

The Effect of Task Frequency on EFL Speaking Ability Acquisition

Yuxiu Yu

School of Foreign Languages, Hubei Engineering University, No. 272, Jiaotong Road, Xiaogan, Hubei Province, 432000, China

Abstract—Psychological researches indicate that human attention resources are rather limited. Accordingly it proves to be very hard for learners to simultaneously attend to both content and form in L2 learning. This study aims to examine the effects of task frequency on EFL speaking ability acquisition. Both instant test and delayed tests were given. 20 sophomores of Chinese English majors repeatedly retold the same story and the material was chosen from the national TEM4 (Test for English Majors-Band 4), a proficiency English test for Chinese undergraduates. It was found that participants' attention was gradually shifted from content to form so that the balance development of both content and form could be achieved in participants' EFL speaking ability acquisition. In addition, participants also made correspondent progress in various linguistic forms such as fluency, accuracy and complexity. The results revealed the positive effect of task frequency on appropriate use of attention resources and explored the effective means to the balance development of various aspects in linguistic content and form. There are important implications for the results.

Index Terms—effect of task frequency, speaking ability, content, form, attention resources

I. INTRODUCTION

Human ability of dealing with information is somewhat limited. When people try to finish a complicated task, such as processing linguistic information, the completion of part of the task may require large amount of attention. Hence it is rather hard for their limited attention resources to attend to the other parts of the task and thus affect their overall performance (Carroll, 1999, p.54).

VanPatten (2004) once pointed out that it required large amount of attention resources to cope with linguistic input. Although form and content were not completely contradictory to each other, both of them did compete with each other with respect to the allocation of attention resources. In most cases, content prevailed. In other words, language learners firstly attended to the content of the information and then to the form only when their linguistic competence had already been gradually improved and even automated.

Similarly, Skehan (1998, p.73) believed that linguistic output also required large amount of attention resources and that to put too much emphasis on certain aspect of language expression would lead to the lack of other aspects. Fluency, accuracy and complexity were all the ideal goals of language learning and development, but they often competed with each other for attention resources in real communication so that they could not be developed simultaneously.

The limitation of human attention resources limits the overall development of learners' language ability and affects the realization of the ultimate goal for language learning. Skehan (ibid, p.43) suggested that the limitation of attention resources might result in the imbalance of language ability development, which would ultimately prevent inter-language from development and variation. It might be helpful for learners' sustainable development of language competence to pay sufficient attention to linguistic form. Accordingly it proves to be a great challenge and of paramount significance for language educators to make effective use of the limited attention resources and lead learners' attention to the ideal goal that is favorable for the development of their language ability.

Skehan (1998) and Bygate (1999) pointed out that task frequency was similar to pre-task planning and that each repetition could be regarded as planning for the next task. Planning could help learners become familiar with their learning tasks and reduce the pressure of processing instant information so as to attract more attention to realize the overall development of various aspects in their language ability.

The task frequency referred to in this research is a variation of frequency effects, namely the role of repeated contact and practice in language learning. Discussions about frequency effects have been one of the focuses in the field of L2 acquisition researches in recent years. According to the frequency theory, repetition frequency and amount of contact are the significant necessities for language learning (Ellis, 2008; Ellis & Collins, 2009; Wang 2012). Ellis (2002, p.144) once pointed out that frequency was the key factor for language learning and that good command of language knowledge did not depend on the abstract grammar rules but on the recollection of large amount of language instances that learners had had contact with.

Although the topic of frequency has been touched upon for a period of time, there have been no sufficient empirical researches that are relevant to the topic, in particular within China. Consequently this study intends to focus on the effect of task frequency on the overall development of Chinese university students' EFL speaking ability so as to

illustrate the effective role of task frequency in the allocation of attention resources.

II. LITERATURE REVIEW

Outside China there have been some empirical researches which touched upon the effect of task frequency on the allocation of attention resources. In Bygate's (1996) study, a participant retold the same story twice with his speaking ability evaluated by complexity, accuracy and fluency. Result indicated that the second repetition had been greatly improved regarding the overall performance and the three norms respectively.

Bygate (1999) increased the sample to 32 participants who finished retelling and dialogue tasks respectively. Pretest and posttest were compared and it was found that repetition could help learners make significant progress in terms of fluency, accuracy and complexity. Based on the previous two researches, Bygate (ibid, p. 43) confirmed the positive effect of task frequency on the overall language ability. He observed that repetition of the same task could help learners make better use of the limited attention resources and make it possible for them to improve their overall speaking ability.

Gass et al. (1999) also confirmed the positive effect of frequency task on the overall performance of speaking ability. In his study, 103 participants were divided into three groups. The two experiment groups respectively retold the same story as well as different stories three times while the controlled group did not have to finish such repetition tasks. Results indicated that the experiment group who repeated retelling the same story outperformed the other two groups with respect to both the overall performance of speaking ability and the accuracy of syntax and the complexity of lexicon. Gass et al. (ibid., p.573) concluded that frequency task could be of help to learners to shift their attention since the shift of attention from linguistic content to form was favorable for the ultimate success of language learning.

In comparison, there have been much fewer relevant researches within China. Zhou (2006) took 16 sophomores of English majors as participants who were offered different input and output task frequency, or each group listened and retold the same story several times. Results revealed that both input and output task frequency proved to be helpful to the story retelling with respect to the content as well as the accuracy, frequency and complexity of the language.

From the above review it can be concluded that there have not been sufficient researches on the relationship between task frequency effect and speaking ability and that there are obvious drawbacks in current relevant studies which illustrated the help of repeated tasks to various aspects of linguistic form in learners' speaking ability. As for whether repetition can be of help to content, there have been no detailed discussions except in Zhou's (2006). According to the psychological theories on the processing of language information (Vanpatten, 2004; Carroll, 1999; Leow, Hsieh & Moreno, 2008), in the processing of L2 information, linguistic content and form compete with each other for attention, affect and restrict each other. Without either of them, it would be impossible to become aware of the whole process of L2 learning. Therefore there is need to take both of them into consideration.

What is more, the previous researches merely focused on the instant effect of repeated tasks, or the progress of language ability that was immediately elicited by repetition. The point is that whether the instant effect brought about by repeated tasks can be maintained some time later is of great significance for teaching practice and being well aware of task frequency. At any rate, the objective of teaching lies in the effect of task frequency on sustainable development of language ability, instead of the temporary progress or variation.

In view of the above, this study intends not only to examine task frequency effect on various aspects of language form but also to take both content and form into consideration, or focus on how repetition affects learners' overall performance of speaking ability. Research on the delayed effect may help realize the practical significance of repeated tasks for language teaching. Simultaneously detailed description of various variations in learners' speaking ability may reveal or illustrate the allocation and shift of learners' attention so as to deepen our understanding of the process of EFL oral expression and contribute to psycholinguistic researches on the allocation of attention resources.

III. METHODS

A. Questions

This research mainly discusses about the effect of task frequency on EFL overall speaking ability and the allocation of attention resources. The specific questions include the following three:

- (1) In which aspects does the instant effect of task frequency affect learners' EFL speaking ability?
- (2) Can the task frequency effect be maintained until some time later?
- (3) How does task frequency effect affect the allocation of attention resources?

B. Participants

Participants in this research were 20 sophomores from a Chinese provincial university with the average age of 19.5, five males and 15 females. From the pretest it could be seen that their English speaking ability was of intermediate level and there was no significant difference between them ($P > 0.05$).

C. Material

The task involved in this research was story retelling or repetition and the material was chosen from the national

TEM4 (Test for English Majors-Band 4), a proficiency English test for Chinese undergraduates. The story was about the fantastic experience that Mr. Smith had had when he was on business and stopped at a hotel, covering 355 words, read aloud and recorded by native speakers of English. When listening to the story, participants were allowed to take notes and when retelling the story, they were able to refer to the notes. In addition, there was no limitation to the time for the repetition.

D. Data Collection

Data collection was not finished at a time. For the first time, 20 students were recorded in the sound lab one by one. They listened to the story once, retold, then listened to it and repeated it once again. The second data collection was done two weeks later. The participants listened to the same story and retold it once. In the data collections, 8 students via random sampling were interviewed after they had finished the story repetition. All the retelling and interviews were recorded, transcribed and analyzed.

E. Data Analysis

The data analysis in this research included analysis of content and form for each story repetition. The former referred to the idea units that participants could accurately recall. According to Kroll's (1977) definition of idea units (quoted in Foster, Tonkyn & Wigglesworth, 2000, p.358-360), the researcher divided the original story into 54 idea units. If a student could precisely retold an idea unit (the meaning was clear and grammar errors were not counted), he obtained 1 point. If he could only partly retold an idea unit, he got 0.5 point. If the expression was totally wrong, he got a zero.

This research refined linguistic form into fluency, accuracy and complexity (Skehan, 1998). Fluency was measured by speaking speed, namely the ratio of total syllables (after rejection), and the time (second) required for the production of the sample, and the result was multiplied by 60, denoting the syllable number produced per minute. The rejected syllables were not of help to understanding the elements of verbal meaning, including repair and repetition of phrases, words, syllables and filled pauses. As for the measurement of accuracy, this research used error-free T-units/T-units. Error types included grammar, vocabulary and pronunciation, and complexity consisted of syntax and vocabulary. The complexity of syntax was measured by clauses/T-units while variety of vocabulary by type-token ratio.

Each repetition was further compared after being analyzed in terms of content and form so as to examine the instant as well as the delayed effect on task frequency.

IV. RESULTS AND DISCUSSIONS

A. Variation of Overall Speaking Ability

With the repeated task, participants' overall speaking ability varied in a sense. The following discusses about how task frequency affected the instant effect on learners' speaking ability as well as the delayed one two weeks later.

1. Instant effect of task frequency

Table 1 listed the variations of various aspects in learners' speaking ability in the instant test, among them retelling 1 meant the repetition for the first time and retelling 2 referred to the instant repetition after the first one (see table 1).

From table 1 the instant effect of task frequency on participants' speaking ability can be clearly seen. After the repeated retelling, students' speaking ability was somewhat improved in both content and form, indicating the positive effect of task frequency on learners' overall language ability and validated the hypothesis that task frequency promoted the development of inter-language (Skehan, 1998; Bygate, 1999).

TABLE 1
INSTANT EFFECT OF TASK FREQUENCY ON LEARNERS' SPEAKING ABILITY

Indexes	Retelling 1	Retelling 2	Wilcoxon Test		
			Z	Asymp.Sig. (2-tailed)	
Idea Units	27.23	34.03	-3.848	.000	
Fluency	123.55	126.36	-1.812	.070	
Accuracy(%)	49.44	50.46	-1.836	.066	
Complexity	Syntax	1.26	1.28	-1.937	.053
	Vocabulary (%)	39.11	40.09	-1.371	.171

Note: The data listed in table 1 refers to the mean scores for the 20 participants and so does that in table 2 and 3.

From the comparison between content and form in their different variations, it could be found that idea units increased more significantly (Sig. <.05). For the first retelling, participants could only retold half of the original story (27/54) while for the second one, idea units increased about 25%, indicating the significant improvement. The progress mainly lied in the grasp of details. When listening for the first time, students could only get the main idea and failed to obtain the details. One of the students said, "If the whole story is regarded as 100%, I could only get 70% for the first time. So for the second time I just focused on the rest 30% and got 20%. For example, for the first time I simply retold that Mr. Smith liked to live in the hotel, and then 'the hotel is very cheap and clean'. For the second time I got the name of the hotel or 'Grand Hotel' and I got to know that the decoration aimed to 'make effort to live up to its name.'"

For the second retelling, although participants could grasp the content of the story more precisely and in more details, they failed to make obvious progress in form so that all the variations of indexes for linguistic form were not significant

(Sig.>.05). Obviously when listening and retelling repeatedly, students' attention mostly and consciously was focused on repairing the missed details and contents that they were not sure of. A student said that she merely got the main idea for the first listening and for the second listening she attended to the details that she had failed to notice so as to be able to retell the story more precisely. Another student reported that when retelling for the second time, he did not notice the tenses, the singular forms of pronouns such as 'he' or 'she', and set expressions, etc. and that he simply intended to make up for the content which he missed the first time he retold so that he failed to attend to grammar.

2. Delayed effect of task frequency

The delayed effect of task frequency can be seen from the comparison between retelling 2 and 3 in table 2. Retelling 2 referred to the instant repetition of the first retelling in table 1 while retelling 3 meant the second repetition two weeks later (see table 2).

TABLE 2
DELAYED EFFECT OF TASK FREQUENCY ON LEARNERS' SPEAKING ABILITY

Indexes	Retelling 2	Retelling 3	Wilcoxon Test		
			Z	Asymp.Sig.(2-tailed)	
Idea Units	34.03	34.25	-1.394	.163	
Fluency	126.36	142.50	-3.923	.000	
Accuracy(%)	50.46	63.64	-3.923	.000	
Complexity	Syntax	1.28	1.46	-3.826	.000
	Vocabulary (%)	40.09	41.40	-2.479	.013

Table 2 revealed that task frequency effect still worked two weeks later. In other words students could not only maintain the progress but also make greater progress in their speaking ability, in particular in linguistic form.

From table 2 it can be seen that the increase of idea units were no longer significant (Sig. = .163 > .05), indicating that students' improvement in content retelling was not significant after one repetition and the increase for idea units was only about .22 points. When interviewed, a student mentioned that when listening to the story, the plot seemed to be familiar to her, so she did not intend to notice the details or write down everything that she had listened to since she had already got most of the content.

In contrast, progress in linguistic form proved to be significant. Compared with the first instant retelling, all the variations of indexes for the delayed second retelling was significant in linguistic form (Sig. < .05). As for fluency, syllables increased from 126 to 142, which could be considered as the result of language automation (Anderson, 1982, 1989, 1992). As repetition increased, information processing did not require intentional effort or large amount of attention resources any more so that the task would be finished in shorter time and more easily. The previous researches also confirmed the positive effect of task frequency on fluency (Zhang, 2010). This research further supported Zhang's conclusion. When interviewed, students claimed that based on the previous two weeks' practice, they could be able to organize the story better, and speak faster and more fluently.

Participants made significant progress not only in fluency, but also in accuracy (Sig. = .000). Via the two outputs and the third output two weeks later, students came to realize their linguistic errors in retelling and make correspondent correction. The improvement of accuracy absolutely conformed to Swain's (1985) output hypothesis which pointed out that output could increase learners' attention to the accuracy of linguistic form. A student mentioned that she did not do it very well in the first retelling, failed to notice tenses, set expressions, merely wanted to retell it and that two weeks later she intended to pay special attention to tenses, pronouns and try to do it better. Another student noticed the language points in more details. She said that when listening, she noticed that it was mainly the past tense used in the story and that she planned to use this tense in her retelling. It was evident that after repeated output, students realized their own problems and the gap between their retelling and the original story and hoped to intentionally notice the points that they had neglected, when being offered another chance to receive input. In addition, they claimed to make correspondent adjustments and improve the accuracy in their spoken English if they were given a second chance to output.

In addition to the significant progress in fluency and accuracy, the variation of complexity was also obvious. The complexity of syntax was greatly increased, the ratio of subordinate clauses and T-units increased from 1.28 to 1.46, indicating that participants had already began to notice the expressions and sentence structures in the original story and tried to use them in their own retelling. A student said that when she listened to the story once again, she noticed the expressions in it so that she could directly say them in her own retelling and need not think hard how to express them, thus she would not make any mistakes or speak arbitrarily. Another student said that he had noticed the sentence patterns, wrote them down and directly used them in his own retelling. Obviously, students not only attended to the expressions of content but also how to express them more effectively.

Although the variation of vocabulary complexity was statistically significant, but not as significant as syntax complexity. In other words, the type-token ratio increased from 40.9% to 41.40%, merely 1.31% more than previously. Although some students reported that they had noticed the words and expressions in the original story, and that the total number of types they used increased, the number of tokens would increase more quickly as the content of the story increased. In other words, compared with the increase of tokens, the increase of the number of types became unimportant. Hence the variation of the type-token ratio was accordingly not that significant. After all participants had

been repeating the same story whose content involved limited vocabulary, and impossibly the words that had nothing to do with the story itself. Therefore the variation range was comparatively limited.

B. Adjustment of Attention

After the two repetitions which had two week's interval, students' speaking ability was improved in all aspects. Table 3 summarized the variations elicited by task frequency effect (see table 3).

TABLE 3
TOTAL EFFECT OF TASK FREQUENCY ON LEARNERS' SPEAKING ABILITY

Indexes	Retelling 1	Retelling 2	Retelling 3	Friedman Test		
				Chi-square	Asymp. Sig.	
Idea Units	27.23	34.03	34.25	27.90	.000	
Fluency	123.55	126.36	142.50	30.90	.000	
Accuracy(%)	49.44	50.46	63.64	32.43	.000	
Complexity	Syntax	1.26	1.28	1.46	32.64	.000
	Vocabulary (%)	39.11	40.09	41.40	10.70	.005

It should be noted that task frequency produced positive effect on the improvement of learners' overall speaking ability. After the two repetitions, participants made significant progress in content as well as in linguistic form for their oral expressions so that their overall speaking ability was improved and all the indexes used for the evaluation of speaking ability varied significantly (Sig.<.05).

When the students tried to retell the story for the first time, their oral English was not only simple in content, but also broken, incoherent and had much room for improvement in linguistic form. As for fluency, there were many pauses, repetitions and repairs. For linguistic form, the accuracy was not ideal, the tenses for subjects and subordinate clauses did not accord with each other, correspondence between subject and predicate in gender, number and case was not taken into account. In addition, the use of syntax and vocabulary was also simple and even not sufficiently accurate. Nevertheless, after two repetitions, content became more detailed and coherent. What's more, participants made significant progress in linguistic form. They spoke more fluently and more accurately with less pauses, repetitions or grammar errors. At the same time, the sentence structures and words were more accurate and idiomatic.

The overall progress in learners' speaking ability was due to appropriate allocation and adjustment of attention. From the comparison between instant effect and delayed one, it could be clearly seen that students' attention resources shifted from content to linguistic form. Vanpatten (2004) pointed out that in the competition between content and form, language learners firstly noticed the content of information. From table 3, it could be found that when students retold the story for the second time, their attention was mainly focused on the expression of content, which was the reason why they made fast and significant progress in idea units. Comparatively, their progress in linguistic form was not obvious. However, from the second retelling to the later third retelling, students made more significant progress than before in linguistic form but much slower progress in content. Accordingly only when their attention resources were partly relieved from the content after repeated retelling would the students attach sufficient importance to linguistic form and make correspondent progress.

In the interviews, students also clearly described the shift and adjustment of their attention from content to form. A student mentioned that at the very beginning, due to the limited attention, it was impossible for her to pay attention to both content and form. Via repeated retelling, learners gradually become familiar with the task content and the pressure of online information processing began to be relieved so as to attract more attention for learners to develop their overall linguistic ability. A student said, 'When I did it for the first time, I merely grasped the main idea. But for the second time I focused on the words, phrases and sentences structures, totally different from the first time.' 'It seemed to be easier for the second time, since I paid special attention to what I had missed previously. I took more detailed notes, became more familiar with the story and retold it more fluently and accurately.' It was obvious that repetition offered students opportunities to make the most out of their attention resources and adjust them so as to attend to various aspects of spoken English and achieve the balance and coordinate development of the language.

V. CONCLUSION AND IMPLICATIONS

From the above discussion and analysis, the following conclusions can be arrived at. *Firstly*, the instant effect of task frequency on speaking ability lied in the progress of content retelling. *Secondly*, the delayed effect of task frequency on speaking ability was mainly in the progress of linguistic form. *Thirdly*, from comparison between the instant effect and the delayed one, it could be found that learners' attention had been shifted from content to linguistic form and their overall speaking ability had been improved.

This research indicated the competition between content and form in the language information processing and the effectiveness of repeated task as a solution to the contradiction. Results revealed that task frequency might produce positive effect on the effective allocation of attention resources, promote the shift of attention from content to linguistic form and achieve the perfect uniformity between the two so as to achieve the ultimate goal of language development.

As far as language teaching is concerned, repetition has been an important and necessary phase (Cook, 1994, p.133). Traditional teaching method laid emphasis on the repetition and strengthening of tasks. With the rise of contemporary

communicative teaching method, language teachers began to doubt and give up the traditional concept. The result of this research confirmed the effectiveness of task frequency effect on the improvement of overall speaking ability. Hence language teachers ought to be well aware of the positive effect of task frequency on language teaching, make the most out of teaching resources and offer students opportunities of practicing and strengthening language knowledge in an all-around way and by all means. Only in this way can language knowledge that has been taught to them be internalized and utilized.

It ought to be noted that due to the small sample from the same university, it should be further validated whether the result of this research was representative or not.

ACKNOWLEDGEMENT

This research is funded by Hubei Engineering University, P.R.C. (No. 2014A08).

REFERENCES

- [1] Anderson, J. R. (1982). Acquisition of cognitive skill. *Psychological Review*, 89(3), 369-406.
- [2] Anderson, J. R. (1989). Practice, working memory and the ACT theory of skill acquisition: A comment on Carlson, Sullivan and Schneider. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 15(4), 527-530.
- [3] Anderson, J. R. (1992). Automaticity and the ACT theory. *American Journal of Psychology*, 105 (1), 165-168.
- [4] Bygate, M. (1999). Task as context for the framing, reframing and unframing of language. *System*, 27 (1), 33-48.
- [5] Carroll, W. L. (1999). *Psychology of Language*. 3rd ed. Pacific Grove, California: Brooks/Cole Publishing Company.
- [6] Cook, G. (1994). Repetition and learning by heart: An aspect of intimate discourse and its implications. *ELT Journal*, 48 (1), 133-141.
- [7] Ellis, N. (2002). Frequency effects in language processing: A review with implications for theories of implicit and explicit language acquisition. *Studies in Second Language Acquisition*, 24 (2), 143-188.
- [8] Ellis, N. (2008). The dynamics of second language emergence: Cycles of language use, language change and language acquisition. *The Modern Language Journal*, 92 (2), 232-249.
- [9] Ellis, N. & Collins, L. (2009). Input and second language acquisition: The roles of frequency, form and function: Introduction to the special issue. *The Modern Language Journal*, 93(2), 329-335.
- [10] Foster, P., Tonkyn, A. & Wigglesworth, G. (2005). Measuring spoken language: A unit for all reasons. *Applied Linguistics*, 21(3), 354-375.
- [11] Gass, S., Machkey, A. Alvarez Torres, M. J. & Fernandez-Gard, M. (1999). The effects of task repetition on linguistic output. *Language Learning*, 49(4), 549-581.
- [12] Leow, R. P., Hsieh, H.C. & Moreno, N. (2008). Attention to form and meaning revisited. *Language Learning*, 58(3), 665-695.
- [13] Skehan, P. (1998). *A Cognitive Approach to Language Learning*. Oxford: Oxford University Press.
- [14] VanPatten, B. (2004). Input processing in SLA// Vanpatten, B. *Processing Instruction: Theory, Research and Commentary* (pp.5-31). Mahwah, NJ, Lawrence Erlbaum.
- [15] Wang, C. M. (2012). A Study of the Interrelationship between L2 Learning Variables and L2 Learning. *Foreign Languages in China*, 20(5), 53-59.
- [16] Zhang, W. Z. (2010). Qualitative study of the fluency development in L2 speaking ability. *Modern Foreign Languages (Quarterly)*, 40(2), 273-283.
- [17] Zhou, D. D. (2006). A study of frequency effect on input and output. *Modern Foreign Languages (Quarterly)*, 36(2), 154-163.

Yuxiu Yu was born in Yunmeng, Hubei, China in 1978. She received his master degree in linguistics from Central China Normal University in 2010.

She is currently a lecturer in the School of Foreign Languages, Hubei Engineering University, Xiaogan, Hubei, China. Her research interests include second language acquisition and English teaching.