Translanguaging Instruction and Reading Comprehension Skills of Japanese EFL Learners: A Quasi-Experimental Study

Alexis Goli [ORCID]

Sophia University Junior College Division, Kanagawa, Japan

ABSTRACT

Background. The adoption of the TOEIC Listening and Reading test as the main English competency measurement instrument for Japanese businesses has lead Japanese business people to invest in courses specialized in test-taking strategies which seem to improve test scores in the short term. Nevertheless, there is pressing need to adopt more reliable instructions for reading ability development. Translanguaging pedagogy, an instruction method that urges L2 learners to make use of all languages in their linguistic repertoire, has rapidly gained the interest of language researchers and educators worldwide. Various studies have been conducted at all level of formal education, from elementary to tertiary education, to evaluate how it could help learners develop their proficiency in the target L2, including reading comprehension ability. However, no study on translanguaging in continuing education in Japan could be found in the literature.

Purpose. This paper presents an investigation to assess the effectiveness of translanguaging pedagogy in nurturing the reading comprehension of a group of Japanese EFL learners in a continuing education context.

Method. The study adapted a quasi-experimental design with a control and an experimental group, as well as a reading comprehension improvement intervention course between pre-test and post-test. The experimental group received instruction based on translanguaging pedagogy, and the control group was restricted to using only English in their classes.

Results. It was found that both the control and experimental groups improved their reading comprehension, but improvement in the experimental group was moderately more substantial. This finding contributes to the literature on translanguaging pedagogy in Japan, especially in the context of continuing education.

Conclusion. Due to the small number of participants, the findings of this study cannot be generalized to EFL education in continuing education. Further research with a substantial number of participants and treatment over a longer period could help confirm that translanguaging pedagogy can effectively be implemented in this setting to assist learners become proficient in the target L2.

KEYWORDS

translanguaging pedagogy, reading comprehension instruction, English as a foreign language (EFL), bilingualism, multilingualism, continuing education

INTRODUCTION

Background

English Education and English Use in the Japanese Context

The end of the twentieth century witnessed technological advances and the globalization of the world economy, resulting in the emergence of a multicultural and multilingual global community where people from all corners of the earth are permanently in contact, whether in person or remotely. As a result, in order to communicate effectively in the global community, most people aspire to gain competency in two or more languages, including English, the de facto lingua franca of the new world commu-

nity. Japan, an insular country that prides itself as being a homogeneous, monocultural, and monolingual society (Carroll, 2013) puts pressure on its students and workforce to acquire reliable English abilities. In this way it can contribute more efficiently to the country's economy which has yet to recover from the economic burst of the early 1990s.

In response to the request of the Japanese Ministry of Education, Culture, Sports, Science, and Technology (MEXT) to enhance their EFL programs and foster bilingual business professionals, Japanese education institutions have adopted the Test of English for International Communication (TOEIC) Listening and Reading as the countries' main English competency measurement instrument (Takahashi, 2012). Universities rely on TOEIC test performances for course placement, and run TOEIC courses to ensure students graduate university with business English proficiency (ibid). Moreover, businesses use the TOEIC score to make employee job placement and career advancement decisions (Tsedal, 2019). As a result, students in their last year of university and people in the workforce make substantial financial investment in courses specialized in test-taking strategies. Except for test-taking strategies, such courses tend to use the same vocabulary and reading instructions which most Japanese EFL learners have been exposed to throughout formal education. The courses use rote learning and memorization to get learners to internalize long lists of vocabulary, and have them practice reading comprehension through grammar-translation practices, as in Japanese junior and senior high schools (Egitim, 2020; Kumagai, 1994; Steele & Zhang, 2017). Consequently, these courses seem to help improve test scores in the short term, but the issue of English competency remains prevalent.

In their continued effort to adapt EFL education to its long-term educational objectives, in 2020 the MEXT introduced foreign language policy reforms which put the nurturing of oral communicative competence at the center of its EFL education. The MEXT has imposed English as the sole official language of instruction in EFL classes in formal education (Turnbull, 2018). However, in a survey which investigated Japanese EFL learners' self-perceived oral communication ability improvement following a one-on-one tutoring course, it was found that the need for Japanese to improve their reading comprehension skills seems comparatively more pressing than expanding their speaking skills. Currently, "most respondents read work-related English documents and correspondence more often than they communicate orally in English" (Goli, 2021). Additionally, as a native language (L1), the Japanese language is not only the preferred language of instruction in foreign language education (Turnbull, 2018), but also the literature abounds with research findings which sustain that the use of L1 in foreign language classrooms plays a key role in an effective acquisition (Baker, 2011; Cenoz & Gorter, 2011, 2022; Garcia & Li Wei, 2014; Lewis et al., 2012; Spinelli, 2017; Williams, 2012). In the light of the reasons aforementioned, it is clearly nec-

essary to adopt reading ability development instructions in EFL which are more suitable to Japanese learners and their context. Consequently, this study was conducted to investigate translanguaging pedagogical approach as an effective reading instruction method to develop the reading skills of Japanese EFL learners. The following research question was formulated: To what extent can translanguaging pedagogical instruction improve the reading comprehension ability of Japanese EFL learners in a continuing educational context?

LITERATURE REVIEW

With globalization and advancements in communication technologies, most people around the world need to be able to read at high levels of proficiency in languages other than their L1, in order to achieve their personal and professional goals. However, developing strong reading abilities, especially in a L2, is both time-consuming and challenging (Grabe & Stoller, 2011). Pressley (2000) demonstrated that unless teachers overtly teach comprehension skills, students cannot easily acquire the ability to understand texts. King (2007) supports the notion that in order for readers to make meaning and comprehend texts, it is crucial for them to also acquire the skill to infer main ideas from a text. According to Grabe & Stoller (2011), effective reading instruction in L2 needs to prioritize guiding learners to grasp the main idea of texts through class discussions where participants learn to make connections between the text and prior knowledge. Hence, learners should work in groups and explain the main ideas to each other. Similarly, August & Shanahan (2006) support the notion that learners increase their literacy comprehension when they work collaboratively in groups. Grabe & Stoller (2011), however, insist that making learners use all the languages in their linguistic repertoire in group reading activities is extremely important. The instruction approach suggested by Grabe & Stoller (2011) and August & Shanahan (2006) have common characteristics with translanguaging pedagogy, a teaching and learning method in language and multilingual education. In translanguaging instruction, the teacher purposefully specifies the language(s) of input and output, and guides learners to use all linguistic and semiotic resources in their possession to optimize learning of the subject matter (Baker, 2011; Cenoz & Gorter, 2011, 2022; Garcia & Li Wei, 2014; Lewis et al., 2012; Williams, 2012). It combines several activities which stimulate learners to make use of all skills in the four language areas to communicate and make meaning. For example, in a language class, the teacher can have learners read a text in one language, investigate the topic and participate in group discussions, then make a summary and report their findings in the target language (Nagy, 2018; Cenoz & Gorter, 2011, 2022). Baker (2011) and Lewis et al. (2012) support the notion that learners can enhance literacy and oral competency in their weaker language when they simultaneously use those languages. Garcia & Li Wei (2014) argue that learners' engagement in translanguaging prompts interlanguage exchanges which

expand on their pre-existing linguistic and cognitive knowledge to instigate further learning and new knowledge. Focusing on the pedagogical aspect of translanguaging, Cenoz & Gorter (2017, 2020) put forward the concept of 'pedagogical translanguaging' which, they argue, goes beyond the original approach of translanguaging by including practices related to the development of metalinguistic awareness. They also explain that pedagogical theory and practice aims at developing multilingualism in two or more languages in content and language classes.

Translanguaging for Reading Skill Development in Tertiary Education in a Global Context

Various studies conducted in tertiary education suggest that translanguaging pedagogy helps learners more effectively develop proficiency in the target L2, in comparison to pedagogical instruction that restricts exchanges among class participants to the L2 (Bartlett, 2018; Hungwe, 2019; Makalela, 2015; Spinelli, 2017). Makalela (2015) researched the vocabulary gains and improvements in oral reading proficiency in Sepedi among 60 multilingual pre-service teachers who used Sepedi as an additional language. While the experimental group received instructions following translanguaging pedagogy, language use in the control group was restricted to the target language. Makalela (2015) concluded that the gain in vocabulary of the experimental group was significantly larger than the control group. However, with regard to oral reading competency, gains were similar for both groups. The author concluded that the vocabulary of adult bilingual language learners could more effectively be enhanced by means of translanguaging instructions, but improvement in oral reading by means of translanguaging instructions were inconclusive. Makalela (2015) established his study on the theory that word recognition skill is crucial for vocabulary and reading comprehension proficiency. In light of the findings of Spinelli (2017), Kor et al. (2014), and Grabe & Stoller (2011), Makalela (2015)'s conclusion on this point of investigation appears plausible. With regard to oral reading proficiency, Makalela (2015) does not provide or elaborate on any explicit theoretical or empirical evidence to support his assumption that word recognition and vocabulary skills affect oral reading competency. However, it is argued that oral reading proficiency is affected by automatic information processing or automaticity (LaBerge & Samuels, 1974; Logan, 1997). Non-fluent language learners tend to struggle with oral reading comprehension, since they have not yet acquired automaticity. Grabe & Stoller (2011) support the notion that non-fluent readers need thousands of hours of reading practice, in order to acquire word recognition automaticity. Consequently, the outcome of the study on oral reading proficiency appears reasonable.

Some researchers have explored the impact of translanguaging and paraphrasing on the development of reading comprehension. Hungwe (2019) investigated the impact of translanguaging and paraphrasing on the development of reading comprehension skill among 36 multilingual medical school students in a course on English for academic purposes. An analysis of the quality of summaries by the participants of a scientific article discussed during intervention led Hungwe (2019) to the conclusion that translanguaging practice used in combination with paraphrasing enhances the reading comprehension of English learners in comparison to conventional instruction. Hungwe (2019) based her argument on translanguaging theory literature and paraphrasing. Regarding translanguaging theory, she supports the idea that the use of L1 through translanguaging not only helps to develop the target language (Lewis et al., 2012), but also helps students work at a higher cognitive level than they would if restricted to the exclusive use of the target language (Storch & Wigglesworth, 2003). Furthermore, the learners are able to understand the meaning of new and difficult words, as well as explain complex syntactic rules (Hussein, 2013). According to the literature, paraphrasing is an excellent tool for reinforcing reading skills, such as identifying main ideas and finding supporting details (Fisk and Hurst, 2003). It has also been shown that by paraphrasing, students grasp and express the original ideas of the author with their own words, thus showing they understand a text (Hirvela & Du, 2013).

Another researcher who investigated translanguaging and other multilingual pedagogies, is Spinelli (2017). Spinelli (2017) researched the impact of translanguaging and other multilingual pedagogies, namely cross-linguistic comparison and inter-comprehension, and L3/Ln learners' reading and writing abilities in a multilingual setting at a university in the United States. Spinelli found that multilingual pedagogy facilitated positive interlingual transfers, leading to the development of both reading and writing skills, with relatively more gain in writing skills. Furthermore, in addition to the degree of proficiency of languages in the learners' linguistic repertoire, the improvement of writing skills seemed to have positively influenced their reading comprehension. Spinelli (2017) based her argument on theories and findings in reading comprehension research, according to which reading comprehension combines visual information processes (lower processes) with prior knowledge (higher lever process) applied by readers to their reading. She paid special attention to visual information processing, by focusing on word recognition and syntactic parsing processes, identified as two of the most important processes for reading comprehension (Adams, 1990; Perfetti, 1999). Spinelli supports the notion that while L2 reading is a dual-language process, L3/Ln reading is a multi-language involvement process (Cook, 1997; Koda, 2007). As a result, the richer the linguistic repertoire of language learners, the more their reading comprehension is expedited at the lower level of processing. Thus, parallel grammatical ordering in the languages in the multilingual speaker's repertoire, cognates across those languages, and similar syntactic information such as deter-

miners promote transfers, especially when reading instructions help learners gain awareness of aforementioned similarities and differences (Nagy et al., 1993; Cook & Bassetti, 2005; Koda, 2007; Grabe, 2009). In light of all the evidence provided by Spinelli (2017) in support of her argument, it appears reasonable that, with adequate reading comprehension training, multilingual learners can gain word recognition skills and more efficiently acquire high and reliable reading abilities for visual information processing.

Translanguaging for the Development of Reading Skills in Tertiary Education in the Japanese Context

In Japan translanguaging pedagogy is gaining attention in language education. Some researchers have started to experiment with regard to its suitability and effectivity in formal education. In his studies of reading comprehension of English, Bartlett (2018) investigated the effect of translanguaging instruction on reading comprehension in a Japanese tertiary educational setting with 107 second-year college students. Findings showed that the 56 participants in the experimental group demonstrated a higher level of retention and a more varied English language use in presentations, when compared to the 51 students in the control groups. Bartlett (2018) also found that the participants in the experimental group were more motivated to study English. Responding to recommendations from translanguaging literature encouraging educators to adopt alternative teaching approaches in the translanguaging classroom (Makalela, 2015), Bartlett (2018) placed multiple intelligences theories as the foundation of his study. He also investigated the effectiveness of applying these intelligences in translanguaging classrooms in promoting learners' learning and comprehension. It has been suggested that each learner possesses at least seven intelligences or independent ways of processing information, which would interact differently depending on the individual (Gardner & Hatch, 1989). Stimulation of the intelligences promotes a more personalized learning, and, in comparison with practices in conventional education, provides different learning opportunities to every learner (Csikszentmihalyi, 1990). Therefore, adopting activities designed to stimulate multiple intelligences along with the full linguistic repertoire of students in translanguaging classroom is consistent with the goals of integrating such activities in the teaching process, especially in the language classroom. This should provide each learner with a unique opportunity to reinforce their linguistic competence, including their reading comprehension, in accordance to the intelligences they possess.

All four studies introduced above concluded that translanguaging pedagogy contributes, to various extents, to EFL learners' reading comprehension improvement. However, although the studies targeted adult learners, they were all been performed in formal education settings, particular-

ly in tertiary education. In light of the increasing need for Japanese business people and workers to improve their EFL reading comprehension business purposes, an evaluation of the effectiveness of translanguaging instruction in a continuing education setting is highly necessary.

METHOD

Design

This project adopted a quasi-experimental design, a pretest—post-test control and experimental group design with a period of intervention between pre-test and post-test (Cohen et al., 2017, p.402)

Participants

21 participants were recruited by convenient sampling method. They all met the course participation criteria described as follows:

(1) Be 18 years old or older;

(2) Be a businessperson, a company employee, or self-employed person;

(3) Be aiming at improving one's reading comprehension skill;

(4) Have a TOEIC Listening and Reading score between 400 and 780.

All the participants m*et al*l the criteria. However, although all 21 participants sat for the pre-test and took part in the entire treatment course, 2 of them did not take the post-test and fill out the questionnaire about their personal details. As a result, 19 participants took part in the entirety of the study. Basic background information on participants is summarized in Table 1.

The Intervention

A reading comprehension instruction course was designed and administered by the researcher. The course was free of charge and was administered online via Zoom Meeting with a control group and an experiment group. The course consisted of 7 sessions of 120 minutes for each group held over the weekend. The reading tests were conducted in the first and 7th sessions, and the 5 sessions in-between were dedicated to reading comprehension skill building. Participants were assigned to the control and experimental groups randomly at registration online by means of the website registration system. In the reading comprehension instruction sessions with the control group, only the target language, English, was used for instruction and during discussion among the participants. The study materials made availa-

Table 1

Basic Background Information of Participants

Gender	Female					Male
	15 (78.9 %)					4 (21.1%)
Age	20 to 29	30 to 39	40 to 49	50 to 59	60 or more	
	0	2 (10.5 %)	13 (68.4%)	3 (15.8%)	1 (5.3 %)	
Education	Elementary school	Junior high school	Senior high school	Professional school	college	Graduate school
	0	0	0	4 (21.1%)	12 (63.2%)	3 (15.8%)
Years of school English education	1 to 3 years		4 to 6 years	7 to 9 years		10 years or more
	0		5 (26.3%)	11 (57.9%)		3(15.8%)
English Study in speaking countries	Within 1 month	Within 3 months	Within 6 months	Within 12 months	Within years	2 years or more
	9 (47.4%)	4 (21.1%)	0	4 (21.1%)	0	2 (10.5%)
Life in English speaking countries	Within 1 month	Within 3 months	Within 6 months	Within 12 months	Within years	2 years or more
	8 (42.1%)	1 (5.3%)	0	1 (5.3%)	2 (10.5%)	7 (36.8%)
Occupation	Company employee					8 (42.1%)
	an executive secretary, a web designer, a graphic designer, a nursery teacher, a university staff member, a Japanese language teacher, a painter, a nurse, a shop assistant, a housewife, and a self-employed person					11 (57.9) %

ble on the webpage were mainly in English, with a simple Japanese translation for relatively long and complex task instructions. In the reading comprehension classes with the experimental group, the researcher used both English and Japanese. The participants were encouraged to use both English and Japanese for in-class discussion, as well as during discussions among participants. The participants in the experimental group were also provided with a Japanese translation of all the English reading materials used in the class.

Data Collection

A pre-test and post-test approach was adapted to gather quantitative data. Thus, two sets of data were collected before and after the reading comprehension intervention. First, before the intervention, participants were asked to complete a 40-minute mockup TOEIC reading test. After attending a total of ten hours reading comprehension instruction classes, the participants took another 40-minute mockup reading test of the TOEIC. Both the pre-test and post-test were administered online. The TOEIC test was chosen for two reasons. First, it is a highly reliable test (ETS, 2007).[3] All

questions in the TOEIC Reading test are in the form of multiple-choice. Secondly, the TOEIC reading test is highly reliable due to the nature of its test tasks which enable objective scoring, as opposed to task-based evaluations such as writing and speaking test.

The official TOEIC reading test has a total of 100 questions. The number of questions is different for each part. For the purpose of this study, short versions of the TOEIC reading test with 50 questions were used. Table 2 summarizes the abilities measured in the TOEIC Reading test (IIBC, n.d.) and the content of the official TOEIC reading test and the customized version for this study (pre-post tests).[4] The content of the pre-test and post-test were adapted from Educational Testing Service (2019) and Educational Testing Service (2020), respectively.[5] [6]

Data Analysis

Descriptive and inferential statistical (independent-samples and paired-sample t-tests) analyses were performed using IBM SPSS 27.0. Inferential statistical analyses were performed, in order to evaluate differences in performance

---

[3] ETS. (2007). *TOEIC Score User Guide-Listening & Reading*. https://www.ets.org/s/toeic/pdf/toeic-listening-reading-test-user-guide.pdf

[4] IIBC. (n.d.). Official score certificate format. https://www.iibc-global.org/english/toeic/test/lr/guide05/guide05_01.html

[5] Educational Testing Service. (2019). *Official TOEIC Listening & Reading preparation book 5*. Educational Testing Service.

[6] Educational Testing Service. (2020). *Official TOEIC Listening & Reading Preparation book 7*. Educational Testing Service.

Table 2

Content and Language Ability Measured in Each Part in the Reading Tests

Part (Test type)	Number of questions		Ability measured
	Official Test	Pre-post tests	
Part 5 (Incomplete passage)	30	15	• Ability to understand vocabulary in written texts.
			• Ability to understand grammar in written texts.
Part 6 (Incomplete text)	16	8	• Ability to understand vocabulary in written texts.
			• Ability to understand grammar in written texts.
			• Ability to make inferences based on information in written texts.
Part 7 (Single passage)	29	12	• Ability to understand vocabulary in written texts.
(Multiple passages)	25	15	• Ability to understand grammar in written texts.
			• Ability to make inferences based on information in written texts.

Table 3

Descriptive Analysis of Performance in Pre-test and Skewness and Kurtosis Statistics.

Control group									
		Scores			Skewness			Kurtosis	
Test rubrics	N	M	SD	Statistic	SE	Z	Statistic	SE	Z
Total score	10	25.40	9.755	0.817	0.867	0.942	-0.939	1.334	-0.704
Part 5 score	10	9.70	2.983	0.802	0.867	0.925	-0.620	1.334	-0.465
Part 6 score	10	5.40	1.430	-0.319	0.867	-0.368	-1.1663	1.334	-0.874
Part 7 score	10	10.30	7.134	1.367	0.867	1.577	0.483	1.334	0.362
Experimental group									
		Scores			Skewness			Kurtosis	
Test rubrics	N	M	SD	Statistic	SE	Z	Statistic	SE	Z
Total score	9	26.22	9.897	-0.396	0.717	-0.552	-0.687	1.400	-0.491
Part 5 score	9	9.44	2.698	0.373	0.717	0.520	0.433	1.400	0.309
Part 6 score	9	5.33	2.000	-0.469	0.717	-0.654	-0.844	1.400	-0.603
Part 7 score	9	11.44	5.855	-0.848	0.717	-1.183	0.464	1.400	0.331

Note. SE: Standard Error; Z: Z-score (Z=Statistic/SE)

between the two sets of tests and between the two groups (Dörnyei, 2007; Paltridge & Phakiti, 2015). The first, t-tests were performed on the participants' pre-test, in order to verify that there were no significant differences in English reading proficiency levels between the control and experimental groups before intervention. Next, t-tests of the participants' post-test were conducted to compare the performance of the control and experimental groups after intervention. Then, paired samples t-tests were conducted, in order to study the effect of the reading comprehension intervention on each group. All t-tests of the participants' performances included their performances in each part of the reading test, namely Parts 5, 6, and 7.

RESULTS

Descriptive Analysis with Skewness and Kurtosis Statistics

Descriptive statistics of participants' performance in the pre-test are shown in Table 3 with the results of skewness and kurtosis statistics. According to West *et al*. (1995) and Lowie & Seton (2012), if the absolute values of the skewness and kurtosis z-scores (Z) are both smaller than 1.96 for a sample size under 50, the sample is considered acceptably normally distributed. Values of z-sores for both the control

and experimental groups for the overall performance as well as performances in Part 5,6, and 7 are all less than 1.96. Consequently, it could be concluded that the samples used for this study was normally distributed.

Results of The Independent T-Test of The Pre-test

In order to compare the level of the two groups, independent-samples t-tests of their performances in the pre-test were conducted. Results of the total score and performance in each part of the reading test are shown in Table 4. They reveal that, out of a total of 50 possible score, both control (*M* = 25.40; *SD* = 9.755) and experimental (*M* = 26.22; *SD* = 9.897) groups achieved comparably similar mean scores values and standard deviations. The t-test pointed out that the difference between the two groups was not statistically significant ($p > 0.05$). Therefore, the control and experimental groups had similar language proficiency and were comparable.

For Part 5, out of a total 15 possible score, comparable means score and standard deviation values were obtained by the control (*M* = 9.70; *SD* = 2.983) and experimental (*M* = 9.44; *SD* = 2.698) groups. Similarly, a comparable mean score and standard deviation values were obtained by the control (*M* = 5.40; *SD* = 1.430) and experimental (*M* = 5.33; *SD* = 2.000) groups out of a total 8 possible score for Part 6. For Part 7, out a total 27 possible score, the control and experimental

groups achieved similar means score values and standard deviations. The t-test for each part of the reading test indicates that the difference between the two groups were not statistically significant ($p > 0.05$). Consequently, the control and experimental groups had similar reading proficiency in each area of the test, and were therefore comparable.

Results of The Independent T-Test of The Post-Test

Independent-samples t-tests of participants' performances in the post-test were performed to evaluate the effect of the reading instruction on the two groups. Table 5 shows the t-test of the overall performance (total score) of the participants, as well as their performance in each part of the post-test. The mean difference of 4.389 points between the total score of the control (*M* = 26.50; *SD* = 10.277) and experimental (*M* = 30.89; *SD* = 9.532) groups was observed. Results of the t-test indicate that this difference in score between the two groups was not statistically significant ($p > .05$). However, the Eta squared value (the effect size describing the magnitude of the difference between two groups observed) suggests that the difference in score has a moderate effect, therefore, not negligible.

In Part 5, comparable means score and standard deviation values were obtained by the control (*M* = 10.30; *SD* = 2.584) and experimental (*M* = 9.22; *SD* = 2.819) groups, with a mean difference of 1.078 points. This difference was not statisti-

Table 4

Results of Independent-Samples T-Test of Participants' Pre-test Performance

Pre-test total score						
	N	**M**	**SD**	*df*	*t*	**Eta squared**
Control group	10	25.40	9.755	9	.182	.002
Experimental group	9	26.22	9.897	8		

Part 5						
	N	**M**	**SD**	*df*	*t*	**Eta squared**
Control group	10	9.70	2.983	9	-.195	.002
Experimental group	9	9.44	2.698	8		

Part 6						
	N	**M**	**SD**	*df*	*t*	**Eta squared**
Control group	10	5.40	1.430	9	-.084	.000
Experimental group	9	5.33	2.000	8		

Part 7						
	N	**M**	**SD**	*df*	*t*	**Eta squared**
Control group	10	10.30	7.134	9	.380	.008
Experimental group	9	10.44	5.855	8		

Note. p > .05

Table 5

Results of Independent-Samples T-Test of Participants' Post-test Performance

Pre-test total score						
	N	**M**	**SD**	*df*	*t*	**Eta squared**
Control group	10	26.50	10.277	9	.962	.052
Experimental group	9	30.89	9.532	8		

Part 5						
	N	**M**	**SD**	*df*	*t*	**Eta squared**
Control group	10	10.30	2.584	9	-.870	.043
Experimental group	9	9.22	2.819	8		

Part 6						
	N	**M**	**SD**	*df*	*t*	**Eta squared**
Control group	10	5.30	2.214	9	-.578	.019
Experimental group	9	4.78	1.641	8		

Part 7						
	N	**M**	**SD**	*df*	*t*	**Eta squared**
Control group	10	10.90	7.593	9	1.859	.169
Experimental group	9	16.89	6.294	8		

Note. p > .05

cally significant (p > .05), and the effect of the Eta squared is relatively small. As a result, there was no difference in the two groups' performance in Part 5 (p > .05). The control (M = 5.30; SD = 2.214) and experimental (M = 4.78; SD = 1.641) groups achieved comparable mean scores and standard deviation values in Part 6, with a mean difference of .522 points that was not statistically significant (p > .05), and has very small effect (Eta squared = 0.19). However, regarding the participants' performance in Part 7, there was a mean difference of 5.989 points between the control (M = 10.90; SD = 7.593) and experimental (M = 16.89; SD = 6.294) groups. This was evaluated as not statistically significant (p > .05), but with a large effect on the difference in performance between the two groups.

Results of The Paired T-Tests of the Pre-Test and Post-Test

Paired samples t-tests of the participants' pre-test and post-test performances were performed, in order to examine the effect of the reading comprehension intervention within the control and experimental groups. The test results of the control group are shown in Table 6, and they reveal that the control group achieved similar means score and standard deviation values in the pre-test (M = 25.40; SD = 9.755) and post-test (M = 26.22; SD = 10.277) with a mean paired difference of 1.100 points. However, the paired t-test shows statistically significant differences between the two tests with a substantial effect (p <.05; Eta squared = .417). This rep-

resents a 41.7 percent difference between the pre-test and post-test total scores in the control group.

In Part 5, comparable means score and standard deviation values were obtained in the pre-test (M = 9.70; SD = 2.983) and post-test (M = 10.30; SD = 2.584) in the control groups, with a mean paired difference of .60 point. This difference in score was not statistically significant (p > .05), and its effect is small (Eta squared = .045). Consequently, the score improvement of the control group in Part 5 alone was ignorable. Similar outcomes were obtained for Part 6 and 7. Both the mean paired differences of .10 point in Part 6 and .60 point in Part 7 were evaluated as not statistically significant (p > .05) with a considerably small effect (Eta squared = .005, Part 6; Eta squared = .049, Part 7). A grouped spaghetti plot of the performance of the control group is represented in Figure 1.

Table 7 displays the results of the paired samples t-test of the performance of the experimental group. It shows that there was an increase in the post-test (M = 30.89; SD = 9.532) in comparison to the pre-test (M = 26.22; SD = 9.897) with a mean paired difference of 4.667 points. The standard deviation values were comparable, and the paired t-test shows a statistically significant difference between the pre-test and post-test with a substantial effect (p <.05; Eta squared = .632). In other words, there was a 63.2 percent difference between the pre-test and post-test scores in the experimental group. A grouped spaghetti plot of the performance of the

Table 6

Results of Paired Samples T-Test of the Control Group on Pre-Test and Post-Test (N=10)

Pre-test total score					
	M	**SD**	**df**	*t*	**Eta squared**
Pre-test	25.40	9.755	9	-2.538*	.417
Post-test	26.50	10.277			
Part 5					
	M	**SD**	**df**	*t*	**Eta squared**
Pre-test	9.70	2.983	9	-.651	.045
Post-test	10.30	2.584			
Part 6					
	M	**SD**	**df**	*t*	**Eta squared**
Pre-test	5.40	1.430	9	.218	.005
Post-test	5.30	2.214			
Part 7					
	M	**SD**	**df**	*t*	**Eta squared**
Pre-test	10.30	7.134	9	-.678	.049
Post-test	10.90	7.593			

*Note. Total test score: *p < .05 (p = .032); p > .05*

Figure 1

Grouped Spaghetti Plot of the Performances of the Control Group

experimental group is represented in Figure 2. Figure 3 is a grouped spaghetti plot of the performance of participants of both the control and experimental groups.

In Part 5, similar means score and standard deviation values were obtained in the pre-test (*M* = 9.44; *SD* = 2.698) and post-test (*M* = 9.22; *SD* = 2.819) with a mean paired difference of .222 point. The paired samples t-tests results also indicate that the difference in score in Part 5 was not statistically significant (*p* > .05), and has small effect (Eta squared = .013). As a result, the decrease in score of the experimental group for Part 5 is considerably small.

Table 7

Results of Paired Samples T-Test of the Experimental Group on Pre-Test and Post-Test (N=9)

Pre-test total score					
	M	**SD**	**df**	*t*	**Eta squared**
Pre-test	26.22	9.897	8	-3.709*	.632
Post-test	30.89	9.532			
Part 5					
	M	**SD**	**df**	*t*	**Eta squared**
Pre-test	9.44	2.698	8	.326	.013
Post-test	9.22	2.819			
Part 6					
	M	**SD**	**df**	*t*	**Eta squared**
Pre-test	5.33	2.000	8	1.104	.132
Post-test	4.78	1.641			
Part 7					
	M	**SD**	**df**	*t*	**Eta squared**
Pre-test	11.44	5.855	8	-4.710**	.735
Post-test	16.89	6.294			

*Note. Total test score: ** $p < .01$ ($p = .006$); $p > .05$; ** $p < .01$ T*

Figure 2

Grouped Spaghetti Plot of the Performances of the Experimental Group
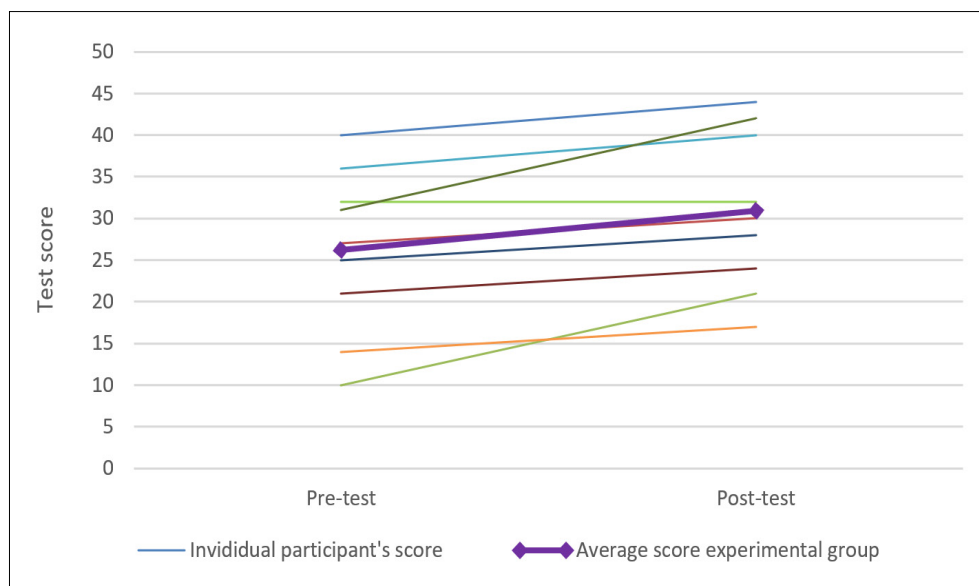
Regarding the performance of the experimental group in Part 6, comparable means score and standard deviation values were obtained in the pre-test ($M = 5.33$; $SD = 2.0$) and post-test ($M = 4.78$; $SD = 1.641$), with a mean paired difference of .503 point. The difference in the Part 6 score between the two tests was not statistically significant ($p > .05$),

but it has a relatively large effect (Eta squared = .132). For Part 7, there was an increase in performance in the post-test ($M = 16.89$; $SD = 6.294$) in comparison to the pre-test ($M = 11.44$; $SD = 5.855$), with a mean paired difference of 5.444 points. The standard deviation values were comparable. The pairs t-test results show a statistically significant

difference between the pre-test and post-test with a large effect (p <.05; Eta squared = .735). In other words, there was a 73.5 percent difference between the pre-test and post-test in the experimental group in Part 7. Figures 4, 5, and 6 are grouped spaghetti plot of the performance of participants of both the control and experimental groups in Parts 5, 6, and 7, respectively.

Results of Multiple Linear Regression Test

A multiple regression test was performed, in order to examine the effect of the treatment groups and the English proficiency level of the participants on performance in the post-test. The multiple regression test was conducted with one dependent variable and three independent variables (predictors). The post-test score was set as dependent variable, and 'intervention group', 'proficiency level' of participants, and 'interaction' as independent variables. The 'intervention group' was a categorical variable consisting of the experimental and control groups. The experimental and control groups were divided into high and low proficiency levels which made up the "proficiency level" categorical variable (See Figure 7 for a grouped spaghetti plot of the performance of the low and high proficiency subgroups in the control and experimental groups). The third independent variable "interaction" was the product of 'intervention

Figure 3

Grouped Spaghetti Plot of the Performances of the Control and Experimental Groups
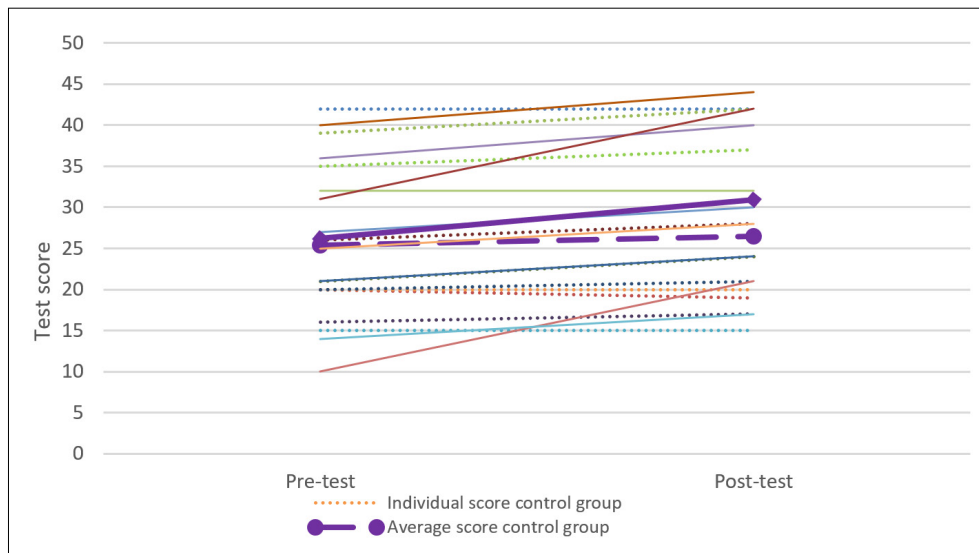

Figure 4

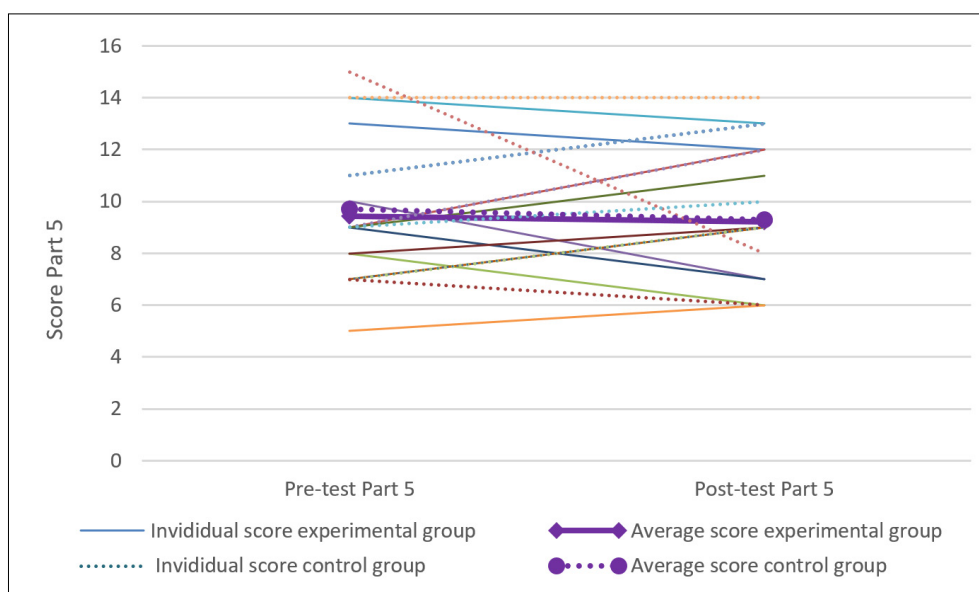*Grouped Spaghetti Plot of the Performances of the Control and Experimental Groups in Part 5*

Figure 5

Grouped Spaghetti Plot of the Performances of the Control and Experimental Groups in Part 6
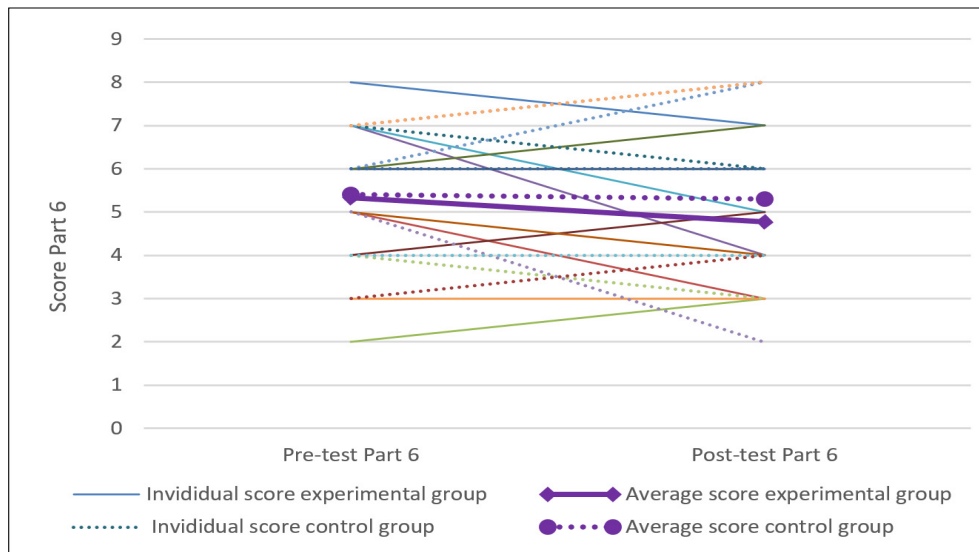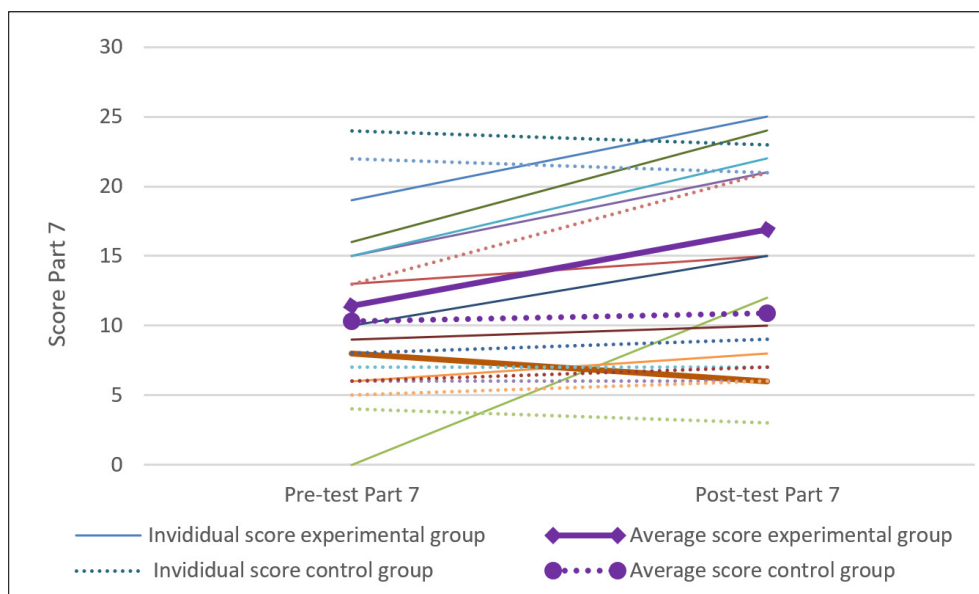

Figure 6

Grouped Spaghetti Plot of the Performances of the Control and Experimental Groups in Part 7

group' and 'proficiency level', in order to measure the combined effects of the two variables on performance after intervention.

Table 8 shows the results of the multiple regression test. With a $p < .001$, the F-test is statistically significant. This shows that the model itself is statistically significant, and the independent variables reliably predict the post-test score (the dependent variable). The R-squared is 0.817; meaning that approximately 82% of the variability of post-test score is accounted for by the variables. The adjusted R-squared shows that about 78% of the variability of post-test score is explained by the variables, even after taking into account the number of independent variables in the model. The Beta coefficients (Beta weighting) value for the 'intervention group', 'proficiency level', and 'interaction' are -.398, .562, and .417, respectively. Thus, for every unit of standard deviation increase in 'intervention group', a .398 standard deviation decrease in post-test score is predicted, if it is assumed that the other variables in the model are constant. Similarly, every unit standard deviation increases in 'proficiency level' leads to a .562 standard deviation increase in predicted post-test score. Every unit standard deviation increase in 'interaction' leads to a .417 standard deviation increase in predicted post-test score with the other variables remaining constant. Since the Beta coefficients of the independent variables are

computed relative to each other, the 'proficiency level' has the strongest positive effect on post-test score. The t-value for the 'intervention group', 'proficiency level', and 'interaction' are -1.185, 1.604, and 0.954, respectively. However, *p* > .005 for each of the predictors. Therefore, the coefficients for each of the predictors are not statistically significant. This outcome could be due to the relatively small size of the sample. Consequently, the effects of the predictors are true for this model, but cannot be generalized.

DISCUSSION

The analysis of the participants' total scores as well as their scores in the three sections (Part 5, 6 and 7) of the read-

ing test showed that the two groups had comparable English reading comprehension skills before the experiment. Consequently, it is safe to conclude that the control and experimental groups involved in the experiment could be adequately compared, in order to achieve the purpose of this study (Cohen et al., 2017). After intervention, the experimental group achieved a higher score than the control group, and data analysis showed that the difference in performance was moderate and not ignorable. However, this outcome is true only for the sample of participants in this study and cannot be generalized.

The higher performance of the experimental group in the post-test was attained due to the high score of its performance in Part 7. The two groups achieved similar performances in Parts 5 and 6, with practically no difference in this

Table 8

Multiple Regression Predicting the Effects of the Intervention and the Participants' Proficiency Level on Achievement in the Post-Test

Predictor	Zero-order	Unstandardized Coefficients		Standardized Coefficients		
	r	B	Std Error	β	t	Sig.
Intervention group	-.227	-7.690	6.492	-.398	-1.185	.255
Proficiency level	.893	11.238	7.005	.562	1.604	.129
Interaction	.540	4.262	4.468	.417	.954	.355
R	= .904	Adjusted R = .781				
R²	= .817					
F-ratio	= 22.346	p < .001				
N	= 19					

Note: Intervention groups: experimental group =1; control group = 2; Proficiency level: love proficiency = 1; high proficiency = 2

Figure 7

Grouped Spaghetti Plot of the Performances of the Low and High Proficiency Subgroups in the Control and Experimental Groups
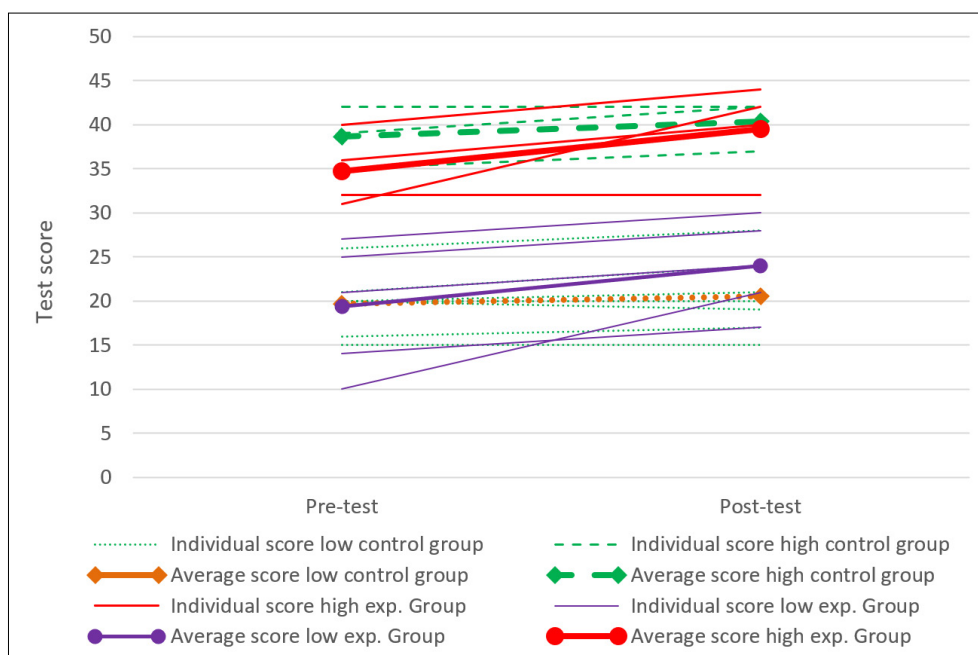
section in the pre-test and post-test. The lack of improvement in these sections of the test was unexpected considering that formal EFL education in Japan is highly dominated by grammar and grammar-translation classes (Egitim, 2020; Kumagai, 1994; Steele & Zhang, 2017). Another possible reasons could be that little time was dedicated to this section of the test during intervention (1/3 of intervention time), and the time was shared between discussing both vocabulary and grammar points that emerged in the questions. Since all participants are working professionals who have been out of formal education, they probably need more time to review and relearn detailed grammatical concepts.

Part 7 focuses on reading and answering literal and inferential questions on various types of texts. In order to help improve reading inferential skill, the reading instructions focused on identifying main ideas and generating paraphrased summaries. Performance improvement in this section of the test supports the importance of inferential skill in the reading process (Grabe & Stoller, 2011; King, 2007). The score improvement in Part 7 for both the control and experimental groups could be a reflection of the substantial time assigned to this section during treatment. The group sessions included individual work time in which each participant did a short test, followed by rereading comprehension passages, and completed a paraphrased summary. The individual work time was followed by a group activity session where the participants shared their summaries of reading texts and answers to reading comprehension questions, discussed main ideas and the meaning of complex words or phrases from the texts. The improvement of mean scores of the reading comprehension section for both groups is proof that collaborative work and group discussions during intervention have a positive effect on improving reading comprehension (August & Shanahan, 2006; Grabe & Stoller, 2011; King, 2007).

In comparison to the control group, the experimental group's improvement in the reading section of the test was relatively substantial, even though both groups were exposed to similar instructions, with the exception of rules related to language use. As a result, it could be said that the difference in performance between the two groups occurred because of the difference in language rules. The experimental group having been allowed to translanguage by using both their L1 and English, it could be deduced that translanguaging has contributed to the relatively high gain in mean score in the experimental group (Hungwe, 2019; Makalela, 2015).

The effect of language restriction was apparent throughout treatment. During group discussions in the control group, in most sessions, participants were generally hesitant to volunteer and express themselves. The more proficient participants were relatively proactive and volunteered to share their answers to questions from the tests. They read aloud the paraphrased English summary written on their notes,

or attempted to explain the meaning of phrases from the reading passages. However, sometimes they would stop in the middle of their utterance when they were not sure how to complete their statement in English. Some participants would start a question in English, but give up halfway, or apologetically rephrase the whole questions in Japanese. Less proficient participants had a lot of difficulty in elaborating on the reasons why they selected a particular answer. They ended up either hesitantly reading an explanation from their notes or answering in just a few words in English. Furthermore, in the control group, participants often asked the teacher if they could express themselves just in Japanese.

The limitation of language to English apparently restricted the participants' freedom to express themselves. They were constrained to think and negotiate meaning in a language they were comparatively less proficient in. This probably worked against the development of reading comprehension skills since the proficiency level of language use during the reading skill development influences their improvement level (Spinelli, 2017).

In contrast to the control group, in the experimental group almost all participants talked for most of the intervention time, except in the first reading instruction session during which most participants were hesitant to volunteer and answer questions or express their opinions. The low frequency of interaction in the first session was probably because most participants were meeting for the first time. However, from the second session, every participant contributed to the class. The less proficient participants asked many questions about new vocabulary, phrases, or asked for clarification of the main ideas of passages, and highly proficient participants offered elaborated answers, mostly in Japanese, but sometimes in English, or both. In comparison to the control group, there was less hesitation from low proficiency participants to ask questions and share their opinions.

There was a significant increase in the total reading score of the experimental group. On the other hand, the standard deviation of the post-test (SD = 9.897) score decreased slightly in comparison to the pre-test (SD = 9.532). This outcome suggests that participants at all levels were able to increase their total score. It could be inferred that translanguaging instruction benefits also participants with lower linguistic skill by allowing them to improve linguistic skills in the weakest language in their linguistic repertoire (Baker, 2011; Garcia & Li Wei, 2014; Lewis *et al*., 2012). Translanguaging appears to generate a relatively calming and relaxing learning environment, which in turn, encourages learners to be confident and proactively use the whole of their linguistic repertoire (Chukly-Bonato, 2016).

Proficient participants used English and Japanese interchangeably, while the less proficient ones used their L1 at a much higher rate than English. At times, the instructor would encourage participants, especially less proficient

ones, to use English as much as they could. Such encouragement resulted in relatively more language mixing and alternation from less proficient learners. The use of the L1 and L2 interchangeably probably acted as scaffold for participants to express their opinion, ask questions for clarification and deepen their understanding of the passage, thus correcting misunderstanding (Motlhaka, 2021). In other words, through group discussion (August & Shanahan, 2006; Grabe & Stoller, 2011; King, 2007) and translanguaging (Makalela, 2015; Motlhaka, 2021) less proficient participants could learn from more proficient learners and make more accurate inferences from reading passages. Consequently, not only proficient participants, but also less proficient ones were able to achieve a relatively higher score in the post-test in comparison to participants in the control group, as shown in Figure 7.

Taken together, translanguaging instruction with group discussions enable participants to display a high level of motivation and confidence. They share their thoughts when they are allowed to express themselves freely, thus making use of all resources available in their linguistic repertoire (Motlhaka & Makalela, 2016). This probably applies also to group discussion where language learners try to make sense of written contents. When learners use their L1 and other languages they are proficient in, they can perform at a higher cognitive level and better understand text with difficult syntactic structures, vocabulary, and idioms. In translanguaging instruction, learners read a text in one or several languages and engage in a discussion where they use all languages in their repertoire (Garcia, 2009). Throughout this practice, the learners move freely between languages, making use of aspects of each language which can help them make sense of the text on focus (Garcia, 2009; Otheguy, Garcia & Reid, 2015; Tian et al., 2020). Thus, through group discussions and translanguaging processes, learners develop their overall linguistic skills, notably in the target language. Learners challenge themselves to understand paragraphs, sentences as well as idioms and vocabulary from the text. In order to better grasp the meaning of specific passage from the author, less proficient participants ask for help from their peers. From the attitude of the participants in the experiment, it can be inferred that group discussions through translanguaging reduces the anxiety of low proficiency learners and their reluctance to speak both the target language and their L1 and play an active role in their learning (Baker, 2011; Garcia, 2009; Motlhaka, 2021). In the meantime, it gives the opportunities to more proficient learners to support their peers by contributing with explanations of difficult sentences, idioms, and words. Thus, group discussions provide a collaborative learning opportunity which helps to scaffold reading comprehension, while translanguaging instruction enhances the scaffolding aspect of collaborative learning, thus facilitating learning for participants, especially less proficient ones (Motlhaka, 2011). The results of our experiments and analysis shows that participants in the experimental group

in this study display all the characteristics and effects of translanguage aforementioned.

Despite the positive outcomes of translanguaging on reading comprehension obtained through this study, this project had some limitations. The most noticeable is the number of participants. A total of 19 people took part in the project, but this number remains considerably small in comparison to similar translanguaging studies in the literature which often enroll around 50 people or more. The low number of participants makes it difficult to generalize the finding of this study. Another limitation is, the reading comprehension intervention conducted during this study lasted a total of ten hours over a period of 18 days. However, in most of the research found in the literature, intervention time lasts at least a semester. Consequently, it is difficult to compare adequately the outcome of this research to the findings in the literature.

CONCLUSION

This study suggested that improvement in the experimental group was moderately more substantial. Consequently, it could be concluded that translanguaging instruction helped the Japanese EFL learners in the workforce in this study improve their reading comprehension to a moderate extent. However, since the score difference between the two groups was not statistically significant, it was difficult to generalize the result of the findings. Nevertheless, it was demonstrated that translanguaging instruction, which encourages participants to express themselves freely using all resources available in their linguistic repertoire, encourages participants to display a high level of motivation and confidence to share their thoughts in group discussions. The learners especially used their L1 to perform at a higher cognitive level and better understand difficult texts. They moved freely between languages and used aspects of each language in their linguistic repertoire which facilitated their making sense of the texts. Furthermore, translanguaging instruction reduced the low proficiency learners' anxiety and reluctance to participate in class and played an active role in their learning. Thus, less proficient learners could make the most of the enhanced scaffolding aspect of collaborative learning opportunities provided by translanguaging instructions.

Literature on translanguaging in Japan is scarce. Moreover, most of the literature available is focused on formal education, especially at college level, and literature on the practice of translanguaging practice in continuing educating is non-existent. Therefore, this paper not only contribute to the literature on translanguaging in Japan, but also shows the potential effectiveness of this emerging pedagogy in the continuing education context in Japan where learners unarguably need reliable ways to improve their English skills for career advancement. As it could be seen in the discus-

sion, this project displayed some limitations which has left much to be covered in research on translanguaging in the context investigated. A range of different projects could be designed based on these limitations, in order to study the effectiveness of translanguaging in EFL education in the continuing education context in Japan.

DECLARATION OF COMPETING INTEREST

None declared.

REFERENCES

Adams, M.J. (1990). *Beginning to read: Thinking and learning about print*. MIT Press.

August D., & Shanahan T. (2006). Developing literacy in second-language learners: Report of the National literacy panel on language-minority children and youth. *Journal of Literacy Research, 42*(3), 341-348. https://doi.org/10.4324/9781315094922

Baker, C. (2011). *Foundations of bilingual education and bilingualism* (5th ed.). Multilingual Matters.

Bartlett, K.A. (2018). Applying translanguaging techniques in Japanese EFL settings. In *The Asian Conference on Language Learning 2018. Official Conference Proceedings* (pp. 239–251). IAFOR.

Carroll, T. (2013). *Language planning and language change in Japan: East Asian perspectives*. Routledge.

Cenoz, J. & Gorter, D. (2011). Focus on multilingualism: A study of trilingual writing. *Modern Language Journal, 95*(3), 356–69. https://doi.org/10.1111/j.1540-4781.2011.01206.x

Cenoz, J., & Gorter, D. (2022). *Pedagogical translanguaging.* Cambridge University Press.

Chukly-Bonato, K. (2016). *Transferring knowledge through translanguaging: The art of multilingualizing the foreign language classroom*. McGill University Libraries.

Cohen, L., Manion, L., & Morrison, K. (2017). *Research methods in education* (8th ed.). Routledge.

Cook, V. (1997). The consequences of bilingualism for cognitive processing. In A. M. B. De Groot, & J. F. Kroll (Eds), *Tutorials in Bilingualism* (279–299). Cambridge University Press.

Cook, V., & Bassetti, B. (2005). *Second language writing systems*. Multilingual Matters.

Csikszentmihalyi, M. (1990). The Domain of Creativity. In M. A. Runco & R. S. Albert (Eds.), *Theories of Creativity* (pp. 190–212). Sage.

Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford University Press.

Egitim, S. (2020). *Understanding Japanese university English teachers' experiences as collaborative leaders: engaging learners in teaching and classroom management* [Doctoral dissertation]. ProQuest Dissertations and Theses Global. https://doi.org/10.17760/D20394199

Fisk, C. & Hurst, B. (2003). Paraphrasing and comprehension. *The Reading Teacher, 57*(2), 182–185. https://www.jstor.org/stable/20205336

Garcia, O. (2009). *Bilingual education in the 21st century: A global perspective*. Wiley/Blackwell.

Garcia, O., & Li Wei (2014). *Translanguaging: Language, bilingualism and education*. Palgrave Macmillan Pivot.

Gardner, H., & Hatch, T. (1989). Educational implications of the theory of multiple intelligences. *Educational Researcher, 18*(8), 4–10. https://doi.org/10.3102/0013189X018008004

Goli, A. (2021). One-on-one English conversation lessons: Evaluating learners' satisfaction and self-perceived oral communication improvement. *Shonan Journal, 12*, 51–61. https://doi.org/10.15034/00007768

Grabe, W. (2009). *Reading in a second language* (3rd ed.). Cambridge University Press.

Grabe, W. & Stoller, F.L. (2011). *Teaching and researching reading* (2nd ed.). Pearson Education.

Hirvela, A. & Du, Q. (2013). Why am I paraphrasing? Undergraduate ESL writers' engagement with source-based academic writing and reading. *Journal of English for Academic Purposes, 12*(2), 87–98. https://doi.org/10.1016/j.jeap.2012.11.005

Hungwe, V. (2019). Using a translanguaging approach in teaching paraphrasing to enhance reading comprehension in first-year students. *Reading & Writing 10*(1), a216. https://doi.org/ 10.4102/rw.v10i1.216

Hussein, B. (2013). Teaching and learning English as a second/foreign language through mother tongue: A field study. *Asian Social Science, 9*(10), 175–180. https://doi.org/10.5539/ass.v9n10p175

King, A. (2007). Beyond literal comprehension: A strategy to promote deep understanding of text. In S. D. McNamara (ed.), *Reading comprehension strategies: Theories, interventions and technologies* (pp. 267–290). Lawrence Erlbaum.

Koda, K. (2007). Reading and language learning: Crosslinguistic constraints on second language reading development. *Language Learning Supplement, 57*, 1–44. https://doi.org/10.1111/0023-8333.101997010-i1

Kor, C. P., Low, H. M., & Lee, L. W. (2014). Relationship between oral reading fluency and reading comprehension among ESL students. *GEMA Online Journal of Language Studies, 14*(03), 19–32. https://doi.org/10.17576/gema-2014-1403-02

Kumagai, Y. (1994). *The effects of culture on language learning and ways of communication: The Japanese case* [Master's Capstone Project, Centre for International Education]. University of Massachusetts Amherst.

LaBerge, D., & Samuels, S. (1974). Toward a theory of automatic information processing in reading. *Cognitive Psychology, 6*, 293-323. http://dx.doi.org/10.1016/0010-0285(74)90015-2

Lewis, G., Jones, B., & Baker, C. (2012). Translanguaging: origins and development from school to street and beyond. *Educational Research and Evaluation, 18*(7), 641–654. https://doi.org/10.1080/13803611.2012.718488

Logan, G. D. (1997). Automaticity and reading: Perspectives from the instance theory of automatization. *Reading & Writing Quarterly: Overcoming Learning Difficulties, 13*(2), 123-146.

Lowie, W., & Seton, B. (2012). *Essential statistics for applied linguistics* (2012th ed.). Palgrave Macmillan.

Makalela, L. (2015). Moving out of linguistic boxes: the effects of translanguaging strategies for multilingual classrooms. *Language and Education, 29*(3), 200–217. https://doi.org/10.1080/09500782.2014.994524

Makalela, L. (2016). Translanguaging practices in a South African institution of higher learning: A case of ubuntu multilingual return. In C.M. Mazak, & K.S. Carroll (Eds), *Translanguaging in Higher Education* (65–78). Multilingual Matters. https://doi.org/10.21832/9781783096657- 004

Motlhaka, H. (2021). Translanguaging in collaborative reading activity: A multilingual perspective of meaning making. *Psychology and Education, 58*(5), 2683–2691.

Nagy, T. (2018). On translanguaging and its role in foreign language teaching. *Acta Universitatis Sapientiae, Philologica, 10*(2), 41–53. https://doi.org/10.2478/ausp-2018-0012

Nagy, W., Garcia, G.E., Hancing-Bhatt, B., & Durgunoglu, A. (1993). Spanish-English bilingual students' use of cognates in English reading. *Journal of Reading Behaviour, 25*, 241–259. https://doi.org/10.1080/10862969009547816

Otheguy, R., García, O., & Reid, W. (2015). Clarifying translanguaging and deconstructing named languages: A perspective from linguistics. *Applied Linguistics Review, 6*(3), 281–307. https://doi.org/10.1515/applirev-2015-0014

Paltridge, B., & Phakiti, A. (2015). *Research methods in Applied Linguistics: A practical resource (Research Methods in Linguistics)* (2nd ed.). Bloomsbury Academic.

Perfetti, C.A. (1999). Comprehending written language, a blueprint for readers. In C.M. Brown & P. Hagoort (Eds.), *The neurocognition of language* (pp. 167–208). Oxford University Press.

Pressley, M. (2000). What should reading instruction be the instruction of? In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (vol. 3, pp. 545–563). Lawrence Erlbaum.

Spinelli, B. (2017). The multilingual turn in FL education. *Translation and Translanguaging in Multilingual Contexts, 3*(2), 184–209. https://doi.org/10.1075/ttmc.3.2.03spi

Steele, D. & Zhang, R. (2017). Enhancement of teacher training: Key to improvement of English education in Japan. *Procedia-Social and Behavioral Sciences, 217*(2016) 16–25. https://doi.org/10.1016/j.sbspro.2016.02.007

Storch, N. & Wigglesworth, G. (2003). Is there a role for the use of the L1 in an L2 setting? *TESOL Quarterly, 37*(4), 760–770. https://doi.org/10.2307/3588224

Takahashi, J. (2012). An overview of the issues on incorporating the TOEIC test into the university English curricula in Japan. *Departmental Bulletin Paper, Tama University Global Discussion Department, 4*, 127–138.

Tian, Z., Aghai, L., Sayer, P., & Schissel, J. L. (2020). Envisioning TESOL through a Translanguaging Lens in the Era of Post-multilingualism. In Z. Tian, L. Aghai, P. Sayer, & J. L. Schissel (Eds.), *Envisioning TESOL through a translanguaging lens: Global perspectives (Educational Linguistics, 45)* (1st ed., pp. 1–20). Springer. https://doi.org/10.1007/978-3-030-47031-9_1

Tsedal, N. (2017). *The language of global success*. Princeton University Press.

Turnbull, B. (2018). Is there a potential for a translanguaging approach to English education in Japan? Perspectives of tertiary learners and teachers. *JALT Journal, 40*(2), 101–134.

West, S.G., Finch, J.F., & Curran, P.J. (1995). Structural equation models with nonnormal variables: Problems and remedies. In R.H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues and applications* (1st ed.) (56–75). Sage.

Williams, C. (2012). *A language gained: A study of language immersion at 11-16 years of age*. University of Wales.