# The Relevance Study of College Students' Chunk Level and Their Translation Ability<sup>\*</sup>

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*Abstract*—This paper briefly explores the role that the prefabricated chunk plays in English Chinese translation among the college English learners. The study result shows that the prefabricated chunk level among college English learners is low, especially in the chunk identification. Besides, the study also shows that there is a strong correlation between college English learners' translation ability and their English prefabricated chunk level, which means the stronger their ability to use prefabricated chunks, the higher their scores in the translation test is. The paper also makes a detailed analysis of the factors which result in the English learners' inability to use prefabricated chunks adequately and makes a few pedagogical suggestions to the English teachers.

Index Terms-prefabricated chunks, translation, chunk identification, college English learners

# I. INTRODUCTION

In recent years, universal attention has been paid to the prefabricated chunk ability of the second language learners in both theoretical and applied linguistic field. One of the reasons is that language learners' ability to use prefabricated chunks is an important index to measure a second language learners' language ability. Chinese and oversea studies have been explaining the inner characteristics and acquisition mechanisms of these prefabricated chunks from the aspects of cognitive linguistics, psycholinguistics, syntactic and so on. These studies include both theoretical summarizations and empirical studies. The linguistic study of the prefabricated chunks in China has not been very long and is still at its initial stage. The present features and the content of these studies include (1) The research in this area has gradually become wider in range, larger in number and deeper in depth. (2) The content of the research mainly involves six aspects including chunk use (identification and application), chunk teaching, chunk definition and function, measurement of students' chunk ability and so on. (3) The research method is mainly corpus-based which means most of the studies are empirical. Some previous studies have made similar discoveries. First, there is a positive correlation between second language learners' chunk ability and their listening, speaking, reading and writing ability. Second, the chunk ability of college English learners, whether seniors or juniors, is very low, especially the output. All these studies have laid a theoretical foundation for future related research. Plus, they also shed light on the study method that will be used in the future research.

However, there are not many research literatures concerning the relations between second language learners' translation ability and their chunk ability. In another word, most of the previous studies haven't made detailed research on this. Thus, this paper is to explore the relevance between second language learners' translation ability and their prefabricated chunk ability.

## II. DEFINITION AND CLASSIFICATION OF PREFABRICATED CHUNKS

There has always been great controversies about the definition and classification of prefabricated chunks. However, researchers through years of studies and observations reached a consensus: prefabricated chunk is a language structure that combines the features of both vocabulary and grammar; it performs a specific language function. Simply speaking, prefabricated chunk is a set term which may include one or more words. According to the data retrieved from corpus, prefabricated chunks are the meaningful collocations in the text that reach a certain frequency. Nattinger (1992) categorized the lexical phrases into 4 kinds: (1) poly word (so to speak, by the way,) (2) institutionalized expressions (how are you, have a nice day) (3) phrasal constraint (as far as..., a...ago) (4) sentence builder (my point is that..., not only...but also...) (Nattinger, 1992). Biber (1999), according to the academic terms he studied in research papers, classified the chunks into 12 kinds: (1) noun phrase +phrase fragment (2) noun phrase +attribute post modifier (3) prepositional phrase +of phrase fragment (4) other prepositional phrase fragment (5) it +verb phrase/adjective phrase fragment (6) passive verb+ prepositional phrase fragment (7) be+ noun phrase/adjective phrase fragment (8) verb phrase +that clause (9) verb/ adjective +phrase fragment (10) adverbial clause fragment (11) pronoun/noun +be(+...) (12) other expressions (Biber, 1999).

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This paper is to take both categorizations into consideration, leaving out the complex parts which are difficult to retrieve from corpus, and recategorize the studied chunks.

# III. RESEARCH QUESTION

Many second language learners have the same problems when it comes to the comprehension and translation of English passages. Sometimes, when they have looked up all the new English words in the dictionary and known all the syntax in the passage, there are still many sentences they could not make out. The writer infers that it might be due to the fact that these second language learners are lacking in their English chunk ability. Thus, a series of questions come up: is there any relationship between the learners' chunk ability and their translation ability? When the learners are translating the given material, are they able to correctly identify these prefabricated chunks? The study analyzed 30 college students' translating material (English to Chinese) and their identification and comprehension of the prefabricated chunks in order to answer the following questions:(1) During the translating process, can they identify and understand the prefabricated chunks given in the passage? Are there any features in their ability to use these chunks? (2) Is there a positive correlation between students' chunk ability and their translation ability? (3) What are the factors that affect their chunk ability? (4) What are the pedagogical suggestions that can be made from the study.

#### A. Data Collection

First, a test is conducted among the students. The subject of this study is 100 two year students in a college. The material of the test is a cloze taken from CET 4 (College English Test Band Four). There are 225 words. The students are required to finish two tasks. First, they must translate the whole English passage into Chinese. Second, they must retrieve all the prefabricated chunks from the passage and translate these chunks into Chinese. 100 test papers have been collected. By using the method of random sampling, 30 test papers are chosen as the study sample. Then three teachers will retrieve 20 English prefabricated chunks from the cloze through joint discussion. If there is a certain dispute about their choice, it is left for the foreign teacher to decide.

### B. Chunk Defining

The defining of chunks is based on the Longman Modern English Dictionary (2003) combined with English native speaker's intuition. The standards are as follows:

(1) combination of two or more than two words

- (2) If the above combination appears in the dictionary, it is considered to be a chunk.
- (3) If there is an ambiguous term, it is left to the foreign teacher to decide.

# C. Research Method

The study is a qualitative study. First, the teachers will mark the test papers. There are three kinds of scores in this test paper. The first kind is the students' score on the prefabricated chunks. There are 20 chunks altogether. The total score is 100. So each chunk has 5 points. (The correct chunk retrieving and the correct chunk translation get 2.5 points respectively). Based on this marking criterion, the score of each student' test paper is calculated. The second kind is their score on passage translation. The total score is also 100. Due to the length, complexity and subjectivesness of the passage, each passage translation is marked by three teachers respectively. The final score of each paper is the mean score of all the three scores given by the three teachers. For example, if teacher A gives a 70, teacher B a 72, teacher C a 74, then the mean score of this paper is 72. The marking criterion is the same with the one in CET 4. The third kind is the reduced score that is caused by chunk error. During the translation, there are various kinds of errors; some errors are not as serious as the others. Plus, some parts in the passage are so controversial that can not be strictly decided. So this part is also jointly determined by the three teachers as to which reduced score is caused by the chunk errors. The purpose of this calculation is to measure to what degree the understanding of prefabricated chunk can affect the students' translation.

This study is a study of relevance. So there is an independent variable- chunk score and a dependent variabletranslation score. The researcher will make one-linear regression analysis of relevance between the two variables with SPSS statistical software to see whether the college English learners' chunk ability is correlated with their translation ability and to see to what degree they are correlated.

#### IV. RESULTS AND DISCUSSIONS

TABLE I. Students' translation score and chunk score			
	Mean	Std. Deviation	N
Translation Score	73.18	6.435	30
Chunk Score	20.3000	11.70611	30

N=Student number Mean=Mean score Std.Deviation =Standard Deviation

The result of table 1 shows the translation ability and chunk ability of the 30 students. As table 1 shows, the mean score of translation is 73.18; the standard deviation is 6.435. The mean score of chunk is 20.300; the standard deviation is 11.71. From this table, it can be seen that (1) the students are not able to identify English prefabricated chunks very well. The mean score is only 20.3 points. (The total score is 100). That is probably because the students do not understand the conception of prefabricated chunks very well. Many students retrieve the chunks wrongly. For example, many students consider Noun+Prep structure as a chunk (development of; effect on). (2) The chunk ability gap between different students is bigger than their translation ability gap. The standard deviation of their chunk score is 11.71, which is bigger than the standard deviation of their translation score 6.435. This is probably because even though there is a huge gap between the students' chunk ability, their ultimate translation score gap is reduced due to other language factors.

COR	RELATION BETWEEN TRAN	SLATION SCORE AND CHUN	VK SCORE
	-	Translation score	Chunk score
Pearson Correlation	Translation score	1.000	.602
	Chunk score	.602	1.000
Sig. (1-tailed)	Translation score		.000
	Chunk score	.000	
	P<0.05	5 r=0.602	

TABLE II.

Table 2 shows the correlation between students' translation score and their chunk score. In this analysis, the mean chunk score is independent variable; the mean translation score is the dependent variable. As can be seen from the Pearson Correlation statistics in table 2: the value of Sig.(1-tailed) is 0.000, which is smaller than 0.05(ie. P<0.05). When P value is smaller than 0.05, students' chunk score can well predict the students' translation score; that is to say, the students' chunk score is strongly correlated with their translation score. Besides, according to the table, r=0.602. When  $0.40 \le r \le 0.70$ , the two scores are moderately correlated. In other words, the chunk score is moderately correlated with the translation score.

			TABLE III.	
THE RESULT OF R SQUARE				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.602 <sup>a</sup>	.360	.358	4.517

Table 3 once again proves that chunk score is correlated with translation score (r=0.616). This further shows to what degree the students' chunk score can explain the students' translation score variation. The degree can be seen from the table: r square is 0.360; the adjusted r squre is 0.358 after the adjustment. It means that the students' chunk score can explain 35.8% of the students' translation score variation. That is to say, 35.8% of the students' translation score is determined by students' chunk score. The standard error of the estimate is 4.517, which is of no statistical significance and is not analyzed in the paper.

#### Scatterplot



Fig.1 is a scatter plot which is the relation between predicted value and residual. According to the graphic, the irregular scattering of the dot proves that the equation of one-linear regression analysis is valid. The predicted value is not correlated with the residual. That is to say, all the errors caused by the statistical analysis will not affect the result of the relevance analysis that has been made. Above all, all the data from table 1, table 2 and table 3 proves the hypothesis

that errors of one-linear regression analysis is bell-shaped scattered and errors are not relevant. The students' chunk ability can well predict the students' translation ability. Adjusted r square is 0.358.(i.e. students' chunk score can explain 35.8% variation of students' translation score). The standardized regression equation is: translation score=0.602\*chunk score. This means that the higher the students' chunk score is, the higher the students' translation score.

However, when the researchers were marking the papers, they found that even though many students missed many chunks during the retrieving, they still could translate these chunks correctly without any notice. Does it mean that the chunk score of some students cannot predict their translation score? In order to answer this question and further prove the initial hypothesis, the research will calculate each student's reduced chunk score and get the average score. Then the relevance analysis of this average score and average translation score is made. The result is as follows.

	TABLE	IV.		
CORRELATION BETWEEN TRANSLATION	N SCORE AND RE	DUCED CHUNK SCORE	CAUSED BY CHU	NK ERRORS
	Mean	Std Deviation	N	

	Mean	Std. Deviation	Ν
Translation score	73.18	6.435	30
Chunk error score	18.4000	3.20400	30
Chunk error score=reduced chunk score caused by chunk errors			

Table 4 shows the mean score of the students' translation and the mean reduced score of the students' chunk. As table 4 shows: the mean reduced score caused by chunk error is 18.4, which accounts for 68.61% of all the error-causing factors. (The other error-causing factors are vocabulary misunderstanding, syntax misunderstanding and so on). This shows that chunk error is the main type among all other kinds of errors. Among all the students, the lowest reduced chunk score is 10, the highest being 29. This again shows that students' chunk ability plays an important role in their translation ability.

TABLE V. Correlation between translation score and reduced score caused by chunk error			
	-	Translation score	Chunk error score
Pearson Correlation	Translation score	1.000	604
	Chunk error score	604	1.000

Chunk error score= reduced score caused by chunk error

Table 5 shows the correlation between the students' translation score and the students' chunk score. In this relevance analysis, the reduced chunk score is independent variable; the mean score of the students' translation is dependent variable. According to the statistics of Pearson Correlation in table 5, Sig (1-tailed) is 0.002, which is smaller than 0.05 (ie P<0.05). When P<0.05, the reduced chunk score can well predict their translation score, ie the reduced chunk score is strongly correlated with the students' translation score. Moreover, according to the table, r=-0.604. When 0.40<r<0.70 and r is negative, the two variables are negatively correlated. The reduced chunk score is moderately correlated with the translation score, i.e. the more their chunk errors are, the lower their translation score is.

# V. ATTRIBUTION ANALYSIS

There are some internal and external causes of the students' general low chunk ability. There are three kinds that are analyzed here.

First, many students do not know the conception of prefabricated chunks. Most of the college English learners lack a definite and comprehensive understanding of the prefabricated chunks. Thus, many second language learners missed or chose the wrong chunks during the test. Many learners believe that the prefabricated chunks are no more than the structure of Noun+Prep, Prep+Prep or Verb+Prep. In some cases, even though the students know these chunks, they are not sensitive to them. When the students are reading a passage or a long sentence, they read each vocabulary singularly and in a linear way. In their cognitive process, they do not combine two or more words together, so they could not understand the long sentences and complex sentences. Besides, many prefabricated chunks are broken to exist in one long sentence, so that students could not retrieve them, for example the so...that structure.

Second, the students do not have a deep memory of the already taught chunks. This can be seen from the collected papers. In the test paper, there are many key prefabricated chunks the teachers already emphasized in class. However, the students did not retrieve them.

Third, some English teachers do not attach great importance to the chunk teaching. The present English teaching in some Chinese colleges still follows the grammar-translation method. The English speaking and English writing which can enhance students' chunk ability most effectively are either neglected or put aside. Some teachers still spend most of the time explaining the test papers or grammatical rules. Even when the students ask chunk-related questions, the teacher only gives a simple and short explanation. Thus the neglect by the teachers themselves have a bad influence on the students' English learning. Consequently the students seldom pay attention to the prefabricated chunk in the English written material.

### VI. PEDAGOGICAL IMPLICATIONS

The general chunk level of college English learners is not high. Thus, great attention must be paid to chunk teaching. First, the teacher must enhance the students' awareness of the prefabricated chunks. In a sense, the base of English learning is the vocabulary acquisition. Vocabulary is the fundamental element of a language; it is also the base if a student wants to improve English. Not only the English learners should put in enough English words, but also they should understand the words deeply enough and use the words fast enough. Only in this way can they express themselves freely and effectively enough. So, during the vocabulary explanation, the teacher should explain to the students in detail the words that could make up important chunks. As long as the students know the importance themselves, they will focus their attention on the prefabricated chunks and will memorize them at their own will during their self-study.

Second, the teacher should change their teaching method from time to time. According to the input hypothesis proposed by Krashen, the ideal input should be close to the level of students' English learning, interesting and enough in quantity. In English chunk teaching, the input should be done in a relaxed and joyous environment. The teacher should not explain them in the mechanical and boring way. The teacher first can list all the chunks that need to be learned and ask the students to do different kinds of drills. If necessary, the teacher can design various games to minimize their psychological barrier and let the students acquire the chunks effectively. The large quantity of input and adequate emotion filtering can activate the students' language acquisition device and turns out the i+1 effect.

Third, the teachers can teach prefabricated chunks with corpus. The prefabricated chunks are usually the set terms that native speakers use through a long period of time. The authenticity of these chunks requires that second language learners learn them from the corpus in real life. However, most of the written teaching material in college including texts and exercises are compiled or written by education experts. Contrary to these artificial materials, the corpus provides a good language resource for both English teachers and English learners, because they can retrieve the most authentic use of a language point. There are many good English corpus to use on the internet, for example, COCA (Corpus of Contemporary American English). The students are interested in the internet, so the teacher can ask the students to look up the needed information in the on-line corpus, using the corpus to preview the chunks before class, explain the chunks during class and exercise after class. Those methods combined with the online learning model can maximize the students' learning efficiency. The students can in this way acquire the English prefabricated chunks more creatively and flexibly. They will gradually get used to this learning model and start to participate in each learning activity whether they are the self-learning tasks or teacher assigned tasks. Finally the students will involve themselves in the chunk learning and make great improvement.

Number	Translation score	Chunk Score
1	75	12
2	75	16
3	78	12
4	79	20
5	80	24
6	50	0
7	75	20
8	82	32
9	71	4
10	65	8
11	78	28
12	78	26
13	80	52
14	76	28
15	71	20
16	73	20
17	78	82
18	70	24
19	80	24
20	75	20
21	74	20
22	69	16
23	75	16
24	85	32
25	65	4
26	70	8
27	72	24
28	70	32
29	74	28
30	78	52

APPENDIX. DATA OF UNDERGRADUATE STUDENTS' TRANSLATION SCORE AND CHUNK SCORE

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