A Study of How Repeated Reading Affects English Recitation Fluency in College Students – A Case in Chinese Culture University, Taiwan

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Abstract

Students in Taiwan tend to find speaking more difficult than other skills, such as reading, writing, or listening. To address this issue, the present study recruited repeated reading (RR) to boost subjects' oral reading ability in the EFL environment of Taiwan and to verify the effectiveness and efficiency of the method. By promoting oral reading speed, RR proved to be an effective technique to enhance oral reading and thus speaking fluency. Thirty college students from Chinese Culture University participated in this study. They had eight 30-minute instructions during the intervention period. The materials were chosen from 60-Second Science. SPSS 22.0 was adopted to conduct the quantitative analysis (paired sample t-tests). The results indicated that there was a significant improvement in oral reading speed after the intervention (126-181 words correct per minute), regardless differences of age, years of learning English, and initial reading speeds among subjects in the present study. Accordingly, RR appears to be a highly promising technique for speed training and fluency in oral teaching.

1. Introduction

Oral Reading Fluency

Researchers such as Chen [1] verify that the oral reading is related to students' oral ability. Furthermore, research documentation has been established that oral reading fluency is a vital skill for students at all levels [2]. Oral reading fluency not only has to do with the students' silent reading in English, but also is related to their speaking ability. It appears that L2 users speak more slowly than native speakers for many reasons, including production problems due to slower lexical access and articulatory difficulties that arise in the production of segments and prosodic patterns that are less well established than those of their native tongue [3]. Similarly, Hulme and Roodenrys [4] assume that slow readers have slow articulation rates, which then leads to poor memory spans as a consequence of the slower processing of information in the articulatory loop of the working memory system. These studies unanimously suggest the importance of articulation and oral reading fluency are related to speaking. To improve the learners' oral skills, oral reading fluency remains a core factor. Among various definitions of fluency [5-8], Moyer suggests the most specific and measurable one, which involves two primary factors—accuracy and speed, as adopted in this study [9].

Repeated Reading (RR)

"One important function of RR is that it provides the practice to become automatic" [7]. It is adopted in this study to help students to develop their fluency in speaking by increased articulation speed achieved through oral reading. Samuels [7] further provides a clear definition of RR as "a supplemental reading program that consists of re-reading a short and meaningful passage until a satisfactory level of fluency is reached." In general, RR procedures fall into two categories: (1) assisted reading: originally evolved out of the neurological impress model. It has been administered by a variety of researchers [10-12] (2) unassisted reading: children read independently [13]. Rasinski concludes the two variations are equally effective in terms of improving the students' reading fluency [14]. RR has been implemented in Western countries for about one hundred years [15], yet it has not won a great popularity in Asia [16], nor in Taiwan.

2. Method

Research Questions

The present study was to verify the effectiveness and efficiency of RR on oral reading fluency in the EFL environment of Taiwan among the university students.

1. What is the difference between the mean WCPMs of Week 1 and Week 8, of the subjects who received RR intervention?
2. What is the applicability of RR regarding the following factors related to the background and

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learning conditions of the subjects:
A. Age
B. Years of Learning English
C. WCPMs – Week 1

Subjects
30 college students enrolled in a TOEIC English class at Chinese Culture University, Taiwan, were recruited as subjects, aged from 17 to 40 years old. They had at least 5 years of English learning experience. Before the experiment, they completed the Pre-Implementation Questionnaire to ensure that they agreed to attend the study and to assess their basic personal and language backgrounds.

Reading Materials
Passages from 60-Second Science were recruited. New passages were chosen for each session in the eight intervention weeks. These chosen materials were considered qualified, meeting the established criteria that 100 words to be read within two minutes with 85% accuracy [17]. All the passages were levelled at 12 on Fry's Readability scale [18].

Procedures
Each intervention was 30 minutes long. During the first 10 minutes the instructor played a recording of the reading once for the class; the subjects were asked only to listen. The researcher then briefly reviewed a few new words, phrases and the texts. In the second part, the instructor played the audio twice and the subjects were encouraged to read aloud as they listened. In the last part, the subjects did individual, unassisted RR for ten minutes. The instructor supervised the subjects and helped with miscues on any words, phrases, or sentences. The subjects were required to read through the text at least four times to reach the effect of RR [19-21]. Finally, for the remaining time, the subjects were required to count their time for reading and recording.

Data Analysis
All the data were analyzed with the computer program Statistical Package for Social Science (SPSS version 22.0). The two variables, WCPM, an indicator of speed, and accuracy, also known as Correctness Rate, were calculated as the following:

WCPM: WC*60/t sec, where WC = No. of words read correctly, and t sec = total seconds
ACCURACY: WC/Wds = % accuracy,
where Wds = total No. of words in passage, and WC =No. of words correctly read

The average WCPMs and accuracy rates of these collected recordings were then calculated by paired sample t-tests with the level of significance set at $p < .05$. Regression analysis was then used to test the correlations of the subjects' total improvement with the following three factors: (1) age (2) years of learning English (3) WCPMs – week1.

3. Results and Discussions

Table 1. Descriptive Statistics of WCPMs of Week1 and Week8

	Mean	N	Std. Deviation	Std. Error Mean
WCPMs - week1	126	30	32	6
WCPMs - week8	181	30	47	9

Table 2. Comparison of the subjects' performance of improved WCPMs (Week8-Week1)

	Paired Differences					
	95% Confidence Interval of the Difference					
	Mean	**Std. Deviation**	**Lower**	**Upper**	**t**	**df**
WCPMs - Week8 - WCPMs - Week1	55	32	42	67	9*	29

*p<0.05

Table 3. Descriptive Statistics of correct rates of Week1 and Week8

	Mean	**N**	**Std. Deviation**	**Std. Error Mean**
correct rate - week1	97%	30	3%	1%
correct rate - week8	93%	30	7%	1%

Effects of repeated reading (RR) on WCPM and accuracy

According to the results obtained (see Table 1 and 2), it was apparent that the college students who received oral RR training had made significant improvements in their oral reading speed (fluency). As shown in Table 4, their improvement was an average of 55 WCPM ($p < .05$), from 126 to 181 WCPM. Fluency in this study was measured by its two component aspects: WCPM and accuracy. In summary, the students' fluency had been greatly improved, with a large contribution coming from the improved Reading Rate (55 WCPM increase) and a small contribution coming from accuracy (4% accurate rate increase, see Table 3).

Table 4. Regression Table of Possible Factors

	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	36.32	32.04			
A. Age	.42	12.43	.01	.03	.97
B. Years of Learning English	4.23	8.05	.10	.53	.60
C. WCPMs- Week1	.07	.20	.07	.35	.73

*p<0.05

RR and other background and learning conditions

As shown in Table 4, the results of the statistical analysis showed that there were no significant relationships between the subjects' total improvement and their Age, Years of Learning English, nor the WCPMs of the week1 ($p > .05$). The data indicate that oral RR was highly effective for subjects who worked hard during the training, regardless of the previous language backgrounds.

Other discussion

Table 5. Statistics of the factor: Age

	Frequency	**Percent**
>30	4	13
21-30	22	73
17-20	4	13
Total	30	100

Table 6. Statistics of the factor: Years of Learning English

	Frequency	Percent
5-10 years	6	20
11-15 years	12	40
>15 years	12	40
Total	30	100

As shown in Table 5, there is no significant difference on improvement for subjects among age groups of 17-20, 21-30, and elder than 30 years old. Table 6 indicates there is no significant difference on improvement for subjects among groups of various learning histories: 5-10, 11-15, and more than 15 years.

Compared with the results of Wang and Kuo [22], WCPMs gained in the present study are much less (81 and 55). However, this may have to do with different levels of the materials. In the experiment of Wang and Kuo [22], the content was daily English, levelled at 8 on Fry's Readability scale, and in the present study, the content from 60-Second Science, levelled at 12 on Fry's Readability scale. This suggests that in the future, researchers shall pay extra attention for chosen materials, which may influence the study results.

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