Promoting Interpreter Competence through Input Enhancement of Prefabricated Lexical Chunks

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Abstract—This research is intended to illustrate that enhancing input of prefabricated chunks in the training of interpreters will help promote their competence in actual interpretation situations. With more prefabricated chunks stored in mind, an interpreter can not only save time for thinking, but also lower anxiety and tension, thus improving fluency and accuracy.

Index Terms—prefabricated lexical chunks, interpretation, interpreter, input enhancement, competence

I. INTRODUCTION

A. Background

Interpretation involves understanding and expressing, with the former being the process of deconstructing the original text and the latter being the process of constructing the target text. The task of an interpreter is to express as fluently and accurately as possible the speaker's meaning following his or her train of thoughts immediately after he or she finishes the speech. Compared with translation, interpretation requires immediate deconstruction and construction, without sufficient time for thinking and polishing. Since it is more demanding in terms of time and response, an interpreter should be more prepared for interpretation tasks.

Of the skills required for an interpreter, linguistic competence is by far the most important aspect which plays the pivotal role in aiding his or her expression of ideas, namely, the output of information. To achieve quality output, the input, namely the stored information in one's mind is of primary importance. One's input has direct impact on the quality of his or her output. So efforts shall be made to enhance input of relevant information. In the case of interpretation, the input of an interpreter consists of vocabulary, grammar, culture, professional knowledge, etc..

B. Current Situation

In current interpretation courses, it is found that, students who had been learning English for nine years from primary through high school, and have been studying English intensively for two or three years as English majors, still can not achieve the basic level of fluency and accuracy in interpretation. This indicates, to certain extent, that, the mere learning of words, grammar and culture is far from enough to make a qualified interpreter. Professional training is required. Of the training courses provided, a typical training program generally includes such units as: Introduction; Interpreter's Code of Ethics and Standards of Practice; Roles, Boundaries and Essential Practices; Theory of Interpreting and Memory Development; Culture Bridging; Interpresonal Skills; Sight Translating and Note-Taking; Interpretation Practice.

These units are quite necessary; however, the most important component of an interpreter is linguistic competence, which directly determines the quality output in interpretation. So besides the conventional learning of words, grammar and cultural knowledge, we should enhance the input of prefabricated chunks to promote timely and comprehensive output of an interpreter.

C. Research Purpose

The purpose of this research is to demonstrate that, the enhancement of input of prefabricated chunks in the training of interpreters, combined with grammar, culture and professional knowledge, will help construct interpreter ability and promote competence in more fluent and accurate output.

D. Methodology

To achieve the purpose of this research, an experiment is conducted to elicit relevant statistics for analysis. After the experiment, some interviews were made to ask the subjects some questions about the differences between sufficient and insufficient input of prefabricated chunks. So experiment, interview, together with literature review will be adopted in this research.

II. COMPONENTS OF INTERPRETER COMPETENCE

A. Characteristics and Requirements of Interpreting

Unlike translation, interpreting does not mean a word-for-word translation; instead, it transfers spoken messages from

one language into another, instantly and accurately. Interpreting takes place in real-time situations, with interpreters being in direct contact with both the speaker and the audience. In interpreting, some unimportant details of the original speech might be omitted when transferred into the target language. Interpreters therefore rely primarily on their linguistic expertise acquired through a lot of training and experience, because a sentence in one language may be rendered an entirely different way in another. So excellent interpreters are those endowed with very quick responses, a good memory as well as standard and comprehensible speaking voice. An interpreter also acts as a facilitator between speaker and listener, both linguistically and diplomatically.

To sum up, interpreting is a spontaneous activity, requiring wide knowledge, strong independence, ability to work under high pressure (Mei Deming, 2000).

B. Components of Interpreter Competence

As a complex mental process, interpreting is a much demanding job, consisting of input, interpretation and output. It can be further divided into five stages, namely reception of specific information, decoding, recording, coding and message presentation. In the process of interpreting, the interpreter must follow closely the train of thought of the speaker. Based on the characteristics of interpreting, an interpreter is generally believed to have the following basic abilities:

- Δ Thorough and deep knowledge of the general subject to be interpreted;
- Δ Being familiar with both cultures;
- Δ Extensive vocabulary of both languages;
- Δ The ability to express thought and ideas clearly and concisely in both languages;
- Δ Excellent memory and note-taking skills;
- Δ Excellent listening and standard pronunciation.

To put the above items in details, it can be extended that an interpreter should possess such components of competence:

Firstly and primarily, an interpreter must have bilingual ability, which includes a thorough understanding and skillful use of both languages and cultures, deep knowledge of linguistic characteristics of both languages, as well as sharp listening and expressing ability, so as to transfer freely between the two languages.

Secondly, an interpreter must be possessed with the ability of clear and accurate expression in target language, conveying the close or equivalent meaning of the speaker.

Thirdly, an interpreter must have excellent memory and note-taking skills, since in the process of interpreting, there is no time for him or her to resort to some references or somebody else for help. Totally depending on himself or herself, he or she has to store a large vocabulary, cultural and professional knowledge, abbreviations, waiting to be drawn out in case of use, to ensure accuracy and fluency.

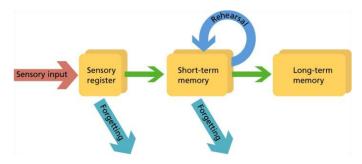
Fourthly, quick response and emergency-dealing abilities are also a prerequisite for an interpreter. Besides transferring the contents between two languages, an interpreter should also be prepared to deal with emergencies at any time.

Lastly, an interpreter should master encyclopedic knowledge, such as professional knowledge, social knowledge, knowledge of regulations and policies, knowledge about international relations and background, as well as national and local customs, places of interest, trees and flowers, insects and other animals. Interpreting is actually a cross-cultural communication, so strong cross-cultural awareness is also quite important for an interpreter to ensure smooth and perfect communication between two or more parties involved.

III. MEMORY AND COGNITION IN INTERPRETATION

A. Short-term and Long-term Memory

Short-term memory, also known as primary or active memory, is the capacity for holding a small amount of information in mind within a short period of time. It is brief in time and limited in storing information. Some information can last for up to a minute in short-term memory, but most information will spontaneously decay quite quickly without conscious efforts for retaining.



In contrast, long-term memory refers to the storage of information over an extended period. It has a seemingly

boundless capacity and duration. Of course, there is not a clear line between short-term and long-term memory. It is generally believed that *chunking* and *rehearsal* can help facilitate information from short-term memory into long-term memory. Once stored in long-term memory, information can be recalled sometime later, as short as a few minutes, or as long as many years to come. However, information stored in long-term memory can also be forgotten without conscious efforts for retaining.

B. Memory and Cognition

According to Collins dictionary, cognition is "the mental process involved in knowing, learning and understanding things." While the definition given by wikipedia is "the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses." As a part of cognition, memory plays an important role in the learning process. New knowledge, once memorized and stored into long-term memory, will become existing knowledge, which will, in return, help learn and memorize newer knowledge. With more and more knowledge stored in our long-term memory, a structured knowledge will come into shape in our mind, we will have a clearer picture of what we are learning or the world around us, thus a better cognition.

C. Interpretation Based on Memory and Cognition

The output of interpretation is influenced by both short-term and long-term memory. Short-term memory can be applied in sentence to sentence interpretation. For consecutive interpretation which involves the transference of more messages extending to the time period of more than twenty seconds or more, note-taking and long-term memory must be applied. Otherwise, the complete and accurate interpretation will not be likely to be accomplished.

In fact, long-term memory has an effect on short-term memory. The more information an interpreter stores in his or her mind, especially more deeply rooted information, the easier it will be to treat information from short-term memory. According to Neisser (1967), the American psychologist who first used the term "cognitive psychology", cognition involves "all processes by which the sensory input is transformed, reduced, elaborated, stored, recovered, and used." Therefore, one's memory influences his or her cognition, which then influences his or her understanding of the subject matter, and thus affecting the output of interpretation.

From the relationship between memory, cognition and interpretation, we can come to the assumption that, enhancing input will facilitate more fluent and accurate output. Then what to be input into our mind as stored information? Vocabulary, grammar, culture, expertise, etc. can all be included. It has been mentioned above that, *chunking* and *rehearsal* can help facilitate information from short-term memory into long-term memory. So, if an interpreter can memorize as many chunks as possible in the course of training, more and more information can be stored in long-term memory, which will produce better and better cognition of the subject matter. Then the output will undoubtedly be a more smooth process, resulting in higher quality interpretation.

This can be called the input enhancement of prefabricated chunks in the training of interpretation or interpretation pedagogy.

IV. PREFABRICATED LEXICAL CHUNKS

A. Introduction

According to wikipedia, prefabrication is "the practice of assembling components of a structure in a factory or other manufacturing site, and transporting complete assemblies or sub-assemblies to the construction site where the structure is to be located." People use the term to distinguish this process from the more conventional construction practice of "transporting the basic materials to the construction site where all assembly is carried out."





Interpretation is, to certain extent, much similar to construction. At the site of interpretation, an interpreter has already accumulated a large vocabulary, cultural and professional knowledge, etc. which can be regarded as construction materials needed for the completion of the buildings. What he or she needs to do, is to utilize his linguistic competence to understand the meaning of the source text as conveyed by the speaker, and then express the equivalent meaning in target language, just like a construction worker who makes use of his skills to put together the reinforcing bars, concrete, gravels or bricks to construct walls and roofs and houses.

Nevertheless, it is time-consuming to mix the different materials on the site. To solve this problem, people build the whole walls or roofs according to specifications beforehand somewhere else, and then transport them to the construction site, where they just do the assembling work. So, if an interpreter can put some words or cultural elements together prior to the interpretation task, and can memorize these combined units firmly, then will it cost less time for him or her to

pick up related words and knowledge from his or her storage? If this is the case, he or she could have more time to concentrate his mind on fluent and accurate transference of information. This is the term of prefabricated chunks."

B. Definition and Classification

It is generally believed that a lexical chunk is a group of words that are commonly found together, or a unit of language which is made up of two or more words, also includes phrasal verbs, idioms, collocations and so on. Ben Zimmer (2010) in his article for New York Times says that, lexical chunks are "meaningful strings of words that are committed to memory".

After exhaustive research, Norbert Schmitt (2000) concludes that, lexical chunks are "longer sequences of words" patterned together, and they are "institutionalized as the most efficient and most familiar linguistic means to carry out language functions."He also points out that, by "storing a number of frequently-needed lexical chunks as individual whole units", we human beings are making use of a relatively abundant resource from long-term memory to compensate for a relatively lack of processing capacity within a very short period of time. According to ehow, lexical chunks are "groups of words commonly found together", including such types as phrasal verbs, collocations, sentence frames and idioms. Phrasal verbs are "combinations of a verb and a preposition, adverb or both". Collocation refers to "the appropriate combination of words in the English language, mainly when using adjectives and nouns together". Some sentence frames have "slots" where "the speaker can insert a number of words, according to the situation." Sentence frames, especially those contain familiar phrases, when memorized, can facilitate a person's speech and enable the listeners to understand the meaning more easily. And idioms are "phrases with a metaphorical meaning".

This is a very general classification of lexical chunks. After studying domestic and overseas research results, Ma Guanghui (2011) summarized that lexical chunks can be categorized from five aspects, namely, structure, function, number of words, frequency of being used, and density among the different parts. As early as 1992, Nattinger & DeCarrico put forward their categorization of lexical chunks in their *Lexical Phrases and Language Teaching* (Oxford Applied Linguistics) (1st Edition). In this book, lexical chunks fall into four kinds: 1. Multiple words chunks: fixed phrases that can act as some independent words, for example, on the one hand, on the other hand; 2. Customary chunks, refer to sentence frames as mentioned above by ehow, that contain some semantic slots in which words or phrases can be inserted; 3. Phrase structure, refers to a fixed form or semi-fixed form of combination of word groups typically including proverbs, aphorisms and social formula language; 4. Sentence constructed chunks, refer to sentence structures and quotations that provide frames to the whole sentences.

C. Lexical Chunks and SLA

No matter how lexical chunks are classified, they have the following advantages: comparatively fixed in form; high capacity; relatively easy to remember; relatively less time for recalling, etc. Due to these advantages, lexical chunks play an increasingly important role in second language acquisition.

Nattinger & DeCarrico (1992) think that, lexical chunks as an ideal memory unit, revealed the essence of the law of language learning. Once acquired, lexical chunks are much productive, able to produce similar phrases based on certain grammatical rules and usage habits. Lian Jie (2001) believes that the use of lexical chunks will enable second language learners to produce more proper and acceptable sentences. Hou Junmei (2013) concluded a set of functions of lexical chunks upon second language acquisition, including: 1. Lexical chunks can reduce short-memory burden; 2. Lexical chunks can facilitate decoding time in the mind; 3. Lexical chunks can help overcome L1 negative transfer; 4. Lexical chunks can help improve fluency and accuracy in linguistic output. Based on previous research, Zhao Ying (2009) generalized other functions of lexical chunks, namely, promoting language fluency; enhancing language accuracy; facilitating creative language production; guiding language production; increasing learners' motivation.

It can be seen from the above research of lexical chunks that, the mastery of lexical chunks can not only facilitate learners' input, but also help the output, thus achieving more effective communication.

V. PREFABRICATED LEXICAL CHUNKS AND INTERPRETATION

A. Lexical Chunks and Memory

As mentioned above, there are short-term and long-term memory. Since short-term memory generally lasts no more than ten seconds, it will require much effort and time to search for and find out the information from the depth of the minds of interpreters. If some cultural or linguistic units can be put together firmly into lexical chunks, which are then rehearsed again and again until deeply rooted in the long-term memory of the interpreters, it will save a lot of time and energy at the site of interpretation. Just as Norbert Schmitt noted, lexical chunks "can be easily retrieved and used without the need to compose them on-line through word selection and grammatical sequencing." (Norbert, 2000)

B. Input Enhancement of Prefabricated Lexical Chunks

According to Wynne Wong (2007), input, in the context of language acquisition, "refers to samples of language that learners are exposed to in a communicative context or setting". Without input, there will not be any successful language acquisition. Therefore, all scholars in SLA agree that "input is fundamental to language acquisition." In SLA, input enhancement can make specific features of L2 input more salient, thus drawing learners' attention to these features.

Of the four techniques (input flood; textual enhancement; structured input and grammatical consciousness-raising tasks) of input enhancement introduced by Wong, input flood is by far the most effective technique for retaining lexical chunks in long-term memory. Once firmly memorized through constant rehearsal or whatsoever, lexical chunks are prefabricated in the mind of an interpreter, who, when encountering the corresponding cultural or linguistic strings, can immediately pick up and put them into the stream of output with fluency and accuracy.

To demonstrate that input enhancement of prefabricated lexical chunks can help promote interpreters' competence, an experiment has been conducted. The following experiment will show that, there is a correlation between prefabricated lexical chunks and interpreters' competence.

VI. EXPERIMENT

A. Description

The interpretation corpus of this research is selected from Mei Deming' *Intermediate Interpretation Course*. The subjects in this experiment, ten students majoring in Business English, are selected from the English department of Pinghu Campus of Jiaxing University. They are divided into two groups, Group A and Group B. The five students of Group A are from Business English Class 121, and the other five students of Group B are from Business English Class 122. To ensure reasonable and scientific results, the academic records of the two groups are at the same level. All of them are senior students and they are attending an Interpretation Course given by the same teacher. The five students of Group A are respectively labeled as A1, A2, A3, A4, A5; likewise, the five students of Group B are respectively labeled as B1, B2, B3, B4, B5.

All of the ten students had been learning English for thirteen years since grade three in primary school. By the time of this experiment, it is their fourteenth year of learning English and the eighth week to study the course of interpretation.

The experiment is conducted as follows:

Step One: Informing the students to take part in an interpretation test one day in advance.

Step Two: Two hours prior to the experiment, sixteen lexical chunks contained in the would-be interpretation test were distributed to Group A students. They were also told to memorize these lexical chunks and should be able to learn by heart.

Step Three: The experiment begins in a quiet office. The subjects come in the office one after another, sitting on the opposite side of the teacher across the table. An assistant sitting beside the subjects would record the whole tests, taking down the time used by each subject from the moment she started the interpretation till she is finished. In each test, the teacher would read altogether five English sentences, and after each sentence, the subject should immediately begin her interpretation. If she does not catch what the teacher says, she could ask the teacher to read again.

Step Four: During the experiment, two items were timed, namely the time that each subject used for the interpretation of one sentence and the times of the teacher's reading of the sentences as required by the subjects. When the test is over, all the data were collected and carefully checked to ensure accuracy.

B. Results

1. Data elicited from the experiment.

Table 1										
Group A	S1 (s)	Reading	S2 (s)	Reading	S3 (s)	Reading	S4 (s)	Reading	S5 (s)	Reading
A1	12.9	1	7.2	2	10.2	1	10.7	1	10.4	1
A2	7.9	1	12.1	1	9.1	1	21	2	14.9	1
A3	6.2	1	4.6	2	9.8	1	13.4	2	11.6	1
A4	9.7	1	10.6	1	10.3	1	10.8	2	15.3	1
A5	7	1	12.6	1	20.8	1	20.8	1	14.8	1
	43.7		47.1		60.2		76.7		67	
Average Time	8.74		9.42		12.04		15.34		13.4	
Average Times		1		1.4		1		1.6		1

TABLE 2

Group B	S1 (s)	Reading	S2 (s)	Reading	S3 (s)	Reading	S4 (s)	Reading	S5 (s)	Reading
В1	5.6	2	6.4	1	6.5	3	10.3	2	10.6	1
В2	9	1	7.5	3	15.8	2	19.6	3	27.4	2
В3	16.7	3	12	1	9.3	1	12.2	1	25.1	2
В4	17	1	13.9	2	21.3	2	13.7	1	25.7	2
В5	16	1	12.2	1	17.6	2	19.4	2	22.4	3
	64.3		52		70.5		75.2		111.2	
Average Time	12.86		10.4		14.1		15.1		22.24	
Average Times		1.6		1.6		2		2		2

Calculation:

D1=AveBS1-AveAS1=4.12 (s)

D2=AveBS2-AveAS2=0.98 (s)

D3=AveBS3-AveAS3=2.06 (s)

D4=AveBS4-AveAS4=-0.24 (s)

D5=AveBS5-AveAS5=9 (s)

4.12+0.98+2.06-0.24+9=15.92 (s)

D6=15.92/5=3.184(s)

Total average times of Group A=1.2 (times)

Total average times of Group B=1.84 (times)

D7=1.84-1.2=0.64 (times)

(Note: D stands for difference between the results of Group A and Group B)

2. Detailed performance of the subjects

S1 contains an adverbial clause of time. Group A subjects all achieved 100% correctness in the use of such lexical chunks as "during one's stay in ...", and "infrastructure construction". Only B1 and B5 from Group B got the correct meaning of "infrastructure construction", with the rest failing to express the right meaning.

S2 is longer than other sentences, containing two independent sentences. Both S2 and S3 are expressions used at trade fairs. Subjects from both Group A and Group B basically expressed the approximate meaning. Nevertheless, the pronunciation of "week-long" created a barrier for their listening, so they just mistook it for a name of a country.

Figures are always the most difficult part in interpretation. Ninety percent of the subjects made mistakes in understanding the two figures of 130 and 90, indicating insufficient training in this aspect.

- (1) been given such lexical chunks as "sign contract with", most of them were still didn't express the right meaning when it is in a passive voice sentence. Only one subject from Group A correctly interpreted the sentence after listening to it for two times. Some subjects from Group B even mistook the word "contract" for "contact".
- (2) S5 is also a long sentence. Subjects from Group A could all translate the sentence correctly after listening for one time, and 90% of them got the right meaning of the source text with the aid of lexical chunks. Whereas subjects from Group B had to listen to the sentence two times before beginning the interpretation, and only one out of five got the right meaning of "establish joint venture with".

C. Analysis and Discussion

From the figures in the above table 1 and table 2, it can be seen that, D6=3.184 (s), which means that the average time spent by each subject of Group A is 3.184 seconds less than that of each subject of Group B. This indicates that, subjects from Group A could finish the interpretation of each sentence more quickly than subjects from Group B.

D7=0.64 (s), means that, the teacher had to read 0.64 times more for subjects of Group B than for subjects of Group A. That is to say, subjects from Group A could grasp the meaning of the sentences with less time than those from Group B.

The two differences show that, with lexical chunks stored in the memory of the interpreters in advance, they can catch the meaning of the source text more quickly and spend less time finishing the interpretation of the sentences.

Of course, it should also be pointed out that, after making a comparison of the translated versions between the two groups, we found that, the target language sentences produced by subjects of Group A are generally more accurate than those produced by subjects of Group B.

VII. CONCLUSION

From the figures, the analysis and discussion, we can see that, lexical chunks, once prefabricated in the mind, can

facilitate interpretation. With the input of more and more prefabricated lexical chunks, it will take the interpreter less time to grasp the meaning of the source language, thus reducing the burden of short-term memory.

With more and more prefabricated lexical chunks stored in long-memory, the interpreter will have a deeper and more thorough understanding of the subject matter, thus gradually forming a better cognition of certain domains of knowledge. On the other hand, after acquiring a better cognition of certain domains of knowledge, an interpreter would have well-structured cognitive system, thus promoting his or her competence of interpretation.

To sum up, sufficient input of prefabricated lexical chunks will enable the interpreters to produce higher quality versions of translation with less time for reaction.

VIII. RECOMMENDATION

The experiment conducted here has shown the advantages of enhancing input of lexical chunks. Based on the results of and discussion about the experiment, it is recommended that, it is necessary and vital for interpreters to enhance the input of lexical chunks in daily training for the promotion of their interpretation competence.

On the other hand, due to the fact that many English majors are not competent enough in the mastery of lexical chunks, appropriate measures shall be taken by teachers to stimulate them to spend more efforts in grasping those set phrases, proper expressions, certain sentence structures, etc., so as to enhance the ability for the utilization of lexical chunks.

Of course, input enhancement of lexical chunks can not work satisfactorily without the input of other knowledge, such as grammar, culture, and professional expertise.

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