The Effectiveness of the Listening-after-Reading Task in College English Vocabulary Learning

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Abstract. This study explores the effectiveness of the listening-after-reading task in College English vocabulary learning. 64 freshmen were asked to fulfill separately the following 2 practices: the listening-without-reading model (group A), the listening-after-reading model (group C). The same vocabulary tests were then conducted on the target words. The results indicate that the listening-after-reading task has a significant effectiveness on college English vocabulary learning, and brings about interactive synergies and effectively promoting L2 learning.

Keywords: the xu-argument; the listening-after-reading task; the listening-without-reading task; vocabulary learning; college English

1 Introduction

Vocabulary is difficult in college English learning, and improving vocabulary-memory efficiency is an important focus of college English teaching. Researching the effective performance of different teaching methods and tasks in promoting vocabulary memory can promote the efficiency of college English teaching. Dictation task is an outstanding effective means of language learning and teaching. There is a significant improvement effect on the language input of English learners (HONG Wei, 2021).[1] Dictation tasks have a subtle positive effect on learners' attitudes and motivations towards English vocabulary learning, vocabulary management strategies and memory methods, psychological and physiological states during vocabulary memory, and the improvement of English language proficiency. Kim & Michel (2023) [2] argued that Complex word dictation tasks can promote the transition of vocabulary knowledge from receptive to productive for college English learners, effectively achieving vocabulary acquisition. Zhou & Wang (2023) [3] authenticated that the xu-argument has a moderate level of overall promoting effect with such factors as target language, task type, genre variation, L2 proficiency level, and L2 skills as moderators, ranking consecutively from the strongest to the weakest. This paper conducts a quantitative study on vocabulary memory to investigate whether the teaching

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task of listening-after-reading is necessarily related to improving the learning efficiency of college English learners.

2 Literature Review

XU & Chen (2023) [4] proposed that the xu-argument should focus on the effectiveness of diverse forms of continuation and the evaluation methods for continuation. This study mainly is to validate the effectiveness of the listening-after-reading task which was based on the xu-argument. In the study, listening task is considered as a continuation action after the reading task.

2.1 The Xu-argument: Widely Applied in L2 Learning

The xu-argument was first proposed by WANG Chuming (2021) [5] systematically and elaborated on the theoretical basis comprehensively that the continuation-task can effectively promote L2 learning. ZHANG Xiuqin and WANG Yingli (2020) studied the impact of language proficiency on learner output and collaborative effects in reading-speaking tasks, and suggested focusing on peer interaction grouping. JIANG Lin et al. (2021) explored the relationship between interaction intensity and synergistic effects in the reading-speaking integrated tasks, and found that there is a synergistic effect in reading-speaking tasks, and the stronger the interaction, the stronger the synergistic effect at the language and situational mode levels, and the more consistent and accurate the learners' oral output. In addition, there is an increasing amount of empirical research combining the xu-argument with language skills teaching. WANG Chuming (2018), HU Haifeng (2021), LIU Xueting (2022) studied the impact of continuation-tasks on learners' translation ability, while MIAO Haiyan and WANG Qi (2022) examined the dynamic effects of multiple rounds of continuation tasks on learners' English writing process. Existing empirical research on the xu-argument is mostly based on observing whether there is a "continuation promoting learning" effect between a language input (reading or listening) and a language output (speaking or writing), such as the research paradigms of writing after reading, speaking after reading, writing after listening, speaking after listening, and translating after writing.

2.2 The Xu-argument: one of the Methods to Facilitate Vocabulary Learning

In recent years, scholars have conducted empirical research on the impact of the reading-writing integrated continuation task on vocabulary acquisition. JIANG Lin and TU Mengwei (2016) found that the reading-writing integrated continuation task closely integrates input and output, which can effectively promote L2 vocabulary learning. Zhang Xiuqin et al. (2019) compared two training modes: the listening-writing integrated continuation task and the reading-writing integrated continuation task, and found that the listening-writing integrated continuation task has a slightly better effect on promoting vocabulary acquisition. LI Qinghua et al. (2020) found that translators tend to use vocabulary that has appeared in the previous reading

material, and have an equal collaborative selection effect on multiple synonyms in the previous reading material. Some scholars have also studied the acquisition effect of "continuation tasks" on specific word classes. For example, SUN Xin and WANG Yudan (2022) proposed that the reading-writing integrated continuation task has a promoting effect on the acquisition of English articles to a certain extent, and the effect is particularly significant in promoting the acquisition of indefinite articles; FENG Yan and Yangmei (2023) found that the reading-writing integrated continuation task help learners acquire declarative knowledge of verb phrases through pre-reading exercises, and then promotes the dynamic use of static knowledge through continuation writing. Existing researches on English teaching methods generally agree that dictation tasks are an effective means of promoting L2 acquisition. Empirical studies based on the xu-argument have shown that "continuation tasks" have a positive effect on vocabulary learning and other L2 acquisition processes.

3 Methods

The basic theoretical assumption of this study is that listening, speaking, reading, and writing are different aspects of language skills that can be discussed separately, but cannot be learned respectively. Listening and speaking are not separated, and reading and writing also improve each other. In addition, vocabulary memory is not just a static memory process in the brain. Integrating skills such as speaking, reading, and writing into the vocabulary memory process can have a certain impact on the efficiency and effectiveness of vocabulary memory.

3.1 Participants

The experiment was conducted at N college which is a general applied undergraduate institution. The participants were chosen based on the following objective, authoritative 2 scores: the English score of the college entrance examination, the score of the first semester college English final exam. A total of 64 students were ultimately selected as the experimental groups for this experiment. During the experiment, the normal teaching process was conducted without giving any experimental instructions to the students, and all students in the classes participated and completed the experiment synchronously.

3.2 Materials

The materials for this study are based on the articles from the first and second units of *New Version of Advanced College English: Comprehensive Course 1*. The target words are mainly College English Test Band 6 vocabulary and superlative words. After the completion of the reading materials, containing approximately 300 words, two English teachers with many years of teaching experience and a native English speaker who did not participate in this experiment were invited to modify and polish

the content and language fluency of the short article. Then the reading materials were read and recorded at the speed of about 120 words per minute.

3.3 Measures

The test was completed in class and submitted online. The scoring criteria is quite simple, clear, and easy to operate. The scoring rules for testing are as follows: The participants were required to choose the target words from the vocabulary-bank according to what they heard (words, sentences, passage), 1 point for each correct target word, and 0 point for those who select incorrectly or fail to answer.

Take Ex.1 for example, the participants will be asked to choose the words he/she hear from the record.

A. meticulous	*B. elaborate*	*C. intricate*	*D. esoteric*
E. exonerate	*F. lucubrate*	*G. obfuscate*	*H. subterfuge*
I. ebullient	*J. convoluted*		

When the word "*lucubrate*" is read out, if the participant's answer is "F", he/she would be granted 1 point, any other answer will be given 0 point.

3.4 Procedures

The experiment was conducted during two consecutive classroom teaching. Each experiment lasted approximately 15 minutes. It specifically includes the following steps, namely:

The first step is the preparation before the experiment. 1) to encode the participant information. Conduct preliminary research on the information of the participants, mainly involving students' provincial origin, college entrance examination scores, etc., to evaluate the English proficiency of the students. 2) to write the test corpus. write and review the test corpus in a targeted manner, and generate complete experimental materials.

The second step is the conduction of the experiment. The task flow is (teacher's) explanation -- (students') practice -- (students') test, as follows: 1) Target words teaching and practice. The teacher presents 10 target words through PPT, giving a demonstration of reading aloud, word meanings, and example sentences. Each target word is presented for 15 seconds. The implementation of this task is the same in both groups. The time for this part is about 5 minutes. 2) Participants' vocabulary practice tasks. Group A: The participants will be asked fulfill this task with the listening-without-reading model, i.e., the participants will memorize the given words by any possible means, but they do not need to read the words out loudly. Group C: The participants will be asked fulfill this task with the listening-after-reading mode, i.e., the participants need read out the given words loudly for about 5 minutes. The time for this part is the same for the 2 groups, both taking about 5 minutes. For example, in Ex.3, after the teacher's explanation of the target words, unlike the participants in group A, the participants of group C will be asked to read out the following words:

- precipitate

- dilate
- *obdurate*
- *auspicious*
- *exacerbate*
- *divergent*
- *imperturbable*
- *equivocate*
- *perspicacious*

3) Listening-identify Test. All the reading permission of the relevant materials will be turned off after students' vocabulary practice task, then the words-select phase will be proceeded. Take Ex.3 for example, unlike the records were played only once in Ex.1 & Ex.2, the records were played three times in Ex.3 totally, with the first time played continuously at a pace of approximately 120 words per minute; During the second playback, there is a pause of about 3 seconds after each sentence, during which participants take notes and identify the target words. The third time is played continuously again, and participants can check their answer. Part of the short passage is as follow:

The proposed project meeting was a complex web of divergent opinions, with each participant weaving a unique contribution into the discussion's fabric. Opinions varied considerably, influenced by the distinct backgrounds and viewpoints of the team members. While some recognized the project as a promising venture, others highlighted several potential challenges. The range of views sparked a vigorous debate, each advocate fervently supporting their perspective.

The participants are expected to identify the word "*divergent*" in para. 1, and complete the listening-identify test. The implementation of this task is the same in both groups, the same corpus, the same audio and recording, lasting about 4~5 minutes. All participants' answers will be submitted online. The results will be calculated immediately.

4 Results & Discussion

As mentioned before, group A is the one to adopt the teaching method of listening-without-reading method without requiring participants to read out the target words loudly before the test. Group C is the one to adopt the listening-after-reading method requiring participants to read out the target words loudly before the test. We found that the listening-after-reading mode has a significant effect on improving the efficiency of learning English vocabulary with moderate difficulty and intensity, but its promoting effect is not very obvious in easier and hardest learning situations. The results show that:

1) The listening-after-reading task does not work for the easiest or hardest test.

T-Test

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Ex.1	A	33	97.58	8.303	1.445
	C	31	94.19	12.852	2.308
Ex.3	A	33	37.58	29.051	5.057
	C	31	38.71	25.264	4.538

Independent Samples Test

		Levene's Test for Equality of VsTancas		t-test for Equality of Means						
									95% Confidence Interval of difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Ex.1	Equal variances assumed	6.408	.014	1.258	62	.213	3.382	2.688	-1.991	8.756
	Equal variances not assumed			1.242	50.815	.220	3.382	2.723	-2.086	8.850
Ex.3	Equal variances assumed	.048	.827	-.166	62	.869	-1.134	6.824	-14.776	12.508
	Equal variances not assumed			-.167	61.646	.868	-1.134	6.794	-14.717	12.449

Fig. 1. Differences of the Results of Ex.1 & Ex.3

In Ex.1, the participants need to identify the words they heard from the words which were read one by one, i.e., every question they heard was very short. Therefore, Ex.1 is quite easy compared with the other 2 exercises, resulting in generally higher grades and smaller score differences among participants. However, In Ex.3, they need to identify the words from a long passage they heard, which made this section the hardest part in the test. The participants' grades were generally low, and the difference in scores between them was small, too. The results of these 2 parts show that (Figure 1):

In Ex.1, group A and C do not have statistically significant ($p=0.220$, $p> 0.05$); 95% CI is [-2.09, 8.85] (includes 0, supports non-significance). Therefor, we may conclude that the listening-after-reading task does not have significant difference between the 2 groups ($p=0.22$). And Small effect size ($d=0.31$) suggests minimal practical relevance, even if future studies detect significance. Also, in Ex.3 group A and C do not have statistically significant ($p=0.869$, $p> 0.05$); 95% CI is [-14.78, 12.51] (includes 0, supports non-significance). We may conclude that the listening-after-reading task does not have significant difference between the 2 groups ($p=0.22$). And Negligible effect size ($d=0.04$) indicates almost no practical difference.

In all, the independent samples T-test revealed no statistically significant differences between group A and group C in either *Words* ($t=1.24$, $p=0.22$, $d=0.31$) or *Passage* ($t=-0.17$, $p=0.87$, $d=0.04$). While group A scored slightly higher in Ex.1 and group C marginally higher in Ex.3, both effects were trivial and lacked statistical support. High within-group variability, particularly for Ex.3, likely contributed to the non-significant outcomes. Future research should prioritize larger samples and explore qualitative factors influencing performance.

2) The listening-after-reading task can effectively enhance learners' vocabulary learning ability in intermediate level tests.

T-Test

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Ex.2	A	33	30.30	18.112	3.153
	C	31	58.06	24.416	4.385

Independent Samples Test

		Levene's Test for Equality of VsTancas		t-test for Equality of Means						
									95% Confidence Interval of difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Ex.2	Equal variances assumed	3.489	.067	-5.188	62	.000	-27.761	5.351	-38.459	-17.064
	Equal variances not assumed			-5.140	55.203	.000	-27.761	5.401	-38.584	-16.939

Fig. 2. Differences of the Groups' Results of Ex.2

In Ex.2, the participants need to identify the words they heard from the sentences which were read one by one, every question they heard were neither long nor short. Therefore, compared to Ex.1 & Ex.3, Ex.2 was a moderate level question. The comparison of scores between the two groups in this section is as follows (Figure 2):

The results show that group C scored significantly higher than group A (mean difference = 27.76 points). P-value (two-tailed) = 0.000, which means Statistically significant difference between groups. We may conclude that a significant difference exists between group A (M=30.30) and group C (M=58.06) in Ex.2 scores: $t(62) = -5.19$, $p < 0.001$. Group C outperformed group A by a substantial margin.

In brief, the independent samples T-test revealed a statistically significant difference in Ex.2 scores between group C (M=58.06, SD=24.42) and group A (M=30.30, SD=18.11), with group C scoring markedly higher (mean difference = -27.76, $t(62) = -5.19$, $p < 0.001$). The large effect size (Cohen's d=1.30) underscores the practical importance of this finding. Despite the borderline Levene's test result (p=0.067), equal variances were retained for analysis. Future research should explore factors driving group C's higher performance and variability, while ensuring methodological rigor through larger samples or mixed-methods approaches.

5 Conclusion

Compared with previous empirical research, the scale of participants in this experiment has a significant advantage and has achieved a certain breakthrough. However, the following two issues require further attention:

Firstly, whether the participants were effectively randomized into groups. We selected and confirmed the students from the 2 target classes mainly based on the two scores (the score of the English course in the college entrance examination and final the score of t the English course at the end of the first semester in college). Because students being assigned to different college English teaching classes inherently has randomness. After excluding the possible factors of differences in the calculation standards of the two aforementioned scores, we assume that students from two classes are randomly divided, e.g., only Guangdong students from the two classes were se-

lected as the participants because the content and grading standards for the college entrance examination in the same region should be the same which can ensure comparability of the English scores. Our grouping method has indeed facilitated the conduct of our experiment. However, the scientific validity of this grouping method needs further verification in future related research.

Secondly, whether our conclusions are applicable to the English learners at different levels. On the one hand, the students in the college where we conducted the experiment are mainly intermediate level English learners. If we conduct the experiment with participants of different levels simultaneously, the number of participants cannot be guaranteed. On the other hand, the reason we strictly limit the English proficiency of the participants is to ensure the reliability and validity of the data.

Eventually, our conclusion reflects well that listening-after-reading task can effectively improve the word memory ability of intermediate level English learners. However, whether our research findings are applicable to English learners of other levels or whether there are differences in the effectiveness of among the learners at different English proficiency levels couldn't be confirmed by this experiment, which will be further improved in the future studies.

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References

1. HONG Wei, SHEN Zhaozhen. The Effectiveness of the Reading-dictation Integrated Continuation Task in Chinese L2 Vocabulary Learning[J]. Chinese Language Learning, 2021, (2).
2. Kim YouJin, Michel Marije. Linguistic Alignment in Second Language Acquisition: A Methodological Review[J]. System.2023.
3. ZHOU Jie, WANG Junju. A Meta-Analysis of the Promoting Effect of the Xu-Argument and Its Mediating Factors [J]. Modern Foreign Languages, 2023,46(04):490-501.
4. XU Jinfen, CHEN Ziyi. A Review of Empirical Research on Xu-Argument[J]. Foreign Languages in China, 2023,20(02):85-90.
5. WANG Chuming. The Rationale behind the Xu-argument for Its Avowed High Efficiency in Promoting L2 Learning [J]. Foreign Language World, 2021, (06):2-7.