The Effects of Repeated Reading on Reading Comprehension in Different Text Conditions

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Introduction

• **Students' performance in reading can be different acc ording to the type of reading texts given.**

- Authentic & modified texts

Previous studies

- **Extensive discussion on the merits of authentic and modified texts on reading comprehension of L2 learners**

(Berarado, 2006; Crossley, Yang, & McNamara, 2014; Gilmore, 2007; Guariento & Morley, 2001; Nation & Deweerdt, 2001; Widdowson, 1998)

- **The effects of text type on reading comprehension**

(Abdallah, 2005; Albiladi, 2019; Gilmore, 2011; Jooyandeh, 2017; Jon, 2020; Kim, 2015; O'Donnell, 2009; Oh, 2001; Rama, 2020; Sacha, 2006; Taghavi & Aladini, 2018; Yano, Long & Ross, 1994; Young, 1993, 1999)

Necessities and originality for the study

• Researchers have separately addressed **the effects of text type (authentic vs. modified)** and **repeated reading (RR)**.

• **Students' English reading proficiency levels** are included as variables.

• Reading comprehension consists of three components: general, specific, and inferential.

• Reading text conditions for the study

No.	Group	Description
1	Modified	Repeated reading activity with texts in the textbook
2	Original	Repeated reading activity with original texts online

Purpose of the study

- To explore the impact of repeated reading on reading comprehension in different text conditions
  - immediate or delayed
  - learners' reading proficiency levels (high, intermediate & low)
- To examine a relationship between text type and L2 learners' perceived text difficulty

Research Questions

1. What are the immediate effects of text conditions (modified vs. original) in repeated reading on L2 reading comprehension?

2. What are the delayed effects of text conditions (modified vs. original) in repeated reading on L2 reading comprehension?

3. What are the effects of text conditions (modified vs. original) in repeated reading on reading comprehension, according to proficiency levels?

4. How do L2 learners perceive text difficulty according to text conditions?

Participants

- Initial No. of Students: 198
- Fifteen failed to take more than one session of instruction or delayed test
- Finally, 183 students participated

- **Participants**

  - 1st grade high school students
  - studied English for about eight years
  - the same mother tongue

Group	*N*	Male	Female
Modified	90	45 (50.0%)	45 (50.0%)
Original	93	46 (49.5%)	47 (50.5%)
Total	183	91 (50.3%)	92 (49.7%)

Participants

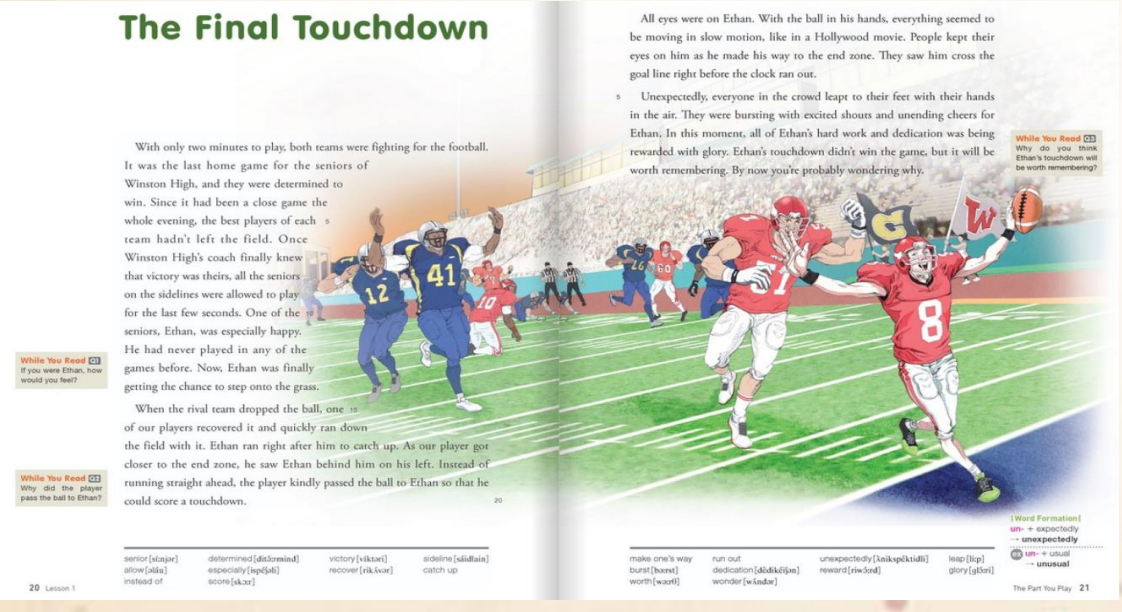
Group	*N*	Level		
		High	Intermediate	Low
Modified	90	27 (30.0%)	42 (46.7%)	21 (23.3%)
Original	93	26 (28.0%)	42 (45.2%)	25 (26.8%)
Total	183	53 (29.0%)	84 (45.9%)	46 (25.1%)

- Criteria for Level: **mean** and **standard deviation** of the pretest (Max. = 15, M = 10.03, SD = 3.335)
- High: 13 -15
- Intermediate: 7-12
- Low: 2-6

Reading Materials Selection

Modified Text

- From the textbook published by NE 능률
- Lesson 1 Read
- The Final Touchdown



The Final Touchdown

With only two minutes to play, both teams were fighting for the football. It was the last home game for the seniors of Winston High, and they were determined to win. Since it had been a close game the whole evening, the best players of each team hadn't left the field. Once Winston High's coach finally knew that victory was theirs, all the seniors on the sidelines were allowed to play for the last few seconds. One of the seniors, Ethan, was especially happy. He had never played in any of the games before. Now, Ethan was finally getting the chance to step onto the grass.

While You Read Q1 If you were Ethan, how would you feel?

When the rival team dropped the ball, one of our players recovered it and quickly ran down the field with it. Ethan ran right after him to catch up. As our player got closer to the end zone, he saw Ethan behind him on his left. Instead of running straight ahead, the player kindly passed the ball to Ethan so that he could score a touchdown.

While You Read Q2 Why did the player pass the ball to Ethan?

senior [sínjər] allow [əláu] instead of
determined [ditə́ːrmind] especially [ispéʃəli] score [skɔːr]
victory [víktəri] recover [rikʌ́vər]
sideline [sáidlain] catch up

20 Lesson 1

All eyes were on Ethan. With the ball in his hands, everything seemed to be moving in slow motion, like in a Hollywood movie. People kept their eyes on him as he made his way to the end zone. They saw him cross the goal line right before the clock ran out.

Unexpectedly, everyone in the crowd leapt to their feet with their hands in the air. They were bursting with excited shouts and unending cheers for Ethan. In this moment, all of Ethan's hard work and dedication was being rewarded with glory. Ethan's touchdown didn't win the game, but it will be worth remembering. By now you're probably wondering why.

While You Read Q3 Why do you think Ethan's touchdown will be worth remembering?

make one's way burst [bəːrst] worth [wəːrθ]
run out dedication [dèdikéiʃən] wonder [wʌ́ndər]
unexpectedly [ʌ̀nikspéktidli] reward [riwɔ́ːrd]
leap [liːp] glory [glɔ́ːri]

Word Formation
un- + expectedly → unexpectedly
un- + usual → unusual

The Part You Play 21

Original Text

- http://www.huffingtonpost.com

Text analysis

- Flesch-Kincaid Grade (FKG) Level
- Text readability results from Web VP Classic

Text		Token	Word family	Type	1K and 2K words	FKG level
Modified	1	282	118+?	152	250 (88.65%)	5.7
	2	371	153+?	195	332 (89.48%)	7
Original	1	372	161+?	200	332 (89.24%)	9.9
	2	394	164+?	218	339 (86.04%)	10.6

The Flesch-Kincaid Grade (FKG) Level

- The **Flesch–Kincaid readability tests** are readability tests designed to indicate how difficult a reading passage in English is to understand.

1) the Flesch reading ease
2) the Flesch–Kincaid grade level.

- These readability tests are used extensively in the field of education. The "Flesch–Kincaid Grade Level Formula" presents a score as a US grade level, making it easier for teachers, parents, librarians, and others to judge the readability level of various books and texts.

Instruments

1. **Pretest & Delayed test**

- fifteen multiple-choice reading comprehension (RC) questions
- extracted from 2017 and 2018 High School Entrance Exams each
- three types of questions used: general, specific, and inferential

2. **Posttests**

- two posttests
- fifteen multiple-choice RC questions
- three types of questions used: general, specific, and inferential

- In total, two texts & 30 RC questions

- Reviewed by two Korean teachers of English & one native English-speaking teacher
- Cronbach α coefficients: .843 & .817

Procedures

Procedures	Description details
Group assignment	8 intact classes Divided into two groups: Modified & Original
Pretest (RC)	2017 High School Entrance Exam / 15 RC questions (5 for G, S, & I each) / for 30 mins.
Treatment	- After one week from the pretest - Two sessions for one week - Proceeded with the repeated reading activity paragraph by paragraph - 15 RC for each session(5 for G, S, & I each) - Read one paragraph four times → Solve RC questions related … (repeat) → Perception check on text difficulty (7-point Likert Scale)
Delayed test (RC)	2018 High School Entrance Exam / 15 RC questions (5 for G, S, & I each) / for 30 mins.

Data Analysis

- The SPSS 20.0 program was run.
- The significance level was set at .05, nondirectional.
- To calculate the reliability of the posttest, Chronbach's alpha was computed.

- Independent *t*-test for pretests
  → **homogeneity of two groups**
- Two-way repeated-measures MANOVA for the two RC posttests scores + LSD post hoc test → **immediate effects**
- A paired-samples *t*-test between pretests and delayed tests in each group → **delayed effects**
- A paired-samples *t*-test between pretests and delayed tests in each group by level (high, intermediate and low)
- Two-way ANOVA for learners' perceived text difficulty

Results

- **Results of Group Comparison on Pretest (max.=15)**

Type	Group	*N*	M	*SD*	*t*	*Sig.*	η^2
General	Modified	90	3.23	1.237	-1.492	.138	.012
	Original	93	3.51	1.230			
Specific	Modified	90	3.83	1.183	.573	.567	.002
	Original	93	3.73	1.226			
Inferential	Modified	90	2.87	1.515	-.118	.906	.000
	Original	93	2.89	1.441			
Total	Modified	90	9.93	3.297	-.396	.693	.001
	Original	93	10.13	3.385			

Results

1. Immediate Effects of Text Conditions in RR on RC

- Descriptive Statistics for Posttests (appendix 1)

- Repeated-measures MANOVA Results for Reading Comprehension

Source	*SS*	*df*	*MS*	*F*	*Sig.*	Partial η^2
Posttest	12.238	1	12.238	4.632	.033*	.025
Posttest*Group	0.042	1	.042	.016	.900	.000
Group	.200	1	.200	.011	.981	.000

- Significant effect of text conditions in RR **over time**

- No difference between groups

Results

2-1. Delayed Effects of Text Conditions in RR on RC

Results of Comparison on Pretest and Delayed Test by Group

Group	Test	*N*	M	*SD*	*t*	*Sig.*	η^2
Modified	Pre	90	9.93	3.297	-5.599	.000*	.150
	Delayed		11.22	3.158			
Original	Pre	93	10.13	3.385	-2.808	.006*	.041
	Delayed		10.78	3.355			

- Significant difference between pre- and delayed RC scores in both groups

Results

2-2. Delayed Effects of Text Conditions in RR on RC

Results of Comparison on Pretest and Delayed Test of the Modified Group

Type	Test	*N*	M	*SD*	*t*	*Sig.*	η^2
General	Pre	90	3.23	1.237	-5.872	.000*	.162
	Delayed		3.99	1.055			
Specific	Pre	90	3.83	1.183	-.775	.440	.003
	Delayed		3.92	1.154			
Inferential	Pre	90	2.87	1.515	-3.408	.001*	.061
	Delayed		3.31	1.511			
Total	Pre	90	9.93	3.297	-5.599	.000*	.150
	Delayed		11.22	3.158			

- Significant results in general and inferential in the Modified group

Results

2-3. Delayed Effects of Text Conditions in RR on RC

Results of Comparison on Pretest and Delayed Test of the Original Group

Type	Test	*N*	M	*SD*	*t*	*Sig.*	η^2
General	Pre	93	3.51	1.230	-2.771	.007*	.040
	Delayed		3.88	1.141			
Specific	Pre	93	3.73	1.226	.581	.563	.002
	Delayed		6.37	1.254			
Inferential	Pre	93	2.89	1.441	-2.434	.017*	.031
	Delayed		3.24	1.658			
Total	Pre	93	10.13	3.385	-2.808	.006*	.041
	Delayed		10.78	3.355			

- Significant results in general and inferential in the Original group

Results

3-1. Delayed Effects of Text Conditions in RR on RC by Level

Results of Comparison on Pretest and Delayed Test of the HL Modified Group

Type	Test	*N*	M	*SD*	*t*	*Sig.*	η^2
General	Pre	27	4.33	.679	-3.075	.005*	.154
	Delayed		4.78	.506			
Specific	Pre	27	4.89	.320	1.442	.161	.038
	Delayed		4.67	.679			
Inferential	Pre	27	4.48	.580	-.328	.746	.002
	Delayed		4.56	1.050			
Total	Pre	27	13.70	.775	-1.017	.319	.020
	Delayed		14.00	1.544			

- Significant difference in general in the HL Modified Group

Results

3-2. Delayed Effects of Text Conditions in RR on RC by Level

Results of Comparison on Pretest and Delayed Test of the HL Original Group

Type	Test	*N*	M	*SD*	*t*	*Sig.*	η^2
General	Pre	26	4.58	.504	-.493	.627	.005
	Delayed		4.65	.562			
Specific	Pre	26	4.88	.326	2.273	.032*	.094
	Delayed		4.62	.571			
Inferential	Pre	26	4.42	.578	.000	1.000	.000
	Delayed		4.42	.902			
Total	Pre	26	13.88	.766	.926	.363	.017
	Delayed		13.69	1.087			

- Significant difference in specific in the HL Original Group

Results

3-3. Delayed Effects of Text Conditions in RR on RC by Level

Results of Comparison on Pretest and Delayed Test of the IL Modified Group

Type	Test	*N*	M	*SD*	*t*	*Sig.*	η^2
General	Pre	42	3.21	.951	-3.789	.000*	.149
	Delayed		3.98	.897			
Specific	Pre	42	3.90	.790	-.741	.463	.007
	Delayed		4.02	.811			
Inferential	Pre	42	2.74	1.014	-3.161	.003*	.109
	Delayed		3.31	1.137			
Total	Pre	42	9.86	1.389	-4.729	.000*	.214
	Delayed		11.31	2.147			

- Significant differences in general and inferential in the IL Modified Group

Results

3-4. Delayed Effects of Text Conditions in RR on RC by Level

Results of Comparison on Pretest and Delayed Test of the IL Original Group

Type	Test	*N*	M	*SD*	*t*	*Sig.*	η^2
General	Pre	42	3.74	.885	-.892	.377	.010
	Delayed		3.93	.997			
Specific	Pre	42	3.95	.697	1.242	.221	.018
	Delayed		3.76	1.008			
Inferential	Pre	42	2.86	1.002	-3.109	.003*	.105
	Delayed		3.50	1.384			
Total	Pre	42	10.55	1.435	-1.879	.067	.041
	Delayed		11.19	2.442			

- Significant difference in inferential in the IL Original Group

Results

3-5. Delayed Effects of Text Conditions in RR on RC by Level

Results of Comparison on Pretest and Delayed Test of the LL Modified Group

Type	Test	*N*	M	*SD*	*t*	*Sig.*	η^2
General	Pre	21	1.86	.854	-3.590	.002*	.244
	Delayed		3.00	1.049			
Specific	Pre	21	2.33	.966	-1.404	.176	.047
	Delayed		2.76	1.338			
Inferential	Pre	21	1.05	.805	-2.197	.040*	.108
	Delayed		1.71	1.146			
Total	Pre	21	5.24	1.136	-3.675	.002*	.252
	Delayed		7.48	2.581			

- Significant differences in general and inferential in the LL Modified Group

Results

3-6. Delayed Effects of Text Conditions in RR on RC by Level

Results of Comparison on Pretest and Delayed Test of the LL Original Group

Type	Test	*N*	M	*SD*	*t*	*Sig.*	η^2
General	Pre	25	2.00	.707	-3.464	.002*	.200
	Delayed		3.00	1.225			
Specific	Pre	25	2.16	.850	-1.250	.223	.032
	Delayed		2.52	1.262			
Inferential	Pre	25	1.36	.952	-.622	.540	.008
	Delayed		1.56	1.356			
Total	Pre	25	5.52	1.447	-2.715	.012*	.133
	Delayed		7.08	2.827			

- Significant differences in general in the LL Original Group

Results

4. A Relationship btw Text Conditions in RR and Perceived Text Difficulty

- Descriptive Statistics for Posttests (appendix 2)

Results of Group Comparisons on Perceived Text Difficulty

Source	*Type III SS*	*df*	*MS*	F	*Sig.*	Partial η^2	Observed Power
Level	179.170	2	89.585	60.881	.000*	.253	1.000
Group	12.571	1	12.571	8.543	.004*	.023	.830
Level*Group	3.139	2	1.569	1.067	.345	.006	.237
Error	529.733	360	1.471				

- Seven-point Likert scale used
- Significant difference btw levels and btw groups respectively
- Post hoc results; significantly different among all levels

Major Findings & Discussion

Immediate Effect

- No significant difference in RC posttest scores between the two groups by **repeated-measures MANOVA**
  → **No immediate effect** of text conditions in RR on RC

- Significant difference in RC posttest scores over time
  → **Sig. immediate time effect**
  → 1) Both text conditions, regardless of text type, have an immediate effect on RC
  2) Practice effect; familiarity of tasks

Major Findings & Discussion

Delayed Effect

- Results of comparing pretest and delayed test of **each group** by **paired samples *t*-test**
  → **Sig. delayed effects** on RC, especially in **general** and **inferential**

Major Findings & Discussion

Delayed Effect

- **Analyzed by RC proficiency levels**

- **In the Modified group**,
  - **HLL** showed significant improvements in **'general'**
  - Both **ILL & LLL** displayed significant difference in **'general' and 'inferential'**

→ Students of all the levels were found to be significantly beneficial to the 'general' item type in RC; those at both intermediate and low levels were significantly effective in 'inferential' as well.

Major Findings & Discussion

Delayed Effect

- **Analyzed by RC proficiency levels**

- **In the Original group**,
  - **HLL** showed a significant drop in 'specific'
  - **ILL & LLL** displayed significant improvements in **'inferential'** and **'general' respectively**

→ Instruction with modified texts is generally more beneficial to all the levels of the students than one with original texts.
→ Especially, ILL & LLL could have more benefits than HLL.
→ In the case of 'specific,' little or negative (HLL of Original) impacts could be seen.

Major Findings & Discussion

Perceptions on reading text difficulty

- Significant differences were shown between high and intermediate levels, intermediate and low, and high and low.

- The Likert scale mean score of the modified group was significantly lower than that of the original group.

→ **Generally, with regard to text type, modified texts would be more appropriate to L2 learners.**

Final Remarks

- RR, regardless of text type, has **positive immediate time effects.**
- RR, regardless of text type, has **positive delayed effects** on RC, not in specific, but in **general** and **inferential**.
- In RR activity, **modified texts** could generally be more beneficial to **all the levels of EFL learners** than original texts.
- Especially, ILL & LLL could have more benefits by using modified texts than original texts**.**

•**For Future Studies**

- Apply to other skills
- Add another experimental group: elaboration
- Longer treatment period

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Thank you!

Appendix

Go back

1. Immediate Effects of Text Conditions on Reading Comprehension

Descriptive Statistics for(Max. = 15)

Type	Group		Posttest 1		Posttest 2		Total	
		N	M	*SD*	M	*SD*	M	*SD*
General	Modified	90	2.93	1.288	3.37	1.449	3.15	1.384
	Original	93	3.04	1.406	3.40	1.368	3.22	1.395
Specific	Modified	90	4.02	1.382	3.47	1.400	3.74	1.415
	Original	93	366	1.068	3.42	1.370	3.54	1.230
Inferential	Modified	90	3.16	1.357	3.62	1.232	3.39	1.313
	Original	93	3.34	1.273	3.61	1.344	3.48	1.312
Total	Modified	90	10.11	3.114	10.46	3.455		
	Original	93	10.04	3.127	10.43	3.462		
	Total	183	10.08	3.112	10.44	3.449		

Results & Discussion

Go back

2. A Relationship btw Text Conditions in RR and Perceived Text Difficulty

Descriptive Statistics for Perceived Text Difficulty

Level	Group	*N*	M	*SD*
High	Modified	54	3.01	1.200
	Original	52	3.66	1.300
	Total	106	3.33	1.285
Intermediate	Modified	84	4.34	1.231
	Original	84	4.71	1.162
	Total	168	4.53	1.208
Low	Modified	42	5.12	1.247
	Original	50	5.26	1.157
	Total	92	5.20	1.194
Total	Modified	180	4.16	1.454
	Original	186	4.54	1.341
	Total	366	4.35	1.413