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EFFECTS OF EXPLICIT INSTRUCTION ON LEARNING ACADEMIC FORMULAIC SEQUENCES FOR EFL COLLEGE LEARNERS' WRITING

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ABSTRACT

In this study, a quasi-experimental within-subject design was adopted to examine the intervention effects of teaching academic formulaic sequences (FS) for writing with one intact class consisting of 15 EFL third-year college students. Fifty target FSs were chosen from five recently compiled academic formulas lists (mostly derived through corpus research) based on frequency, semantic transparency, and localized pedagogical considerations. Measurements included (a) the pretest, posttest, and delayed posttest on target FSs; (b) pretest and posttest timed summary writing; (c) free production of taught FSs in an out-of-class book report and research report assignments at the end of the semester or several months later. Additionally, the participants' perceptions toward the explicit instruction were investigated through a questionnaire. The results indicated that 60% of the taught FSs appeared in the participants' writing, and the numbers of FSs used increased after explicit instruction. Both the learners' posttest FS test and writing performance were better than those in the pretest, maintaining the effects. The current study shed some light for integrating FSs instruction into a college EFL writing class. Pedagogical implications suggested that writing teachers may take target genre types in their course into consideration when choosing appropriate formulaic sequences. Future research can recruit more participants with different backgrounds and different proficiency levels.

Key Words: academic formulaic sequences, phrase lists

INTRODUCTION

The importance of mastering L2 formulaic sequences has been emphasized as they are essential to demonstrate effective use of producing

or understanding the target language (Meunier, 2012; Schmitt & Carter, 2004). A formulaic sequence is like other multi-word sequences but some of its words frequently co-occur with others and form a fixed word combination (Schmitt, 2010). Being understood and produced more quickly than non-formulaic words by both native and non-native speakers, formulaic sequences facilitate efficient language processing (Conklin & Schmitt, 2008). Recently, several phrase lists ranked with frequency and functional utility in academic discourse have been devised with an aim to serve pedagogical purposes (e.g., Ackermann & Chen, 2013; Hsu, 2014; Martinez & Schmitt, 2012; Simpson-Vlach & Ellis, 2010) through corpus research. With almost no empirical evidence on their applications on learners themselves, whether these lists can achieve their claimed pedagogical reference remains to be verified. Meanwhile, explicit instruction is recommended in order to help learners acquire enough formulaic sequences (FSs) for their academic demand in writing (AlHassan & Wood, 2015; Jones & Haywood, 2004; Meunier, 2012; Peters & Pauwels, 2015). Scholars do not think incidental learning of these FSs through either listening or reading the target language is effective to reach the mastery level of using written discourse like an insider in the academic community. To our limited knowledge, few studies have tried to address the issue of enhancing students' writing through focused-instruction on the effects of teaching **selected** FS items from those devised lists to learners.

To address the gap by linking phrase list research with pedagogy, this study aimed to offer pedagogical implications by investigating the effects of the FSs focused-instruction on college students' elicited and writing performance. The in-class explicit teaching addressed form, meaning, and usage of fifty target FSs in a regular writing course for five consecutive weeks, followed by in-class practice and after-class reinforcement. The designed procedures were to raise the learners' awareness and knowledge of FSs and provide practice for mastery of using FSs. Learners' progress was measured by FS tests and writing tasks through pretest-posttest comparison.

LITERATURE REVIEW

Importance of Formulaic Sequences

Past studies have indicated that at least one-third to one-half of

language is made of formulaic sequences (Foster, 2001), which demonstrates that formulaic sequences are essential parts of human communication. Over half of the spoken or the written language of L1 speakers may include formulaic sequences (Erman & Warren, 2000). Altenberg (1998) estimated the amount is more than 80%. Thus, FSs are a core part of an L2 system and to master them can facilitate learners' communication in the target language.

FSs are important in academic writing because mastering academic FSs facilitates pragmatically efficient communication (Hyland, 2012; Schmitt, 2010). In addition, fluent and appropriate use of FSs in academic texts defines membership in various disciplines. The absence of characteristic features of FSs in academic texts may indicate the insufficient skill of a novice writer in a specific disciplinary community (Hyland, 2008). Similarly, Jones and Haywood (2004) and Coxhead and Byrd (2007) endorse the importance of FSs and the challenging roles played by them in L2 communication and acquisition by learners. In other words, an L2 learner who intends to be successful in their academic writing is required to master these conventional sequences which characterize the learner's discipline.

Recent Academic Phrase Lists

Four recent phrase lists were devised with the help of corpus analysis, as summarized in Table 1. They are helpful for learning academic formulaic sequences effectively as L2 teachers choose instructional materials from these target phrases for their classes. First, Simpson-Vlach and Ellis (2010) created the Academic Formulas List (AFL) compiled from 2.1 million words of academic speech and academic writing corpora. The AFL, with sequences such as "*in relation to*", "*in response to*", and "*is based on*", is a list for teaching purposes as it was compiled based on frequency and functional utility in academic texts. Second, Martinez and Schmitt (2012) compiled the PHRASE List for pedagogic purposes. The List amounts to 505 formulaic sequences which focus on the most frequent phrases in English such as "*on the other hand*" and "*take for granted*". The List is intended for non-native English speakers and aims to provide a basis for teaching materials, vocabulary tests, and learning syllabi. Third, Ackermann and Chen (2013) investigated the written curricular component of the Pearson International Corpus of Academic English (PICAE, http://www.pearsonpte.com/research/Pages /CollocationList.aspx) comprising over 25 million words. They used

corpus statistics and expert judgment to develop an Academic Collocation List (ACL). The ACL contains 2,468 frequent and pedagogically relevant collocations such as "*empirical research*" and "*profound implications*". They claim that the ACL can help learners use collocations more properly and thus write better academic English. Additionally, the list can also support EAP teachers and researchers in their instruction or investigation into academic language development. Fourth, Hsu (2014) compiled a list of 475 opaque formulaic sequences (OFS) of two to five words from a corpus of 20 million words of two hundred college textbooks from forty different subject areas in Taiwan. Similarly, the list was also meant for pedagogical use, based on criteria of frequency and semantic transparency for EFL users. OFS included entries such as "*carry out*", "*by and large*", "*with reference to*", "*in the absence of*" and so forth.

Not associated with corpus evidence, the fifth list was designed to help teaching as a reference, the Academic Phrasebank (as cited in Peters & Pauwels, 2015) is available on the website from the University of Manchester (http://www.phrasebank.manchester.ac.uk) as a general resource for academic writers. All FS entries are arranged based on the main sections of a research paper, i. e., by function. A function of a FS is sometimes its meaning itself and other times refers to a purpose the FS is trying to achieve. For example, one function of FSs is used to provide signals in a discourse for readers (*as shown in Table x*, to give a signal) or by linking ideas (*on account of*, to link two ideas). Phrase items like *X is one of the greatest challenges* highlight a problem and *X plays a vital role in* establish the importance of the topic. The website is specifically developed for non-native English speakers.

Martinez (2013) wisely points out crucial issues of choosing appropriate multi-word expressions for teaching and proposes a Frequency-Transparency Framework (FTF) for pedagogical considerations. The FTF takes two common criteria into consideration: frequency and semantic transparency (confirmed in Gyllstad & Wolter, 2016; Todd, 2017), "designed to serve the qualitative and subjective needs of its users" (p. 197). Thus, although the frequency measure can show a precise cut-off, the degree of transparency can vary from one instructional setting to another because their course objectives and learners' proficiency can differ.

Table 1

Summary of Four Recent Academic Phrase Lists Compiled from Corpora

Past Studies	The Corpus	The Multi-Word Units List	The Purpose
Simpson-Vlach and Ellis (2010)	2.1 million words including MICASE (Simpson, Briggs, Ovens, & Swales, 2002), BNC (British National Corpus, 2007), Hyland's (2004) RA corpus.	Academic formulas List (AFL) with written and spoken sections.	It facilitates development of both academic spoken and written language in EAP curricula.
Martinez and Schmitt (2012)	BNC	The most frequent 505 opaque phrasal expressions.	The PHRASE list was intended for the systematic integration with multiword lexical items into teaching materials, vocabulary tests and learning syllabuses.
Ackermann and Chen (2013)	25 million words from the Pearson International Corpus of Academic English (PICAE).	2468 most frequent Academic Collocation List (ACL).	The Academic Collocation List (ACL) supported EAP teachers and helped learners increase their collocational competence.
Hsu (2014)	A corpus containing 20 million running words of two hundred college textbooks across forty subject areas.	475 opaque formulaic sequences (OFS) of 2-5 words containing the most widely-used phrases across various academic fields.	OFS may provide some inspiration for future empirical studies and EAP teaching materials development.

Focal Studies of Teaching Formulaic Sequences

FSs need to be emphasized and taught in the language classroom (Hatami, 2015) because "formulaic language is as important as individual words" (p. 8). The existing FS focal studies used explicit instruction like teaching single-word meaning and usage plus various exercises to consolidate the learners' knowledge about FS. Chan and Liou (2005) examined the effects of using web-based practice units on English verb-noun collocations on thirty-two EFL students. The units provided learners with semantic nuances of target collocations and practice items which were designed with example sentences from a concordance program. They found that the participants' post-treatment performance was significantly different from their pretest but the improvement was not maintained. Learners with different prior knowledge of collocations were found to perform differently under the same online instruction.

In a longitudinal case study, Li and Schmitt (2009) observed a Chinese-speaking MA student's FS use in a year during her MA program in an ESL context. Interviews were given after each of her assignments concerning the sources of learning and her confidence of FS use. They found that she could use more new FSs and consolidate learning of old FSs, and she became more confident about using FSs. She also showed that both implicit (academic reading) and explicit approaches (Nation, 2001) were useful for her learning of FSs. However, Li and Schmitt did not find a relationship between the number and appropriateness of FSs used and her essay scores. AlHassan and Wood (2015) investigated effects of focused instruction of formulaic sequences on academic writing skills of twelve Canadian university L2 learners. The treatment included a ten-week focused instruction (90 minutes each week) with 40 formulaic sequences and 25 collocations designed in both contextualized and decontextualized activities. They used a line graph as a prompt (similar to the one used in the academic IELTS test) to elicit learners' written paragraphs (in 20 minutes) in the pretest, the posttest, and the delayed posttest concerning the number and occurrence of the target formulaic sequences when they compared pre-treatment and post-treatment performance. The findings suggested that explicit instruction can enhance the participants' acquisition of formulaic sequences in writing. The students showed a significant increase of the target formulaic sequences in their post-treatment writing.

Peters and Pauwels (2015) conducted a study of a five-week

intervention in order to examine the instructional effects on students' awareness and use of academic FSs. Twenty-nine Dutch-speaking EFL university students were recruited from second-year business English classes. The target items were twenty-four FSs selected from the Academic Phrasebank (http://www.phrasebank.manchester.ac.uk) such as "*findings are consistent with*", "*this paper/study focuses on*", "*to address research questions*", "*questionnaire consists/ed of*" (cited on p. 31). A pretest-posttest design was used for comparison of the teaching effects concerning their devised items of recognition, cued output, and a combination of recognition and cued output. The students' spontaneous use of FSs at the end of the academic year was identified in their writing. They found that the students made improvement in the test items and also used more FSs in their end-of-year writing assignment. Among the three item types, cued output activities showed better performance than recognition activities. The findings supported the effect of explicit instruction on FS performance.

To sum up, Li and Schmitt (2009) helped us understand how learners may develop their academic phrases when they were exposed to academic phrases for writing as observed in their course of graduate study. Chan and Liou (2005), AlHassan and Wood (2015), and Peters and Pauwels (2015) show that interventions can help learners increase their collocation or FS performance. In addition, explicit instruction showed the effects of promoting L2 learner's writing performance and output activities yielded more gains than recognition ones.

Needed research

Previous studies have indicated that the importance of FSs for academic writing and the acquisition of academic FSs should be emphasized in an L2 learning context. Two studies specifically examined empirical evidence for teaching FSs for writing. Peters and Pauwels (2015) examined whether explicit vocabulary-focused instruction with different kinds of activities improved EFL learners' writing. Due to their limited target items, 24 only, and collaborative students' papers collected (hard to gauge individual efforts), the findings were encouraging but not conclusive. AlHassan and Wood (2015) also demonstrated the positive effects of focused instruction of formulaic sequences and suggested more empirical studies are needed. The two studies have not incorporated insights from corpus-informed academic phrase lists which have been compiled recently. In fact, extremely limited research has been

conducted to show the usefulness of teaching multi-word units drawn from recent lists with empirical evidence (as summarized in Table 1). Therefore, it is necessary to investigate whether and how students' knowledge and use of academic FSs chosen from those lists can be improved through explicit instruction with empirical classroom-based studies. To address the issue of enhancing learners' writing proficiency with FSs in an EFL college context in Taiwan, the current study aims to investigate the following two research questions by examining both the learners' perceptions and FS performance:

1. How do students perceive the effectiveness of explicit FS instruction?
2. Does explicit instruction help EFL learners' performance in using formulaic sequences in a test and in writing tasks? If so, can the effect last?

METHOD

Participants and Setting

Fifteen EFL third-year students were recruited as participants from one intact section in a two-credit required writing course; the students were from a private university located in central Taiwan. They had studied English for at least eight years, including six years in secondary schools and two years of undergraduate studies in the university. The participants were all English majors and included four males (26.7%) and eleven females (73.3%). Their average age was 20.9 (SD = 1.98). They signed a consent form to participate in the study.

Target FS Items

Fifty formulaic sequences for the present study were selected from five sources (Ackermann & Chen, 2013; Hsu, 2014; Martinez & Schmitt, 2012; Simpson-Vlach & Ellis, 2010; Academic Phrasebank) to serve as target items of the study. Frequency of occurrence and meaning or function of formulaic sequences were our selection criteria as emphasized by Martinez (2013). It is widely accepted that frequency of occurrence is one of the best indicators of usefulness of individual words in general English (Nation, 2001). We think phrases are not different. In addition to the consideration of FS frequency of occurrence, a pedagogical list

should include "relevant meaning or purposeful functions in order to reach the extent of the highest usefulness" (Martinez, 2013, p. 5). Based on the selection criteria and consultation with the course instructor who had taught the group (holding a Ph. D. in TEFL), and when we considered specific instructional and contextual factors, 50 formulaic sequences were selected as the teaching materials for the current project.

The fifty FSs were chosen from five sources (See Table 2 and Appendix A). As the study focused on academic formulaic sequences and academic writing, spoken and written general genres were not included. In addition, less common and infrequent phrases were not taken into consideration either. The first source (Ackermann & Chen, 2013) consisted of 2,468 most frequent and pedagogically useful entries for teachers and students. FSs with the highest combined scores over 3.0 per million (the original list ranging from 1.21 to 59.64 in their normed frequency) were selected because a score less than 3.0 per million indicated less frequent use and FSs unlikely to be used in student writing. From the second source (Hsu, 2014), those with a frequency over 300 per million words (ranging from 100 to 20,371) were chosen. From the third source, the PHRASE list (Martinez & Schmitt, 2012), chosen were *by virtue of, owing to, the bulk of, with a view to* (ranking at least over 4950, ranging from 107 to 5504, see their Appendix) out of those written academic genres. Fourth, those academic written entries within the top 10 by frequency from AFL (Simpson-Vlach & Ellis, 2010) were selected into our target FSs (their Table 3 on p. 495 and Table 4). Altogether, forty-one academic formulaic sequences were chosen from the four sources above. The fifth source was the Academic Phrasebank from the University of Manchester which is a general web-based resource for academic writers (http://www.phrasebank.manchester.ac.uk/). Academic phrases in this source were classified according to functions used in academic discourse. Each function has several items, e.g., the function of *establishing the importance of the topic* with several alternative expressions like: *be fundamental to*, *play a vital role*, *be an important aspect of* and *be central to*. Nine functions were chosen.

Table 2

Sources of Phrase Lists and Frequency Criteria for Choosing Target FSs into the Current Study

Corpus Source	Selection Criteria
Ackermann and Chen (2013)	Over 3.0/million (2,468)
Hsu (2014)	Over 300/million (475)
Martinez and Schmitt (2012)	Written, academic over rank 4950
Simpson-Vlach and Ellis (2010)	Top 10 by frequency
Academic Phrasebank	FS items and functions are listed; 9 functions chosen for our project

Explicit Instruction

Different from implicit learning of vocabulary through reading or listening incidentally, explicit instruction involves direct teaching of FS meaning and usage as a target in the classroom (Ellis, 1994; Schmitt & Schmitt, 2005. Archer and Hughes (2011) maintain:

Explicit instruction [is] a structured, systematic, and effective methodology for teaching academic skills. It is called explicit because it is an unambiguous and direct approach to teaching that includes both instructional design and delivery procedures. Explicit instruction is characterized by a series of supports or scaffolds, whereby students are guided through the learning process with clear statements about the purpose and rationale for learning the new skill, clear explanations and demonstrations for the instructional target, and supported practice with feedback until independent mastery has been achieved (p. 1).

To guide learners to acquire vocabulary successfully, the explicit instruction of this study was designed by following three psychological conditions: "noticing, retrieving, and generating" (Hatami, 2015, p. 118; Nation, 2001). Boers and Lindstromberg (2012) indicate that raising students' awareness of FSs by highlighting formulaic sequences (similar to 'noticing'), repeatedly encountering sequences in texts ('retrieving'), and explaining the meaning of FSs to help learners memorize are useful strategies. Those are optimal for form meaning mapping in classroom-based courses (Schmitt, 2008) and for learning FSs (Peters, 2014). 'Productive generative use' of FS (Hatami, 2015, p. 123) refers to making new texts around FSs. Based on the three principles, we

designed five weeks of instruction which concentrated on fifty target FSs (10 target FSs were taught in each week, see Appendix B for a sample lesson plan) and related exercises. The explicit instruction included a presentation of the FS items followed by a practice stage. In the presentation, the participants were taught the meaning, usage, and functions of target FSs with example sentences as well as various Internet corpus sources such as COCA (http://corpus.byu.edu/coca/) and *iCIBA* (http://www.iciba.com/). The instruction was integrated with the regular writing component and after-class reinforcement on the university's web-based course management system *i-learn 2.0*. In a two-hour meeting each week for this writing course, one hour was devoted to the FS part and the other hour, the regular writing part.

After FS presentation, the participants were required to do in-class activities that included writing sentences or working on gap-filling/multiple-choice items using the formulaic sequences taught. To enhance the participants' retention of FSs, the researcher provided the participants with supplementary materials on *i-learn* and homework of writing a 70-100 word paragraph with at least three to five taught FSs in order to create more encounters, exposure, and use of FSs besides the in-class instruction for the participants. In-class practice included retrieving and generating activities which consisted of gap-filling tasks and spontaneous short paragraph writing. Worksheets were designed for the students to repeatedly practice the ten FSs taught by the researcher in each of the five sessions because repetitive encounters to the unknown FSs are helpful for learning (Nation, 2013; Peters & Pauwels, 2015; Webb, 2007). The instruction intended to promote the "noticing" process by highlighting or underlining FSs with authentic texts such as a local conference description. The gap-filling and sentence-writing were similar to the "retrieving" process, while paragraph writing could be considered as the "generating" process. Each instructional session consisted of receptive as well as productive activities. The target FSs were taught and subsequent practice was administered in class all at once. Supplementary materials were provided and students were required to do homework after each session and to submit it in the next class. After-class supplementary materials were related to the 50 target FSs taught during class, which created the opportunity of more exposure to the target FSs for the participants. The supplementary materials provided L1 meaning and one sample sentence for each FS.

FSs Test Items

Three different versions of one 25-item FS test were designed to measure the knowledge of the learner's FS competency and served as the pretest, posttest, and delayed posttest. Their contents were identical but the order of test items in each major question type was rearranged to avoid any practice effects. The FSs test was composed of four question types: type I: Multiple choice (n = 7 items); type II: Gap-filling (n = 8 items out of 14 provided choices); type III: Matching verbs and nouns (n = 5 items, e.g., *meet a requirement*); and type IV: Fill in the right word to complete the blanks in sentences (n = 5 items). One sample item of type IV is as follows: *The competitors will be s_____ to (受…支配, subject to) random drug testing*. The pretest was to determine the participants' FSs knowledge before the training period. The posttest was used to examine any increased accuracy in the number of the target FSs used. Answers were not given after the pretest or the posttest. The delayed posttest was administered twenty-one days after the instruction period. This was used to demonstrate the effectiveness of explicit instruction on participants' long-term retention.

Writing Tasks

With regard to writing tasks as data collected in the study, both timed in-class and out-of-class types were designed to see if the students could use the taught FSs spontaneously in written production. As summary writing was one of the instructive goals for this course, it was used in both the pretest and the posttest. The reading was selected from Huntley (2006, p. 34) because it contained some academic words which were also targets of the writing course. The reading text was distributed to the participants one week before they composed the piece of around 100 to 200 words. The participants were required to read the article at home beforehand. The same article was used to do the writing task after the FS instruction to investigate if there was any increase in the number of taught academic formulaic sequences in their writing. Two extended out-of-class writing assignments were also designed for the project: a book report and a research report. For the book report (at least 500 words), the participants were required to read a novel called the *Joy Luck Club* (Tan, 1989) and write reports (around 600-800 words). The research report required the students to include at least three outside source texts on either of the two themes: globalization or technology and

humans, and to submit them four and half months after the instruction ended. These two writing assignments were collected to further assess the participants' spontaneous FS use in free production.

Questionnaire

An evaluation questionnaire (See Table 4) was designed in this study. The questionnaire consisted of 17 items with a five-point Likert scale of options (5 = Strongly Agree, 4= Agree, 3 = Unsure, 2 = Disagree, 1 = Strongly Disagree) to explore participants' viewpoints toward the overall explicit instructions. Three main sections of the questionnaire (items 1-5, 6-9 and 10-17) were designed to explore (1) whether the FSs instruction enhanced writing in general, (2) whether practice and supplementary materials on *iLearn 2.0* facilitated the learning of FSs, and (3) whether the FSs instruction influenced their ways of using English during the treatment, and after the treatment.

Data Collection Procedures

Before the treatment, the students were given the pretest of FSs and the summary writing task to complete. In the first week of the treatment, the researcher gave students explicit instruction on ten target FSs including their meaning and usage, and example sentences. In-class worksheets were distributed to students for practice after instruction. Students were required to do the homework after each session. In the sixth week, students took the FSs test and summary-writing as the posttest. In the ninth week, students took the FS delayed posttest (1). Their book reports on *Joy Luck Club* were also collected for analyzing the use of FSs. After four and half months (delayed posttest 2), students submitted their research reports (see procedures in Table 3).

Table 3

Data Collection Procedures

When (4 time points of measurement)	What	How
(1) Pretest	The consent form The background questionnaire Pretest of FSs and summary-writing	FS test and summary writing collected
weeks 1 to 5	The explicit instruction on ten target FSs each week In-class practice After-class supplementary materials	
(2) Posttest (6th week)	Posttest of FSs and summary-writing	FS test and summary writing collected
(3) Delayed posttest 1 (9th week)	Delayed posttest of FSs Book reports	Compare FS test scores at time 1, 2, & 3; compare summary writing rating at time 1 & 2
(4) Delayed posttest 2 (after 4.5 months)	Research reports	Analyze FS type and token of written pieces at all 4 time points

RESULTS

Results of the Perception Questionnaire

The mean score of all the items in the questionnaire was 4.1 (out of 5.0, meaning 'strongly agree') as shown in Table 4. The explicit FSs instruction of the current study was confirmed as reported by the participants. The responses with higher ratings indicate that the participants considered the five-week English writing training helpful for their English learning in Item 15 (M = 4.5), and they were willing to

apply the knowledge of FSs into future English learning (Item 17, *M* =4.4). Items 1-5 (*M* = 4.3) and Item 13 (*M* = 4.3) ranked in third place to show that in-class instruction could enhance the students' acquisition of FSs and improve their writing performance, and they thought FSs were important for good writing. Items which gained the least agreement (still higher than 3.0, meaning 'unsure') showed that the students were a bit uncertain whether they really recalled the knowledge of FSs when speaking English (Item 12, *M* = 3.6) or listening to English (Item 11, *M* = 3.8). Based on the slightly higher ratings of Item 2 and Item 13 (*M* rank = 3rd place), it seems that the participants knew the importance of FSs in their learning and already could associate acquired FSs from our treatment while reading other English texts. Yet, this ability may not be readily transferred to their writing immediately or at least not for every one of them (Item 14, a lower agreement rating). Unsurprisingly, in-class teaching activities were regarded as more useful than after-class practice (Item 3 vs. comparison of Items 4 and 5 for in-class parts as well as Items 6-9 for homework) as the latter was designed as supplementary when in-class time was insufficient.

Table 4

Mean Scores and Mean Ranks of All Items in the Perception Questionnaire

Item	Statement	*M*	*M* Ranks
1	In contrast to individual words, I think FSs taught in the English writing sessions can better improve my English writing ability.	4.3	3
2	I think learning FSs and using them in English writing can enhance my English writing performance.	4.3	3
3	In terms of improving English writing ability, I think the in-class instruction was more effective than after-class supplements on *iLearn 2.0*.	4.3	3
4	I think in-class instruction and practice were useful for retention of knowledge and applications of FSs.	4.3	3
5	I think in-class instruction and practice were useful for my English writing.	4.3	3
6	I think after-class assignments can increase my opportunities to practice English writing.	4.0	12

Table 4 (Continued)

Item	Statement	*M*	*M* Ranks
7	I think *iLearn 2.0* can extend the practice of in-class FSs.	3.7	16
8	I think "The PHRASE List" on iLearn 2.0 can enhance the knowledge and applications of FSs.	4.1	10
9	I think COCA, TANGO, Academic Phrasebank on *iLearn 2.0* can enhance the knowledge and applications of FSs.	3.8	14
10	During the five-week English writing training, I recalled the knowledge of FSs when writing in English.	4.1	10
11	During the five-week English writing training, I recalled the knowledge of FSs when listening to English.	3.8	14
12	During the five-week English writing training, I recalled the knowledge of FSs when speaking English.	3.6	17
13	During the five-week English writing training, I recalled the knowledge of FSs when reading English.	4.3	3
14	The target FSs selected during these five weeks roughly met my needs when writing a composition.	3.9	13
15	As a whole, the five-week English writing training was useful for my English learning.	4.5	1
16	After the five-week English writing training, I will keep improving my knowledge of FSs.	4.2	9
17	I will apply the knowledge of FSs to my future English learning.	4.4	2
	Mean score of all items	4.1	

Comparisons of the Pretest, Posttest and Delayed-Posttest of FSs

The answers of the 25 FS items in three FSs tests were scored with four points assigned to each correct item. The student's answers in relation to spelling and tenses were taken into account. As shown in Table 5, the minimum and maximum scores in the pretest were 20 and 72, respectively,

with a mean of 48 out of 100 (see Table 5, *SD* = 14.34), which implied their prior knowledge on target FSs was very limited. In the posttest, the mean was 89.6 (*SD* = 7.53), and the mean of the delayed posttest was also 89.6 (*SD* = 9.66). Individuals' scores between the pretest and the posttest as well as those between the posttest and the delayed-posttest were compared by the statistical Wilcoxon Rank-Sum Test.

Table 5

Descriptive Statistics of Pretest, Posttest, and Delayed-posttest

	Mean	Median	Min	Max	*SD*
Pretest	48.00	48	20	72	14.34
Posttest	89.60	92	72	100	7.53
Delayed-posttest	89.60	92	68	100	9.66

Table 6 shows that the statistical test result between the pretest and the posttest reached a significant difference (z = -4.66, p = 3.12e-06 < .05). The learners' performance on the two FS tests had increased significantly, which confirmed the positive effect of FSs explicit instruction. The teaching materials as well as treatment had raised students' awareness and skills of FSs.

Table 6

Results of Comparison between Pretest and Posttest

		N	*M* Rank	Sum of Ranks	*Z* score	Asymp. Sig. (2-tailed) *p*-value
Posttest-Pretest	Negative ranks	0[a]	0	0	-4.6627	3.121e-06*
	Positive ranks	15[b]	7.88	118.0		
	Ties	0[c]				
	Total	15				

Note. 1. *P-value (3.121e-06) < 0.05.
2. a. posttest < pretest b. posttest > pretest c. posttest = pretest.

Concerning the retention and enduring effects of the explicit instruction, the comparison of the posttest and the delayed posttest

results (z = 0.23, p = 0.82 > .05) did not reach a statistically significant difference between the delayed posttest and posttest, which suggested that the students did not regress but retained most of the FSs they had learned during the treatment and did not regress. Comparison of the delayed posttest and the pretest results (z = -4.60, p = 4.26e-06 < .05) reached a statistically significant difference, which indicated that the participants did not return to the former or less developed state in the lapse of one month after instruction. This further demonstrated that the explicit instruction had positive effects on participants' FSs retention and learning. The explicit instruction improved not only the participants' performance of the FSs test in the short term as shown from the participants' progress in the posttest but also facilitated participants' retention of the FSs in the long term as indicated in their performance of the delayed posttest compared with that of the pretest. Therefore, the explicit teaching strategies including noticing, retrieving, and generating may be useful for EFL learners' FSs enhancement as demonstrated in the test setting of the present study.

General Performances of the Pretest and Posttest Summary Writing

To assess the general writing performance of the participants, the summary writing from the pretest and posttest was rated based on a rubric with five ranks (0 to 10, see Appendix C) modified from the Integrated Writing Rubric published by Educational Testing Service (ETS, Next Generation TOEFL Test, https://www.ets.org/Media/Tests /TOEFL/pdf/Writing Rubrics.pdf) for TOEFL iBT writing. The rubric assesses the extent to which the student summary successfully selects the important information from the reading, and coherently and accurately presents this information. If a summary is well organized, and occasional language errors do not result in inaccurate or imprecise presentation of content in the reading, then it will be rated as 10. All the participants' summary writing pieces were rated respectively by two raters, the two authors. The inter-rater reliability for the summary-writing pretest of Spearman's rank correlation coefficient was 0.75 (p < .0001) and for the summary-writing posttest, 0.88 (p < .0001). The scores on which the two raters differed were discussed to reach a consensus. Then, the Wilcoxon Rank-Sum Test was used to compare the average scores of the two raters given on the pretest and posttest summaries. The mean score of summary writing was 6.33 out of the total 10.00 (SD = 0.78) in the pretest, and was 7.26 (SD = 0.43) in the posttest. The increase was statistically

significant (p = 0.00 < .05; z = -3.56). It was inferred from these results that the participants' writing performance had improved steadily in the current study. The explicit instruction may result in the improvement as demonstrated from the students' better summary writing as compared between pretest and posttest performance. Because the students read the same article in the pretest and the posttest, the practice effect might also explain part of the increase.

Tokens and Types of FSs Used in Various Writing Samples

To further investigate whether FSs instruction guided the participants to use more target FSs in their two summary pieces, the book reports, and sourced research reports at different time points (pretest, posttest, delayed posttest, and after four and a half months), the tokens and types of FSs used in students' samples against the 50 taught target FSs were counted respectively. As shown in Table 7, only two out of the 15 participants (13.33%) used FSs in the pretest summaries, but 11 students (73.33%) used taught FSs in the posttest summary, and 13 (86.67%) in the book reports on *Joy luck Club*. Five students had dropped the course when the research report data were collected; however, 60% of them used FSs in their reports. As for the tokens (two incidents of the same FS counted as two) of target FSs used in writing, the numbers of FSs tokens used in the pretest, posttest, book reports, and research reports were two, 13, 70, and 21, respectively. The mean number, token, of target FSs used per student in the pretest writing was 0.13, which was calculated as the total used target FSs divided by 15 students and in the posttest writing was 0.87. Their comparison shows a significant difference (p = 7.86e-05 < .05; z = -3.95). Similarly, the comparison between the pretest and the book reports was also significant.

Table 7

FS Tokens Used by the Participants in the Pretest, Posttest Writings and Two Reports

Stu-dents	FS (Pre-test)	Length (words)	FS (Post-test)	Length (words)	FS (Book reports)	Length (words)	FS (Research reports)	Length (words)
S1	1	108	0	131	8	625	X	X
S2	0	156	1	142	8	748	X	X
S3	0	104	1	139	4	778	X	X
S4	0	102	1	120	4	740	3	700
S5	0	146	1	112	7	799	7	585
S6	0	103	1	119	5	751	5	510
S7	0	151	2	140	3	849	1	908
S8	1	87	0	110	0	862	0	503
S9	0	119	1	128	2	668	X	X
S10	0	132	0	164	9	827	1	437
S11	0	149	1	123	6	845	0	550
S12	0	130	1	161	0	714	1	712
S13	0	124	2	121	5	775	3	599
S14	0	122	1	124	7	666	X	X
S15	0	129	0	148	2	632	0	659
Total	2	1,862	13	1,982	70	11,279	21	6,163
M group FS (raw number) or **essay length** per person	0.13 (2/15)	124.13	0.87 (13/15)	132.13	4.67 (70/15)	751.93	2.1 (21/10)	616.3
M FS Per 100 words	0.11		0.66		0.62		0.34	

Note. X means five students dropped the course after 4.5 months.

Because each of the students' essays had a different length composed at different times, to normalize their numbers of FSs, we divided them by

the unit of 100 words in all the written pieces. This can provide a fair picture, and the measure is called FS density. The FS density in the posttest (0.66) was higher than that of the pretest (0.11), which showed the immediate effects of explicit FSs instruction. Again, the practice effect might play a role, in addition to the instructional effect, as the students read the same article in the pretest and the posttest. The FS density in the final report (0.62) shows the retention effect of the current study. With regard to the research reports collected after four and a half months, the average FSs used per 100 words in their research reports (0.34) appeared to decrease compared to the posttest writing (0.66) and book reports (0.62) after four and a half months, which suggested a drop in the long-term retention effects. However, the rate was still higher than that in the pretest writing (0.11), and the finding demonstrated there was still an FS awareness residual. It is likely that the writing abilities, i.e. spontaneous use of FSs, may need a longer time to be cultivated while the elicited performance, i.e., FSs test scores, could be raised immediately given five weeks of explicit instruction.

In addition to the tokens of FSs used in all the participants' writing samples mentioned above, looking closely at the type of FSs used (two or more incidents of the same FS counted as one), different tokens might shed light on how the explicit instruction affected the participants' FSs production. In Table 8, the target FSs selected from the Academic Phrasebank were counted according to the items rather than the function (one function can be represented by several different items). Group means of FS types in the pretest, posttest writings, book reports, and research reports were two (M = 0.13), nine (M = 0.60), 30 (M = 2.00), and 16 (M = 1.60) at different points, respectively. Consequently, the stable increase in the mean number of FSs types from the pretest to posttest, to the delayed posttest, and to the second delayed posttest (research reports) was evident. It appeared that the explicit instruction produced positive effects on the participants' awareness and skills by increasing the learners' use of FS tokens and types in their production activities.

Table 8

Types of FSs Used by the Participants in the Pretest, Posttest Writings and Two Reports

Stu-dents	Summary (Pretest)	Summary (Posttest)	Book report	Research report
S1	are likely to	0	is similar to, are likely to, due to, the bulk of, by virtue of, result in, appears to, fully understanding,	X
S2	0	On the other hand	are composed of, result from, social status, On the other hand, fail to, a series of, In short, dealing with	X
S3	0	achieve goals	is composed of, in accordance with, is similar to, are likely to	X
S4	0	in short	social status, by no means, the bulk of, In short,	for the propose of, manage to, This paper attempts to show
S5	0	Play vital roles,	In accordance with, fully understand, With a view to, achieve the goal, is fundamental to, On the other hand,	due to, are likely to, on the other hand, In accordance with, is fundamental to, highlights the importance of, Similarly

Table 8 (Continued)

Stu-dents	Summary (Pretest)	Summary (Posttest)	Book report	Research report
S6	0	in short	brought about, result in, As opposed to, manage to, In short	result in, bring about, In short, an important aspect of, fully understand,
S7	0	is likely to, appear to	is composed of, On the other hand, fully understand	was related to
S8	is related to	0	0	0
S9	0	serve as	served as, In short,	X
S10	0	0	a series of, failed to, deal with, appeared to, In short, is similar to, In the course of, On the other hand,	This paper highlights the importance of,
S11	0	in the course of	highlights the importance of, fails to, regardless of, managed to, For the purpose of, In short,	0
S12	0	are likely to	0	is regarded as
S13	0	appear to, on the other hand	is composed of, brings about, fail to, resulted in, the bulk of	is related to, bring out, due to
S14	0	as opposed to	as opposed to, results in, brought about, fails to, results in, in virtue of, In short,	X
S15	0	0	Be composed of, for the purpose of,	0
Total	2	9	30	16
Group *M*	0.13	0.60	2.00	1.6

Note. FS underlined were items rather than its function being tallied.

FSs Test Performances and Writing Gains by Different Learners

To understand how the instruction impacted students with high or low FS scores between the elicited performance and spontaneous use of FSs, we divided the 15 participants, based on their scores of the FSs pretest, into high and low groups (58.5 vs. 36.0/100) as shown in Table 9. Their low mean scores indicated very limited awareness of the target FSs in the beginning of the project. In the pretest, the mean score gap between the high and low FS levels was 22.50 (out of 100.00) while the mean score gaps in the posttest (89.50 vs. 89.71) and delayed-posttest (89.00 vs. 90.29) were reduced from 22.50 to -0.21 and -0.71, respectively. This means that the low level group's performance had improved enough to catch up with that of the high level group between the time of the pretest and posttest. The good performance was maintained till the point when the delayed posttest was given. The mean score of the low level group was slightly higher than that of the high level group in the posttest and in the delayed-posttest. The writing score differences of the two groups also became closer from the pretest (0.89 out of 10) to the posttest (0.27) possibly due to the treatment effect. If the trend is applicable to other learner groups, the instructional effect is encouraging to teachers when they desire to motivate the low group to learn to use more academic formulaic sequences.

Table 9

The Means of the Two Groups of Different FSs and Writing Levels

Level	*N* of students	Pretest (*M*)		Posttest (*M*)		FSs Delayed-Posttest (*M*)
		FSs	Writing	FSs	Writing	
Low	7	36.00	5.86	89.71	7.11	90.29
High	8	58.50	6.75	89.50	7.38	89.00
Gap between high and low		22.5/100 (22.5%)	0.89	-0.21/100 (-0.21%)	0.27	-0.71/100 (-0.71%)

DISCUSSION

We examined the learners' perception and FS performance after they were given a five-week instructional training by assessing their entry and

after-training performance.

Learners' Perception of FS Instruction

The responses of the participants in the perception questionnaire indicated that in-class instruction and practice were useful for learning English formulaic sequences for writing. In the designed instructional package, the in-class component was reported as more useful than the homework part, which may not be surprising as the latter was taken as supplementary. Our explicit instruction in the current study emphasized the meaning and usage of FSs taught in class and encouraged the participants to employ the target FSs taught, in their writing. This may have enhanced their FS learning process (Lindstromberg, 2010). Moreover, the instruction may convince the group into trusting the usefulness of learning FSs as most participants reported that they were willing to apply the knowledge of FS into their future English learning. Raising awareness of the significant role of FSs would promote the EFL learners' knowledge and skills to employ them in academic writing (Hyland, 2008) as they recognized the importance of learning FSs for writing. The participants' positive attitudes were also supported by their actual performance of FSs in elicited tests or various writing tasks.

Effects of Explicit Instruction of FSs on Test Performance and Writing

Because FSs are ubiquitous in spoken and written discourses, they are important elements of language learning and use for EFL learners in Taiwan, where they do not have as much contact with native-speaking people as ESL learners. The FS-focused treatment in this study was designed with three crucial psychological conditions advocated by Nation (2013) for vocabulary learning and Hatami (2015) for learning FSs: noticing, retrieving, and generating. Our five-week explicit instruction which involved demonstrating and explaining the meaning, usage, and example sentence of each FS in the classroom raised our learners' awareness and made them notice how single words can form one formulaic sequence and its use in context. FSs knowledge was repeatedly highlighted in in-class explanation and demonstration as well as practice and homework, where the participants were provided with various sample sentences for comprehension as well as receptive/productive practice to create more FS encounters and to facilitate learners' memorization and consolidation of acquired FS knowledge. The process

also led to retrieving and generating FSs in productive contexts.

Shown through the comparison between the pretest and the immediate posttest performance in the current study, gains in the FS test results and summary writing confirmed the effectiveness of our explicit instruction. Our learners performed better not only on the FS test with elicited items but also on the summary writing task. Five weeks after the instruction stopped, the learners' performance of FSs did not regress. More encouragingly, a greater number of FS types and tokens in the two reports (spontaneous use of FSs in writing) when instruction was not provided seemed to confirm the retention effect of the explicit instruction. The positive findings of our explicit instruction were supported by Peters' (2009) statement that explicitly explaining the meaning of FSs for EFL learners could produce significant gains. These findings were also in line with those of AlHassan and Wood (2015) and Peters and Pauwels (2015), who endorsed the effects of an explicit instructional approach in helping L2 learners to acquire formulaic sequences and use them in writing.

The explicit instruction made the 50 target FSs noticeable through in-class demonstration and lectures. Students not only recognized the target items but engaged in tasks in which the FSs were provided in the five hours of instruction plus homework, which created the opportunity to memorize the form and meaning of the target FSs. Previous research has shown the positive repetition effects of encountering an unknown word more times could demonstrate significantly larger gains in vocabulary knowledge (Webb, 2007). Our teaching strategy had similar repetitive effects for FSs gains in the current study. After repeated exposure and awareness-raising of target FSs in the intervention, the learners' test and writing performances were improved greatly and could be maintained for some time.

Being junior English-major students, our participants were exposed to English in every English course they were taking and the regular writing component of this two-hour course (where the study took place). Those opportunities might also lead to their progress in the posttest and the delayed posttest, although the other two components did not target the FSs we aimed to teach. Yet, before the five-week instruction started, the learners' entry performance of FSs was very low (48/100 in the test and 6.33/10/00 in summary writing). It can be argued that our instruction might have enhanced the learners' FS awareness through direct teaching of academic formulaic sequences and provided opportunities for practice

in writing, which contributed to the gains in the immediate posttest and delayed posttests (89.6 in test and 7.26 in writing), together with possible exposure from the writing component of the course and the learners' other English courses.

Prior studies on learning single academic words (see Lin & Liou, 2009) examined the effects of their explicit intervention on EFL learners' academic words and writing abilities (with junior English-major college students as participants like ours). Their results indicated that their junior English-major learners increased their lexical depth and used more academic words accurately in post-instructional writing. On comparison of students' performance at different time points between the two studies as shown in Table 10, it seems that our students in writing up the book reports immediately after the treatment showed a huge increase of academic formulaic sequences, highest among all time points and between the two studies. The increase was in sharp contrast with a low occurrence in both the posttest summary and the research reports. In comparison with the academic word occurrence rates in Lin and Liou's study, they found a steady increase at their three time points as their English-major students became more mature academic writers. One possible reason may be the different nature of academic words in Lin and Liou's study and academic formulaic sequences in our case when instruction was given. What remains to be investigated further is whether the difference comes from the nature of different lexical units (single academic words vs. FSs) or learners' performance at different learning times.

Table 10

Proportion of Target Items Used in the Students' Texts vs. Taught Items across Time in Two Studies

	Pretest	Posttest	Delayed posttest	
Lin & Liou (2009)	25.76% (17/66, total taught words)	37.88% (25/66)	42.42% (28/66)	
The current study	4% (2/50, total taught FSs)	18% (9/50)	Book reports 60% (30/50)	Research reports 32% (16/50)

Still, Lin and Liou (2009) and the current study both demonstrate effectiveness of explicit instruction, and their findings conform to those of previous studies (AlHassan & Wood, 2015; Chan & Liou, 2005; Peters & Pauwels, 2015) and also support the views on effectiveness of explicit instruction on FS advocated by previous researchers (Coxhead & Byrd, 2007; Meunier, 2012).

When learners' before-instruction FS performance was considered, the less proficient group seemed to be able to make more progress than the more proficient group as found in our study. We may argue that our designed explicit instruction can make a greater impact on the less proficient group by pushing up their performance. Precautions should be taken in applying the findings to a different EFL context or student group, particularly as our study only involved a small sample, 15 participants.

CONCLUSION

This study investigated whether the explicit instruction on chosen FSs (from several recent corpus-informed phrase lists) produced positive effects on EFL college learner's performances concerning FSs tests and writing in order to shed light on FSs pedagogy and learning. Corpus research led to compilation of several lists of academic formulaic sequences but their usefulness has rarely been tested on classroom learners' learning of FSs. Our results indicated that the explicit FSs instruction on chosen formulaic sequences from those lists produced positive effects on tests and various writing tasks when specific instructional consideration was taken. The effects were further maintained in the learners' writing performance as assessed in delayed posttests. The obvious progress of FS test scores in the posttest and delayed-posttest, and the increased numbers of target FSs used in posttest writing and two reports were found in this study. Though the participants' low awareness of FSs was observed in their pretest performance before instruction, the improvement in the FSs posttest and writing tasks in several post-instruction measures were significantly different concerning test scores, rating of writing quality, and occurrence of types and tokens as well as density of taught FSs in student essays. It seems that effective FSs instruction as designed in our project may help students to show better FS performance not only in a test setting but also contribute to better writing performance in several timed or out-of-class

tasks. The students' perception data showed that the learners mostly held a positive attitude towards the instruction and considered the FS treatment helpful for their English learning in the current study. When different learners' proficiency was considered, we found that the less proficient students made more progress than the more proficient ones.

Limitations of the Study

Although the aforementioned positive effects of the explicit academic FSs instruction were demonstrated from the test performance and writing gains with students' positive attitudes toward the instruction, there were a number of limitations in this study. Thus, the results should be explained with care. The first limitation concerned the lack of a control group, which may cast doubt on the results because no comparisons between the control and experimental groups were available. The learners were all English majors; therefore, it was likely that they had greater chances to encounter and acquire the target FSs from other courses and the writing component where the current project was integrated. Without a control group, it is hard to contrast by singling out the FS instruction alone. Yet, since significant effects of the learners' performance at different time points were found and the students indicated a beneficial effect of our FS instruction, FS instruction should share part of the positive influence on the overall effects of both the test and the writing gains except for the regular writing course and the input from other English courses. Second, owing to the time constraints, the FS instruction merely lasted for five weeks. Therefore, the results only showed the summary of learners' academic FS performance in a short-term period rather than a long-term learning setting as the 90 minutes a week for ten weeks in focused instruction on formulaic sequences (AlHassan & Wood, 2015). Finally, only quantitative data through a questionnaire survey was collected in the current study; to further explore each learner's perception of the treatments, qualitative evaluation might be needed, e.g., interviewing the participants. By doing so, the learner's attitudes could be investigated to a greater extent.

Directions for Future Study

In view of the limitations of the study, it is recommended that future research design should be improved to create more generalizations on the effects of explicit FS instruction. More participants with different

backgrounds and different proficiency levels should be recruited to investigate whether the effects of explicit FS instruction can be positive on various English learners. Also, a research design with an experimental group and a control group for the comparison of learning gains is more rigorous than the single group design. Second, a longitudinal study will be appropriate for exploring how learners with different backgrounds incrementally acquire these FSs for writing in a longer time span. Also, these outcomes can verify the suitability of FSs instruction for various EFL learners, given longer observation periods. Third, whether academic FS, which is, or is not, like academic words in Lin and Liou (2009), is receptive to instructional effects should be investigated more in the future as we found that immediately after instruction, our learners could make much more progress concerning using FSs in their writing than academic words in their study. Finally, qualitative data are desirable for supporting the findings of the quantitative data as analyzed in the current study. For example, interviewing the learners as to how they learned from FS instruction and other activities. If both qualitative and quantitative measurements could be triangulated, this would be likely to gather more information from the learners' performances and their feedback toward academic FSs acquisition. Accordingly, more pedagogical insights can be obtained to enhance L2 learners' productive capabilities.

Pedagogical Implications

Formulaic sequences are considered as a core element of L2 learners' proficient academic writing. Lack of features of FSs is likely to affect the quality of academic writing negatively (Li & Schmitt, 2009). When designing courses for L2 learners, teachers should integrate formulaic sequences into English courses and arrange them according to different functions and disciplines. Writing teachers should explicitly introduce the meaning and various functions of FSs and how to use them to express rhetorical purposes in academic contexts. Jones and Haywood (2004) suggest that "encountering or using an item in various contexts helps illustrate and refine its meaning" (p. 272). As classroom time is not enough to teach all the FSs, Martinez (2013) indicates that frequency and relative semantic opacity of multi-word expressions should be considered for selecting appropriate FSs that are of use to the learners. How to strike a balance between the frequency measure and the opacity degree deserves much more attention from teachers and researchers in

other contexts.

In addition, different proficiency levels of L2 learners should be taken into account. When the students' before-instruction FS performance is considered, teachers can be informed and thus expect that instruction can lead the less proficient learners to make more progress than the more proficient ones if their instructional context and students are similar to those of the current study. Teachers may also take into consideration the practice of targeting genre types in their course when choosing appropriate formulaic sequences for explicit instruction. For instance, summary writing and narrative or expository genre types may require different sets of FSs. A close mapping between particular sets of FSs and genre types can be linked together so that students understand deeply the context of appropriate use for particular sets of FSs in written discourse.

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APPENDIX

Appendix A. Target Formulaic Sequences and Chinese Meaning

Target FSs	Meaning	Target FSs	Meaning
a number of	一些	in accordance with	與…一致；依照
a series of	連續；一系列	in question	討論中的；值得懷疑的
achieve the goal	達成目標	in short	簡而言之；總之
amount to	達到；總計	in the course of	在…期間;在…過程中
appear to	似乎	make a prediction	作出預測
as opposed to	而不是;相對於	manage to	設法做到；勉力完成
be composed of	由…組成	meet the requirement	滿足需要(要求)
be likely to	可能的	owing to; due to	因為；由於
be regarded as	…被認為	pertain to	與…有關；涉及
be related to	與. . . 有關	pose a question	提問
be subject to	受…的支配;易受…的	regardless of	不管；不顧
by no means	絕不;一點也不	result from	起因於;因…發生
by virtue of	憑藉；由於	result in	導致；結果造成
bring about	引起；導致	serve as	充當；擔任
consist with	與…一致;符合	social status	社會地位(身份)
deal with	處理；對付…	take responsibility	承擔責任
fail to	失敗；不能	the bulk of	大部分；大多數
financial resources	財力;財政資源	undertake research	進行研究
for the purpose of	為了…目的	widely accepted	被廣泛接受；普遍認可
fully understanding	充分理解	with a view to	為了；目的在於

Academic Phrasebank

Function: Establishing the importance of the topic

X is fundamental to…
X plays a vital role in the
X is an important aspect of …

The concepts of X and Y are central to…

Highlighting a problem

One of the main obstacles …
One of the greatest challenges …
However, X may cause …
However, X is limited by …

Indicating the focus, aim, argument of a short paper

This paper attempts to show that …
This paper provides an overview of …
This paper highlights the importance of …
The aim/purpose of this essay is to…

Introductory sentences: Differences

X is different from (differs from) Y in a number of respects …
There are a number of important differences between X and Y.

Introductory sentences: Similarities

is similar to …
is comparable to …

Restatement of aims

This paper has argued that…
This paper sets out to determine…

Summarizing

This study/paper has identified
This study/paper has shown that…

Indicating difference across two sentences

It is very difficult to get away from calendar time in literate societies.	**By contrast,** **In contrast,** **On the other hand,**	many people in oral communities have little idea of the calendar year of their birth.

Indicating similarity across two sentences

Young children learning their first language need simplified input.	**Similarly,** **Likewise,** **In the same way,**	low level adult L2 learners need graded input supplied in most cases by a teacher.

Appendix B. A Sample Lesson Plan

Step	Activity	Procedures	Materials and Aids	Time (min.)
1.	Warm-up:	1. Greeting & check attendance. 2. Briefly introduce the topic of today's lesson.	-PPT (PowerPoint slide)	5' (start)
2.	Stage (I): Noticing (presentation)	1. Describe the importance and omnipresence of FSs. 2. Draw learners' attention to meaning and usage of FSs. (Highlighting/ underlining the FSs by using PowerPoint slides).	-PPT	10'
3.	Stage (II): Noticing (presentation)	1. Introduce the meaning and usage of 10 target FSs. 2. Provide other example sentences containing the target FSs. 3. Introducing website (e.g., COCA http://corpus.byu .edu/coca/) to show example sentences of target FSs.	-PPT -Internet	15'
4.	Stage (III): Retrieving & generating (in-class activities)	1. Offer the worksheet of multi-choice/gap-filling task on FSs for learners to practice. 2. Encourage learners to make sentences by using the 10 FSs taught in today's lesson.	-In-class worksheets	15'
5.	Wrap-up	1. Announce the assignment: learners need to read the after-class supplementary materials on *iLearn* 2.0. In addition, learners are required to do after-class homework. 2. Check if learners have any questions about today's lesson.	-PPT -*iLearn* 2.0 -After-class supplementary materials	5' (end)

Appendix C. Integrated Writing Rubrics for the Summary Writing

Score	Task Description
10	**A summary at this level** successfully selects the important information from the reading and coherently and accurately presents this information. The summary is well organized, and occasional language errors that are present do not result in inaccurate or imprecise presentation of content or connections.
8	**A summary at this level** is generally good in selecting the important information from the reading and coherently and accurately presenting this information, but it may have minor omission, inaccuracy, vagueness, or imprecision of some content from the reading. A summary is also scored at this level if it has more frequent or noticeable minor language errors, as long as such usage and grammatical structures do not result in anything more than an occasional lapse of clarity or in the connection of ideas.
6	**A summary at this level contains some important information from the reading, but it is marked by one or more of the following:** ■ Although the overall summary is definitely oriented to the task, it conveys only vague, global, unclear, or somewhat imprecise points made in the reading. ■ The summary may omit one major key point made in the reading. ■ Some key points made in the reading may be incomplete, inaccurate, or imprecise. ■ Errors of usage and/or grammar may be more frequent or may result in noticeably vague expressions or obscured meanings in conveying ideas and connections.
4	**A summary at this level contains some relevant information from the reading, but is marked by significant language difficulties or by significant omission or inaccuracy of important ideas from the reading; a summary at this level is marked by one or more of the following:** ■ The summary significantly misrepresents or completely omits the overall connection in the reading. ■ The summary significantly omits or significantly misrepresents important points made in the reading. ■ The summary contains language errors or expressions that largely obscure connections or meaning at key junctures, or that would likely obscure understanding of key ideas for a reader not already familiar with the reading.
2	**A summary at this level** is marked by one or more of the following: The summary provides little or no meaningful or relevant coherent content from the reading. The language level of the summary is so low that it is difficult to derive meaning.
0	**A summary at this level** merely copies sentences from the reading, rejects the topic or is otherwise not connected to the topic, is written in a foreign language, consists of keystroke characters, or is blank.

直接教授學術英語字串對大專生寫作之影響

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英語字串因其十分普遍而在學界愈益受到重視，其相關字表因語料研究而蓬勃發展，但字表能否協助教學卻鮮有學者研究；本文針對三年級英文系大專生來進行成效探析。我們自五項學術字串表選擇高頻、語意合宜及符合教學目標的 50 個學術英語字串，施予五週教學、練習以及課後加強。採用前、後測和延遲後測的考試，摘要寫作、兩份報告來評估所有參與者在不同時間點的表現，並施予評估問卷。結果顯示教學有助測驗及寫作，效果也能保持，並有百分之六十的英語字串出現在學生的報告中。這說明教學提升了學生對英語字串覺知及使用數量。而在問卷中，學生肯定字串教學有助於寫作和英語學習。我們建議英語字串應該融入課程中，並依據不同的功能和文類，慎選英語字串來教學。

關鍵詞：英語字串、字串表