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The effectiveness of instruction of formulaic sequences in EFL writing - A quantitative research in high school education-

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Abstract

In this paper, the effectiveness of formulaic sequences on foreign language learners' writing skills was investigated. The focused instruction of formulaic sequences related to essay writing was conducted to forty first-year students in high school and their products were analyzed as to how formulaic sequences affect their writings at three different stages: pretest, posttest, and delayed post-test. The study results suggest that an explicit instructional approach to formulaic sequences in essay writing can enhance and promote foreign language learners' skills. Moreover, it is found that formulaic sequences play a role in increasing learners' writing fluency for they function as frames on which foreign language learners might rely when approaching a writing task to compose an essay.

Key words: Formulaic sequences, Focused instruction, EFL writing proficiency

Ⅰ Introduction

A number of studies have been conducted on the effectiveness of formulaic sequences to university students in English as a Second Language (ESL), and the previous studies showed that formulaic sequences could be useful toward improving learners' academic writing skills. It was also indicated that the knowledge and skill to utilize formulaic sequences improves the learner's language fluency (Wood, 2001) since well-structured speech or writing leads to better fluency and better evaluation of the performance. However, there is little research conducted to learners in English as a Foreign Language (EFL).

According to the previous research in EFL contexts, Duch (Peters & Pauwels, 2015), Taiwan (Liou & Chen, 2018), the results suggested that formulaic sequences can compensate for the lack of learners' exposure to English. While this seems to apply to English learners in Japan, few studies have been done. Moreover, given that the participants were mainly university students in EFL's past studies, there is space for further research that focuses on younger participants whose proficiency level is relatively lower than the past research.

Therefore, in this research, we focus on first-year students in high school as the participants, who are mostly labeled as A1 level or A2 based on CEFR to investigate whether formulaic sequences will be useful to young learners with limited access to English. To find out the effectiveness of formulaic sequences, the following research questions were established.

[Research Question]

1) Will participants integrate the formulaic sequences into essay writing through the focused training?
2) Will participants receive a better evaluation of the products after the training period?
3) Will the instruction of formulaic seguences affect fluency in writing?

Ⅱ The Present Study

1 Formulaic sequence

Wray (2000, p. 465) defined "formulaic sequences" as a sequence, continuous or discontinuous words or other meaning elements, which appear to be stored and retrieved from memory in use, rather than generating the language with the analysis of the grammar. In this research, "formulaic sequences" are defined in the same way other than being limited to a chunk or words indicating transitions in essay writing.

We focus on essay writing structure instruction out of several types of formulaic sequences as lexical bundles in this study because the textbooks used in Japan handle essay-writings; besides, the skills of writing a persuasive essay are required for the entrance examination of the university.

2 Participants and data collection

In this research, writing tasks and utilizing formulaic sequences were conducted on forty high school students in one of the public high schools in Aichi prefecture. Three

tests requiring the participants to write an essay were conducted at three different stages: pretest, posttest, and delayed posttest.

As to the data collection, the past tests of Eiken Pre-Grade2 were employed since the level is the one that most students in high school are supposed to achieve by graduation. As for training, the researcher set spoken practice utilizing formulaic sequences at the beginning of class during the training period. More specifically, oral communication tasks using formulaic sequences were given to the participants. The tasks were designed to ask the participants to give their opinion on a certain topic. These tests and training were conducted within the class named "English communication" which the researcher teaches. In addition to them, the task of writing an essay was given to the participants every two weeks.

Before the instruction of formulaic sequences, the participants were asked whether they had used the formulaic sequences used in this study. According to a survey on the targeted formulaic sequences, more than half of the participants had used them before the training. Lastly, comments on the training were collected in a written form by the participants after the posttest.

3 Data analysis

The textual data on the written products were coded in accordance with the list which the researcher created, and then analyzed regarding occurrences of formulaic sequences, evaluation of its structure in 5 scales, and the number of words. The data was processed by descriptive statistics. Also, the average score of each item was compared among the three tests by a one-way repeated measure *ANOVA*.

As to the evaluation of its structure, Both the researcher and his colleague evaluated the products independently. The evaluators followed the rubric, which the researcher created based on the criteria of Eiken Pre-Grade2 Writing. *Cronbach's alpha* between the two judges was measured after the evaluation was completed. Comments on the treatment were used to supplement the quantitative result.

4 Research Design

This research was conducted according to the following schedule below, Figure1. To determine the immediate effects of treatment and the long-term effects, pretest, posttest, delayed posttest design was carried out. As we mentioned above, some of the past tests of Eiken Grade Pre2, which were retrieved from the same source, the main website of Nihoni Eigo Kentei Kyokai, were employed as the tests in order to maintain that the degree of difficulty is equal among the tests. Also, with regard to the training tasks requiring students to utilize the targeted formulaic sequences, we employed the past exams as well. Spoken tasks in class and written tasks as assignments were given to the participants in the following schedule.

Date or Duration	Activity
2020 / 6 / 15	Writing test ① (***Pretest***)
2020/ 6 /16 ~ 7/22	Training Period 5 minutes of practice in class (10 times) 25 minutes of essay writing (3 times)
2020 / 7/ 30	Writing test ② (***Posttest***)
2020 / 9 / 30	Writing test ③ (***Delayed posttest)***

Table1: Research Design

5 Findings

As mentioned in data analysis, the textual data on the written products were coded and analyzed statistically to address the focus of this study: the tendency of young learners in integrating formulaic sequences as a result of focused instruction; better evaluation that they might receive after the training; and the possible association between writing fluency and the instruction of formulaic sequences.

5.1.1 Quantitative analysis and descriptive statistics

The manual coding of the textual data (see Table2) indicated that most of the participants tended to use more formulaic sequences in the posttest (M = 5.38, SD = 1.23) and delayed posttest (M = 5.82, SD = 1.00) than they did in the pretest (M = 2.49, SD = 1.62)

In terms of evaluation (see Table3), according to results given by the judges (researcher & colleague), the increase in the mean scores was shown from (M = 1.55, SD = .98) for the pretest to (M = 2.68, SD = 1.00) for the posttest, and then to (M = 2.93, SD = .80) for the delayed posttest. The results demonstrated that the texts which were elicited after the focused instruction on formulaic sequences received a better evaluation.

As to the number of words (see Table 4), the significant rise in mean scores was found over the three tests as shown in Table 3 from (M = 39.31, SD = 15.30) for the pretest to (M =55.54, SD = 7.48) for the posttest and (M = 68.05, SD = 10.06) for the delayed posttest. The difference in the mean score between pretest and delayed posttest was 28.74 (=68.05-39.31).

	Pretest	*Posttest*	*Delayed posttest*
Valid(N)	39	39	39
Mean	2.49	5.38	5.82
SD	1.62	1.23	1.00

Table2 : The occurrence of formulaic sequences at three production stages.

	Pretest	*Posttest*	*Delayed posttest*
Valid(N)	39	39	39
Mean	1.55	2.68	2.93
SD	.98	1.00	.80
Cronbach's α	.80	.70	.63

Table3 : The evaluation of the judges in terms of the structure at three production stages.

	Pretest	*Posttest*	*Delayed posttest*
Valid(N)	39	39	39
Mean	39.31	55.54	68.05
SD	15.30	7.48	10.06

Table4 : The number of words at three production stages

5.1.2 A one-way repeated measures *ANOVA*

The initial findings of the quantitative content analysis and the evaluation were statistically tested by computing one-way repeated measures to investigate any statistically significant differences in the occurrence of the target formulaic sequences and the judges' evaluation as well as the number of words before and after the training period.

Based on the results shown in Tables 5 and 6, the focused instruction of formulaic sequences contributed to their successful internalization into the participants' linguistic repertoire. This can be inferred from the statistically significant differences in the results of repeated measures of *ANOVA* on the occurrence of the target formulaic sequences in the pretest and the posttest as well as the pretest and the delayed posttest, F=80.23, $p < 0.01$, *partial* η^2 = .68, medium effect size. However, a post hoc comparison using a Bonferroni adjustment showed that there was no statistically significant difference in the tests' results that compared the occurrence of the target formulaic sequences between the posttest and the delayed posttest. This result indicated further evidence to support the effectiveness of the focused instruction of formulaic sequences; thus, the participants' use of this language phenomenon was relatively stable after the training period.

Besides, based on the results presented in Tables5 and 7, the texts after the training period received a better evaluation from the judges, referring to the statistically significant difference between the pretest and the posttest and the pretest and the delayed posttest. Furthermore, both of the judges gave a similar evaluation to the texts at each stage even though the mean score was different to some extent. A post hoc comparison using a Bonferroni adjustment showed that there was a statistically significant difference in the tests' results that compared evaluation between the pretest and delayed posttest. This indicated further evidence to support the effectiveness of the focused instruction of formulaic sequences that the effect of the treatment remains even after a certain period.

Lastly, as can be seen from the results in Tables 5 and 8, the focused instruction of formulaic sequences resulted in the increase of their fluency in essay writing. The statistically significant difference in the pretest and the posttest showed another evidence to support the effectiveness of the focused instruction of formulaic sequences. Moreover, the significant difference between the posttest and the delayed posttest presented that the participants internalized formulaic sequences more successfully and led to the rise of their fluency.

	Mauchly's W	*df*	*Sig.*
① *Occurrence of FS*	.89	2	.12
② *Structure Evaluation*	.99	2	.42
③ *Number of words*	.56	2	.00

	Sphericity Assumed (Greenhouse-Gresser)	*df*	*F*	*Sig.*	η^2
①	256.05	2	80.23	.00	.68
②	84.368	2	75.87	00	.63
③	*16200.63*	2	91.03	.00	.70

Table5 : Mawkley's sphericality test

Occurrence of FS		*Mean difference*	*Sig.*[b]
1	*2*	-2.89 *	.00
1	*3*	-3.33 *	.00

Table6 : Paired comparison within-subjects effects

Structure Evaluation		*Mean difference*	*Sig.*[b]
1	*2*	-1.13 *	.00
	3	- 1.38*	.00

Table7 : Paired comparison within-subjects effects

Number of words		*Mean difference*	*Sig.*[b]
1	*2*	-16.23 *	.00
1	*3*	-28.74 *	.00
2	*3*	-12.51*	.00

Table8 : Paired comparison within-subjects effects

5.1.3 Learners' feedback on the effectiveness of the instruction of formulaic sequences

According to Tables 9 and 10, the overall feedback on the instruction of formulaic sequences was positive (92.5% of the whole participants consider the instruction favorably). With regard to the comments, there were 39 positive comments and 2 negative comments; one participant left it blank.

evaluation	1	2	3	4	5
Number	0	0	3	18	19
(%)	0	0	8.5	45	47.5

Table9 : Leaners' belief on the effectiveness of FSs (Five scale questionnaire)

<Positive>
37 participants commented on FS positively.
It helps me learn how to start and conclude my essay.
It helps increase the number of words in my essay.
It helps to increase the English expressions I can use.
It makes it easier for me to express my opinion.
It's versatile.
I can continue to write without stopping my hand.
It reduces the risk of making mistakes
It helps me learn grammar and idioms.
It's more fun to write using formulaic sequences.
It enables me to write freely.
<Negative>
2 participants commented on FS negatively.
It's boring to follow them.
My English ability does not improve so much.

Table10 : Leaners' belief on the effectiveness of FSs (Summary of comments)

6 Discussion

6.1 Focused instruction of formulaic sequences

The result of this study shows that the focused instruction led to the successful acquisition and internalization of the target formulaic sequences into the participants' linguistic repertoires. In other words, the results of quantitative tests show that the focused instruction resulted in a statistically significant increase in the occurrence of the target formulaic sequences in the posttest compared to the pretest. Furthermore, the ability of the participants to utilize the formulaic sequences remained the same in both the posttest and the delayed posttest. This is reflected in the statistically significant difference between the pretest and the delayed posttest and the absence of any statistically significant difference between the posttest and the delayed posttest. These results can be linked to the result of previous research (AlHassan & Wood, 2015) that student writers' majoring in ESL course at university could successfully integrate the language in their writing.

It is especially noteworthy that some formulaic sequences were implemented by almost all the participants in both the posttest and the delayed posttest; actually, the obvious similarities in the production after the training period can be seen as the significant role of formulaic sequences' focused instruction (Peters & Pauwels, 2015, Liou & Chen, 2018), although the total occurrence slightly differs among the participants. It can be suggested that the focused instruction did not only promote the acquisition and internalization of the target formulaic sequences into the participants' linguistic repertoire, but it also helped the participants fully understand the use and function of each formulaic sequence.

6.2 Focused instruction of formulaic sequences and EFL writing proficiency

The focused instruction of the target formulaic sequences provided the forty participants with the opportunity to develop their writing proficiency. In other words, most of the participants could produce better quality reports after the training period as far as content and language are concerned. First, the training period raised the participants' awareness of the importance of beginning and concluding statements as two essential components of academic writing. About one-third of the participants did not write introductory or concluding sentences in the pretest; however, they wrote ones which is similar to the models they practiced during the training period for both their posttest and delayed posttest.

These findings match with the research (Li & Schmitt, 2009) in the effectiveness of having L2 learners practice the use of some formulaic sequences that function as sentence frames; also, the better understanding of the usage boosted the confidence of the students in writing. To them, EFL learners can use these frames to produce better quality sentences that are constructed through the storage of

chunks rather than being composed from scratch.

As mentioned earlier, the results of *ANOVA* computed on the scores for the two judges' evaluation demonstrated that the increase in each rater's scores for the posttest and the delayed posttest was statistically significant when compared to the pretest. These results can be viewed as an indication that the use of the target formulaic sequences has implicitly enhanced the overall quality of the level in the academic context. As Hyland (2008) suggests, the successful internalization of formulaic sequences might augment L2 learners' knowledge of the target discourse and lead them to proficient writers. Through this research, it is suggested that this also applies to EFL learners with low proficiency.

6.3 The effectiveness of formulaic sequences on augmentation of EFL learners' fluency in writing.

It has been suggested that formulaic sequences can serve as 'frames' on which L2 users tend to depend, in writing or in speech, to communicate their ideas successfully. Given the products and comments of the participants, It might be due to the formulaic nature of language (Wray & Perkins, 2000) . The data for this study illustrates the participants' strong tendency to resort to formulaic sequences when composing their sentences. It seems that the participants viewed formulaic sequences as 'frames' that can be utilized to compose sentences.

All the above-listed examples reveal the participants' endeavors to rely on the target formulaic sequences in their construction of the text meaning rather than composing their sentences out of individual lexical items. Thus, it can be noted here that the participants might have viewed the target formulaic sequences as trustworthy frames which they could use to start their essay, which contributed to better fluency. This can be seen in speaking fluency past research (Wood, 2001).

However, although the previous studies (Erman & Warren, 2000) suggested the participants' tendency to creatively utilize the target formulaic sequences after the successful acquisition of a considerable number of formulaic sequences, this study was not able to investigate this respect since the training was designed to introductory learners and the number of formulaic sequences was limited. Rather, the instruction might seem to have limited the variety of lexical expression in the products; in fact, the structure and expressions in their writing were similar although they used these frames to produce better quality products. Therefore, we need further empirical research in this respect by investigating the products of the participants in a longitudinal period.

6.4 Learners' feedback on the effectiveness of the instruction of formulaic sequences

As can be seen from Tables 6 and 7, the overall feedback on the instruction of formulaic sequences was positive. Almost all the participants consider it effective to improve their writing proficiency. The comments suggest that the instruction can work as scaffolding when learners compose and write an essay. The results match with the previous research (Li &Scimitt, 2009, Liou & Chen, 2018)

More importantly, only two participants gave negative feedback on the instruction. However, it should be noted that the instruction also has some negative influence on learners as is shown in the comments. Therefore, there is some room for further research to remove or mitigate the negative effect related to formulaic sequences. As to this aspect, while almost all the participants were able to follow the basic structure of the essay, some of their products did not seem creative or original to the judges; in fact, some students with lower proficiency among the participants could only create a few sentences other than formulaic sentences although others with relatively high proficiency could increase the number of words in addition to formulaic sentences. Also, the fact that the number of formulaic sequences was not significantly different regardless of proficiency level. This result indicates that the targeted formulaic sequences in this study might have limited learners' creativity mentioned above. Therefore, we need to come up with some way to teach formulaic sequences without learners losing their creativity in writing. In contrast, in terms of creativity, some positive influence was indicated that learners could enhance their writing fluency independently according to the result of the delayed posttest. The perceptive also leaves some room to be investigated further.

7 Conclusion

This quantitative research study is novel in that it has explored the role of the focused instruction of formulaic sequences in augmenting learners' writing skills in essay writing to EFL learners with lower proficiency, Japanese high school students. Moreover, it has empirically expanded the view of formulaic sequences in enhancing not only speech fluency and but also writing fluency. Furthermore, the study has empirically demonstrated that focused instruction of formulaic sequences contributes to EFL learners' better achievement regardless of learners' proficiency, and it has provided insights into teaching methodology in academic contexts.

By highlighting the effectiveness of focused instruction of formulaic sequences in enhancing EFL learners'

academic writing skills, this research study indicates the way for future research to scrutinize such a role empirically on a larger sample to come up with more generalizable results that can provide insights into teaching academic writing in various contexts; for example, the way of training to participants can be compared to measure its effectiveness. Moreover, more longitudinal studies are needed to examine the belief of learners, how they perceive and internalize the targeted formulaic sequences, and how they change in the research period.

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