-level structures alone does not adequately prepare students for the task of writing for communication” (Matsuda, 2010, p.16). While affirming the importance of grammar for writing, he asserts that not only grammatical knowledge but also sociolinguistic and procedural knowledge should be developed for practical communicative competence (ibid.). Keeping these views in mind, this study aimed to raise students’ awareness toward writing organization and contents, in addition to linguistic aspects.

Supported by the above-mentioned studies and theories, this study attempted to examine the efficacy of development in syntactic competence on the improvement of actual writing performance by analyzing developmental changes in students throughout the relevant course in Japanese university.

3 Methods

3.1 Participants

A total of two hundred thirty university students participated in this study including 124 males and 106 females (in their first and second year). Their majors ranged widely, including economics, business management, law, foreign studies, cultures, science, computer science, and biological science. They represented a wide range of English proficiency levels from low to high intermediate (with TOEIC score ranging from 450 to

780). The study was conducted in a 15-week required English course which met once a week for 90 minutes. The total enrollment was 241, of which 11 students who did not complete all the necessary tasks for this study were eliminated.

3.2 Analyses

As a principal analysis method, this study employed structural equation modeling (SEM) to help understand how the rise in syntactic competence affects the change in writing performance. SEM is a useful method for theory testing and development, and “provides a basis for making meaningful inferences about theoretical constructs and their interrelations, as well as avoiding some specious inferences” (Anderson & Gerbing, 1988, p. 411). As SEM is a large-sample technique with a recommended samples size of 200 or more (Kline 2005), a large number of participants were collected to sufficiently satisfy the conditions for SEM analysis. As an analytic tool this study employed the MVN package of the statistical environment R for multivariate normality test and the Lavaan package for SEM analyses. The following statistics were checked to assess the fit of the models: scaled comparative fit index (CFI), scaled root mean-square error of approximation (RMSEA), and standardized root mean square residual (SRMR).

3.3 Instrument

3.3.1 Syntactic competence

In order to assess the development of syntactic competence, the following three tasks were assigned to the participants.

● *Quiz on syntax (S1)*

The quiz consisted of 20 questions formulated by the present author, focusing exclusively on evaluating syntactic competence. The same questions were used for pre- and post-tests to ensure adequate fairness in evaluation of changes of syntactic competence, as it was impossible to make two tests identical in terms of their level of difficulty. Answers were given only after the post-test, which was conducted twelve weeks after the pre-test, in order to minimize the study effect, accompanied by adequate explicit explanation on each syntactic item.

● *TOEIC Part V (S2)*

As an additional variable for SEM analysis, 20 questions were selected from Part 5

questions in commercially available TOEIC® textbooks, and modified to focus on syntax. Again the same questions were used for pre- and post-tests, and answers were not given until after the post-test for the same reason explained earlier.

● *Gap-fills (S3)*

This was a syntax-based gap-fill task. Passages were collected from NHK World¹ news articles, both domestic and overseas. Although not a few English educational studies have used news articles as teaching materials, it seems that most have focused on “spoken” English. The current study, however, dealt with “written” English news, which was considered to help deepen students’ understanding of sentence structure, which is rather difficult to attain through listening and speaking activities. The articles were current, and usually selected from within one week before each class, in order that the students would have a fresh memory of the stories they had likely seen on the news. This could greatly reduce their burden to understand the news contents, facilitating concentration on syntactic aspect of each news article. Lastly no grammatical and lexical simplification was made so that students could benefit from exposure to real English usage.

This task had been conducted weekly for 12 weeks through week 2 and week 13 as a core task in this study to construct foundation of syntactic competence. Specifically, two printed articles from the NHK World website were used each week with ten words or short phrases omitted from the articles, which students were asked to fill in by choosing the best answer from among four choices. According to the objective of this study, only those serving a crucial role in terms of syntax were blanked out. Specifically targeted grammatical items included subject-verb structure of principal and dependent clauses, parallel construction, relative clauses, conjunctions, and participles generally considered to have key roles in the formation of correct sentences. This was a timed task of five minutes, which was calculated based on the appropriate time for TOEIC® Part 6 (as the format of the gap-fill activity in this study was similar to that of TOEIC® Part 6) for the level of the current participants.

Once students filled in the blanks, they were told to discuss their answers in groups of three to five, focusing particularly on their own grammatical reasons regardless of accuracy or appropriateness of their explanations. It was a meaningful process which prevented students from overlooking their paucity of necessary knowledge. This was

¹ <http://www3.nhk.or.jp/nhkworld/>

followed by discussion between students and the teacher (the present author), who ultimately gave an explicit explanation whenever necessary. As data for SEM analysis, the total score of weeks 2 and 3 (with a full score of 20) was used as pre-S3 data, and that of weeks 12 and 13 (with a full score of 20) as post-S3 data.

3.3.2 Writing

Development of writing performance was measured by the following procedures. Writing tasks were assigned twice in a single semester on week 2 and week 14. On both occasions participants were asked to handwrite on A4 paper a summary and opinions about any news item of their interest, in a classroom setting with a time constraint of 20 minutes. They were notified of this task in advance so that they could select the news item and collect relevant information to help expand the scope of their composition prior to the execution of the task. Dictionary use was allowed based on the claim that dictionary use is an authentic and legitimate activity and corresponds with language in actual use or represents real world practice (Wiggins 1989).

All the writing samples were first statistically analyzed by three linguistic factors, complexity (C), accuracy (A), and fluency (F) as specified in Table 1, and the change in each factor was assessed by the difference between pre- and post-tasks. With regards to accuracy assessment, only syntactic errors were counted, with spelling, articles, collocation, capitalization, or punctuation errors excluded.

Another writing assessment factor employed was criticality. This factor was added due to the author's assumption that the more proficient the syntactic competence is, the more

Table 1 *Summary of Eight Measures*

Factor	Code	Measure
S (Syntactic competence)	S1	Syntactic questions (20)
	S2	TOEIC Part 5 questions (20)
	S3	Gap-fills (20)
WL (Writing linguistically)	C	DC/T; No. of dependent clauses per T-unit
	A	EFC/C; Error-free clauses per clauses
	F	Total number of words
WC (Writing criticality)	CO	Comprehensibility
	CR	Criticality

Note. Measures for codes C, A, and F (Wolfe-Quintero, Inagaki, & Kim 1998)

critical writers could be either affirmatively or negatively. This is based on the theory that insufficient syntactic competence might cause “syntactic avoidance” (Brown, 2007, p. 138) which possibly makes one tend to abandon further argument of one’s ideas and thoughts when not equipped with sufficient syntactic knowledge.

Criticality was assessed from two aspects; comprehensibility of writing samples (CO), and criticality (CR). The former evaluates the intelligibility of each writing sample, while the latter judges the extent to which one’s views and opinions were described, going beyond the plain summary of selected news content. As this is a subjective evaluation, it was conducted by three raters, two educated English native speakers and the present author, based on an original rubric constructed by the present author (Appendix. 1). Coding was done independently for all the writing samples with the utmost attention paid to consistency in assessment. The native raters were not informed which were pre- or post-writings, and any coding discrepancy or disagreement between the three raters was resolved and compromised through discussion whenever necessary.

Both comprehensibility and criticality were analyzed respectively to measure the difference between pre- and post-writings for SEM analysis.

3. 3. 3 Questionnaire

To collect participants’ direct voices on the entire course content, participants were asked to complete a questionnaire at the end of the course, in which they answered on their motivation toward grammar learning (Q1), their consciousness of the importance of grammar (Q2), and the effects of syntactic competence on actual writing performance (Q3). Responses to the questionnaire were based on a 5-point Likert scale (Likert 1932), as shown in Table 2, accompanied by voluntary comments.

Table 2 *Scales for Questionnaire*

	5	4	3	2	1
Q1	Very motivated	Motivated	Neutral	Not very motivated	Not motivated
Q2	Very important	Important	Neutral	Not very important	Not important
Q3	Very effective	Effective	Neutral	Not very effective	Not effective

4 Results and Discussions

4.1 Descriptive statistics of the three factors

Table 3 shows the descriptive statistics of syntax-based task scores, Table 4 linguistic assessment of writing, and Table 5 criticality.

In Table 5, the mean value of the assessment made by the three raters based on the rubric were used as final data, as the inter-rater reliability was .92 for CO (pre), .91 for CO (post), .91 for CR (pre), and .94 for CR (post) respectively.

Table 3 *Descriptive Statistics of Syntax-based Tasks (N = 230)*

	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Skewness</i>	<i>Kurtosis</i>
S1 (pre)	7.45	2.16	4	14	1.06	0.69
S1 (post)	9.83	3.03	5	18	0.96	0.28
S2 (pre)	7.90	2.00	4	14	0.87	1.13
S2 (post)	10.26	2.73	6	18	0.57	-0.21
S3 (pre)	8.28	1.34	5	12	0.26	0.21
S3 (post)	12.97	1.86	9	18	0.29	0.22

Note. S1: syntax-based questions, S2: TOEIC Part 5 questions, S3: gap-fills.

Table 4 *Descriptive Statistics of Writing Performance (Linguistic) (N = 230)*

	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Skewness</i>	<i>Kurtosis</i>
C (pre)	0.35	0.09	0.17	0.62	0.14	-0.52
C (post)	0.44	0.11	0.00	0.77	0.17	1.44
A (pre)	0.47	0.03	0.40	0.50	-0.53	-1.00
A (post)	0.47	0.11	0.20	0.77	0.30	0.01
F (pre)	96.82	17.52	68	141	0.34	-1.00
F (post)	109.97	18.26	78	148	0.21	-1.03

Note. C: Complexity, A: Accuracy, F: Fluency.

Table 5 *Descriptive Statistics of Writing Criticality (N = 230)*

	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>a</i>
CO (pre)	3.25	0.68	1.75	4.75	0.30	-0.49	.92
CO (post)	3.32	0.70	2.00	4.83	0.26	-0.60	.91
CR (pre)	2.85	0.82	1.17	4.66	0.36	-0.69	.91
CR (post)	3.16	0.82	1.50	4.66	0.22	-1.14	.94

Note. CO: comprehensibility, CR: criticality. CO and CR refer to the mean of assessment by three raters. *a*: Cronbach's coefficient alpha.

Table 6 shows the difference between pre- and post-data for each variable. Prior to SEM analysis, multivariate normality (MVN) was checked for the data in Table 5 using Mardia's MVN test. The result indicated the skewness value was non-normal (χ^2 skewness: 233.9526, $p = < .001$). As an option for non-normal outcome variables, a robust test with Satorra-Bentler (SB) correction (Satorra & Bentler 2010) was selected, which is "the best known example of corrected model test statistics" (Kline, 2005, p. 177).

Table 6 *Difference between Pre- and Post-data (N = 230)*

	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Skewness</i>	<i>Kurtosis</i>
S1	2.38	1.61	-2.00	8.00	-0.01	0.09
S2	2.36	1.72	-1.00	7.00	0.07	-0.31
S3	4.70	1.80	0.00	9.00	-0.08	-0.38
C	0.09	0.13	-0.29	0.46	0.20	-0.13
A	0.00	0.12	-0.30	0.31	0.13	-0.28
F	13.15	13.26	-27	44	-0.21	-0.22
CO	0.07	0.14	-0.33	0.50	0.92	1.01
CR	0.30	0.50	-1.05	2.00	0.67	0.92

4. 2 SEM analysis

In order to answer the research question, "How does a rise in syntactic competence affect the development of writing performance?", three base measurement models were proposed. Model 1 examined the effects of S (increase in syntactic competence) on W (increase in writing performance) integrating WL (increase in linguistic performance) and WC (writing criticality), along with the WL's influence on WC. Model 2 directly investigated the effect of S on WL, and WL's influence on WC. Finally Model 3 was constructed nearly identically with Model 1, except for the intended examination of WL's effect on WC. In these models, S1, S2, and S3, C, A, F, CO, and CR are dependent variables, with S, W, WL, and WC as independent variables for four-factor Models 1 and 3, and S, WL, and WC for three-factor Model 2.

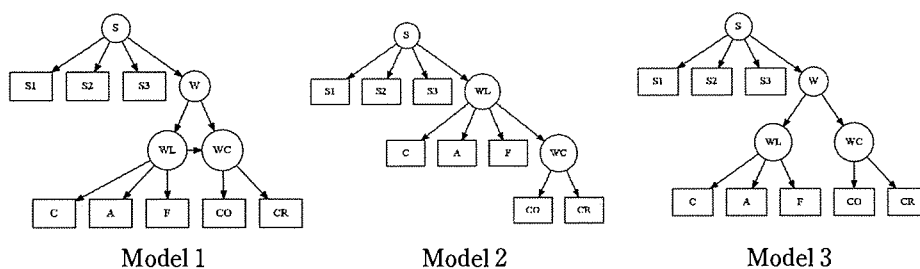


Figure 1. Three base measurement models

Of the three models, Model 1 and Model 2 were not identified as fit models. Accordingly it was decided to use Model 3 as the best model for the subsequent analysis. The fit statistics of Model 3 are presented in Table 7. The Satorra-Bentler scaled χ^2 was 18.54 (df: 17, $p = .36$), scaled CFI was .99, scaled RMSEA was .02, and scaled SRMR was .04, which indicate good fit of this model.

Table 7 Model Fit Statistics of Model 3

	SB-scaled χ^2	df	p	Scaled CFI	Scaled RMSEA	Scaled SRMR
Model 3	18.54	17	.36	.99	.02 (.00 - .07)	.04

It was clear from the data in Figure 2 and Table 8 that a rise in syntactic skill had a certain amount of impact on increase in writing performance (.78). This suggests that the acquisition of syntactic competence could significantly help enhance practical English writing performance integrating linguistic writing skill in terms of complexity, accuracy, and fluency, and also overall writing criticality evaluated based on comprehensibility and criticality itself. This result agrees with previous research results described in Chapter 2 of this paper (Ur, 1999; Wilkins 1976; Matsuda, 2010), which largely claim that sufficient communication can not be realized without grammatical skill. The result also implies that learning syntax through explicit instruction could have a strong positive effect on developing Japanese students' writing performance represented in this study by linguistic performance including complexity, accuracy and fluency, and criticality. It seems the significance lay in the fact that writing performance assessed not only linguistic aspects but also comprehensibility and criticality. In other words, this means that enhanced syntactic competence positively affects "what they write", as well as "how they write".

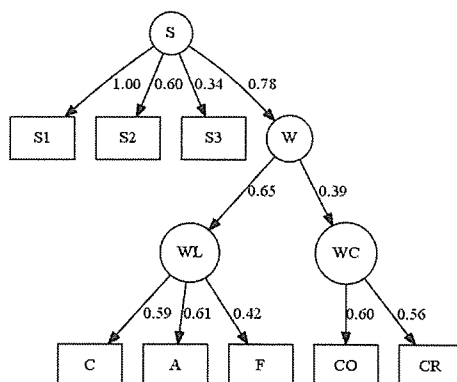


Figure 2. SEM result for fit Model 3

Table 8 Parameter Estimates of Model 3

Parameter estimates	Syntactic performance	Writing (linguistic)	Writing (criticality)	Error
Syntactic performance (S)				1.00
S1	1.00	-	-	.00
S2	.60	-	-	.65
S3	.34	-	-	.88
Writing (W)	.78	.65	.39	.39
Writing (WL)				.58
C	-	.59	-	.66
A	-	.61	-	.63
F	-	.42	-	.82
Writing (WC)				.85
CO	-	-	.60	.64
CR	-	-	.56	.70

4. 3 Questionnaire

Table 9 indicates mean and standard deviation of results of each question. A small space at the end of a questionnaire sheet was filled with students' frank and honest comments, except for around 12 per cent left blank. Table 10 shows those comments labeled and categorized according to Grounded Theory Approach (GTA) by Saiki-Craighill (2005), which could help demonstrate characteristics of respective data while possibly eliminating any biased views of a researcher (ibid.).

Table 9 *Results of Questionnaires*

	5	4	3	2	1	Mean	SD
Q1	38%	45%	10%	6%	0%	4.15	0.84
Q2	78%	12%	6%	4%	0%	4.65	0.75
Q3	79%	12%	5%	3%	1%	4.66	0.77

Note. Based on 5-scale Likert scale. Q1 (Motivation toward grammar learning), Q2 (Importance of grammatical knowledge), Q3 (Effects of syntactic competence on writing)

Table 10 *Free Comments in Questionnaire*

Category	Label	
	Affirmative	Negative
Motivation toward grammar learning	● Rise in confidence	● Still too difficult
	● Increased interest in grammar	● Communication rather than grammar
	● Desire to enhance writing skill	
	● Effective use of news articles	
Importance of grammatical knowledge	● Necessary to write well	● Not necessary for practical communication
Effects of syntactic competence on writing	● Enhanced expressiveness	● Not recognized due to insufficient syntactic competence
	● Decreased frustration in writing	
	● Ease of sentence construction	
	● Increase in writing speed	
Grammar learning opportunities & environment	● Significance of grammar learning opportunities	● Distressed in grammar discussion
	● Previous grammar learning experience	
	● Pleasant peer work	

It is a core belief of the present author that one of the crucial requirements of education in universities is to seek autonomy among students rather than teach knowledge and expertise. In this sense it was an encouraging sign that the participants are generally motivated to continue learning grammar (with a mean of 4.15), and recognized the significance of grammar learning (with a mean of 4.65). In addition, it was revealed that nearly 70 per cent of the respondents attributed their enhanced motivation to learning with news articles. Use of authentic, latest news for grammatical study seemed to have been a successful strategy for boosting their motivation towards grammar learning. With regard to the effects of syntactic knowledge on writing (with the mean of 4.66), it is

significant that 68 per cent of the respondents confessed that they felt more satisfied with their expressiveness in writing due to enhanced grammatical knowledge. It is highly recommended for learners to experience difficulty in expressing their opinions in English, by which they recognize a necessity of grammatical knowledge, rather than to be only advised as to this need. As for grammar learning environment, 75 per cent wrote about discussing grammar in groups, saying that it was a unique experience and a preferable method of learning grammar.

Meanwhile, it should be noted that three students showed their desire to acquire practical communication skill without learning grammar. The same students wrote that grammar is not necessary for real communication. As to the effects of syntactic competence on writing, those who marked "Not very effective" and "Not effective" admitted that it is due to their insufficient syntactic competence. It should also be alerted that five students revealed that grammatical discussion in groups had been rather annoying to them due to their limited knowledge employed for discussion with their classmates.

5 Conclusions

This study made an attempt to investigate the effects of increasing syntactic competence on development of writing performance from a longitudinal perspective using SEM analysis, which helped explain the interrelationships between relevant factors and variables. Results showed a strong relationship (.78) between the two principal factors, a rise in syntactic competence and an increase in writing performance, suggesting that English writing performance tends to be largely enhanced commensurately with the amount of syntactic competence accumulated through explicit instruction. It seems this is a reasonable outcome in accordance with previous study results on the importance of grammar acquisition for practical English communication (Ur 1999; Wilkins 1976), significance of explicit instruction and knowledge (Ellis 2006; Swan 2006), and the efficacy of grammar on writing performance (Matsuda 2010).

Another significance of this study was the fact that writing performance assessed not only the linguistic aspect but included its overall comprehensibility and criticality, considering one's ability as an English user in society is measured by whether a writer's views and opinions are clearly expressed. Results demonstrated that acquisition of syntactic competence improved both linguistic level (complexity, accuracy, and fluency)

and the level of criticality. This led to the conclusion that accumulation of syntactic competence might contribute to students' enhanced proficiency as critical writers.

A subsequent pedagogical implication is that explicit instruction to provide explicit syntactic competence could be recommendable in order to improve practical English writing performance of Japanese university students. It might be a meaningful suggestion to provide students with opportunities to acquire explicit syntactic competence through explicit instruction, along with writing activities. For instance it seems favorable to spend some time to reflect on and structurally analyze one's own written sentences with an aid of error correction feedback by a teacher or peer review, thus enabling learners to accumulate explicit knowledge. It seems these attempts might turn out to be highly beneficial from a long-term perspective. According to the results of this study, such a balanced learning of explicit knowledge and writing skill could possibly generate more fruitful outcomes than just repeatedly assigning spontaneous writing tasks to the students.

As a limitation of this study, it is certainly necessary to make replication in different contexts such as involving different tasks, measures, and participants before reaching adequate generalization of this outcome. Another limitation of this study is that assessment of writing criticality was executed by only three raters, who closely examined as many as 460 writing samples (230×2) over the course of ten months. Although it might be a strength in terms of consistency in assessment, it is of some concern, considering rather heavy burden imposed to the raters, whether adequate intra-rater reliability could have been retained.

For future studies it might be worth integrating writing and reading as practical English performance, and examining the interrelationships among three major factors, syntactic competence, writing, and reading performance. In addition it is necessary to conduct a thorough qualitative analysis of the questionnaires through category classification in order to disclose the students' voices in a more constructed way.

It is hoped that this study will help Japanese university students and teachers reconfirm the importance of explicit syntactic competence to boost practical writing performance, so that students could expand their career paths globally as confident and competent English users.

Acknowledgements

I would like to thank anonymous reviewers for their valuable comments and suggestions. I

would also like to express my sincere gratitude to Professor Hino and Professor Imao for their generous support to make this study possible.

References

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, *103*(3), 411.
- Brown, H. D. (2007). *Principles of language learning and teaching*. New York: Pearson Education. Inc.
- Cummins, J. (2008). BICS and CALP: Empirical and Theoretical Status of the Distinction. In Street, B. & Hornberger, N. H. (Eds.), *Encyclopedia of Language and Education* (pp. 71-83). New York: Springer Science + Business Media LLC.
- De Graaff, R., & Housen, A. (2009). 38 Investigating the Effects and Effectiveness of L2 Instruction. In M. Long & C. Doughty (Eds.), *The Handbook of Language Teaching*, (pp. 726-755). New Jersey: Blackwell Publishing Ltd.
- Elder, C., & Davies, A. (1998). Performance on ESL Examinations: Is There a Language Distance Effect?. *Language and Education*, *12*(1), 1-17.
- Ellis, R. (2006). Current Issues in the Teaching of Grammar: An SLA Perspective. *TESOL Quarterly*, *40*(1), 83-107.
- Hirvela, A. (2004). *Connecting reading & writing in second language writing instruction*. Michigan: University of Michigan Press.
- Kline, R. B. (2005). *Principles and Practice of Structural Equation Modeling*. New York: Guilford.
- Krashen, S. D. (1993). The effect of formal grammar teaching: Still peripheral. *TESOL Quaterly*, *27*(4), 722-725.
- 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 Women's University Faculty of Humanities and Social Science kiyō [Journal of Jissen Women's University Faculty of Humanities and Social Science]. *10*, 103-122.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of psychology*, *22*, 5-55.
- Matsuda, P. K. (2010). English writing in Japan: Toward integration. *JACET Journal*, *50*, 15-20.

- Saiki Craighill (2005). *Shitsuteki kenkyu houhou zeminaru : Grounded Theory Approach wo manabu*, Tokyo: Igakushoin.
- Satorra, A., & Bentler, P. M. (2010). Ensuring positiveness of the scaled difference chi-square test statistic. *Psychometrika*, 75(2), 243-248.
- Scheffler, P., & Cinciata, M. (2011). Explicit grammar rules and L2 acquisition. *ELT Journal*, 65(1), 13-23.
- Schulz, R. A. (1991). Second language acquisition theories and teaching practice: How do they fit?. *The Modern Language Journal*, 75(1), 17-26.
- Swan, M. (2006). Teaching grammar: does grammar teaching work. *Modern English Teacher*, 15(2), 5-13.
- Tsuji, K. (2014). Research on English Education Needed for the Optimization of English Communication at Corporations. Grant-in-Aid for Scientific Research (C) Number 23520779.
- Ur, P. (1999). *A Course in Language Teaching*. Cambridge: University Press.
- Wiggins, G. (1989). A true test. *Phi Delta Kappan*, 70(9), 703-713.
- Wilkins, D. A. (1976). *Notional syllabuses: A taxonomy and its relevance to foreign language curriculum development*. London: Oxford University Press.
- Wolfe-Quintero, K., Inagaki, S., & Kim, H. (1998). *Second language development in writing: Measures of fluency, accuracy and complexity*. Honolulu: Second Language Teaching & Curriculum Center, University of Hawaii.

Appendix 1: Rubrics for criticality assessment

<p>Major viewpoints are clearly and accurately identified and interpreted.</p> <p>Important claims and arguments are identified and analyzed clearly and accurately.</p> <p>Writers' views are intelligible, and ideas and opinions are expressed clearly and strongly.</p> <p>Relevant data and information are incorporated effectively and in an organized way for further discussion of writers' personal views.</p> <p>Conclusions are demonstrated clearly and strongly based on the key concepts.</p>
<p>Major viewpoints are generally identified and interpreted.</p> <p>Important claims and arguments are comprehensibly identified and analyzed.</p> <p>Writers' views are intelligible, and ideas and opinions are expressed clearly.</p> <p>Relevant data and information are incorporated for further discussion of writers' personal views.</p> <p>Conclusions are reasonably demonstrated.</p>
<p>Major viewpoints are superficially identified and interpreted.</p> <p>Important claims and arguments are identified and analyzed superficially.</p> <p>Writers' views are understandable, and ideas and opinions are expressed in general terms.</p> <p>Relevant data and information are incorporated, with a limited connection with writers' personal views.</p> <p>Conclusions are acceptable.</p>
<p>Major viewpoints are not identified clearly enough.</p> <p>Important claims and arguments are presented with some misunderstanding.</p> <p>Writers' views are difficult to discern, and ideas and opinions are not expressed clearly.</p> <p>Relevant data and information are very limited or misused.</p> <p>Conclusions stray from the key concepts.</p>
<p>Major viewpoints are identified incorrectly, or not identified at all.</p> <p>Important claims and arguments are presented incorrectly, or not presented at all.</p> <p>Writers' views are hardly understandable, and ideas and opinions are irrelevant to the key concepts, or not demonstrated.</p> <p>Writers' views are almost impossible to discern, and ideas and opinions are irrelevant to the key concepts, or not demonstrated.</p> <p>No relevant data or information is presented.</p> <p>No conclusions are demonstrated.</p>