

Gains in Reading Comprehension and Fluency for L2 Learners: A Comparison Between Word Recognition Training and Extensive Reading

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BACKGROUND & CONCEPTS

Reading Fluency: L2 readers' ability to automatically recognize an increasing number of words and phrases (Perfetti and Hart, 2002; Grabe, 1991; Paran, 1996; Perfetti, Van Dyke, & Hart, 2001 cited in Grabe 2009)

WRT: Word recognition training; targets orthographic, semantic and phonological aspects of word to aid in processing, fluency & possibly comprehension

Reading Comprehension: Ability to read, process, and understand passage-level texts

ER: Reading extensively to develop good reading habits, vocabulary and structure, and to encourage reading for enjoyment (Burrows, 2012)

Theoretical Underpinnings

- Lexical Quality Hypothesis (Perfetti & Hart, 2002; Perfetti, 2007)
- Verbal Efficiency Theory (Perfetti, 1985)

Previous Studies on ER

- Homan, Kloman, and Hite (1993)
- Tanaka and Stapleton (2007)
- Iwahori (2008)
- Bell (2001)

Previous Studies on WRT

- Fukkink, Hustijn, and Simis (2005)
- Akamatsu (2008)
- Burrows and Holsworth (2016)

Measures

- Pre- and post-test
- Administered in weeks 1 and 6 of the study
 - Reading comprehension (Burrows, 2012; Burrows and Holsworth, 2016). Cronbach's α for pretest: 0.97; Cronbach's α for posttest: 0.96
 - Reading fluency (Burrows, 2012; Burrows and Holsworth, 2016)

Analyses

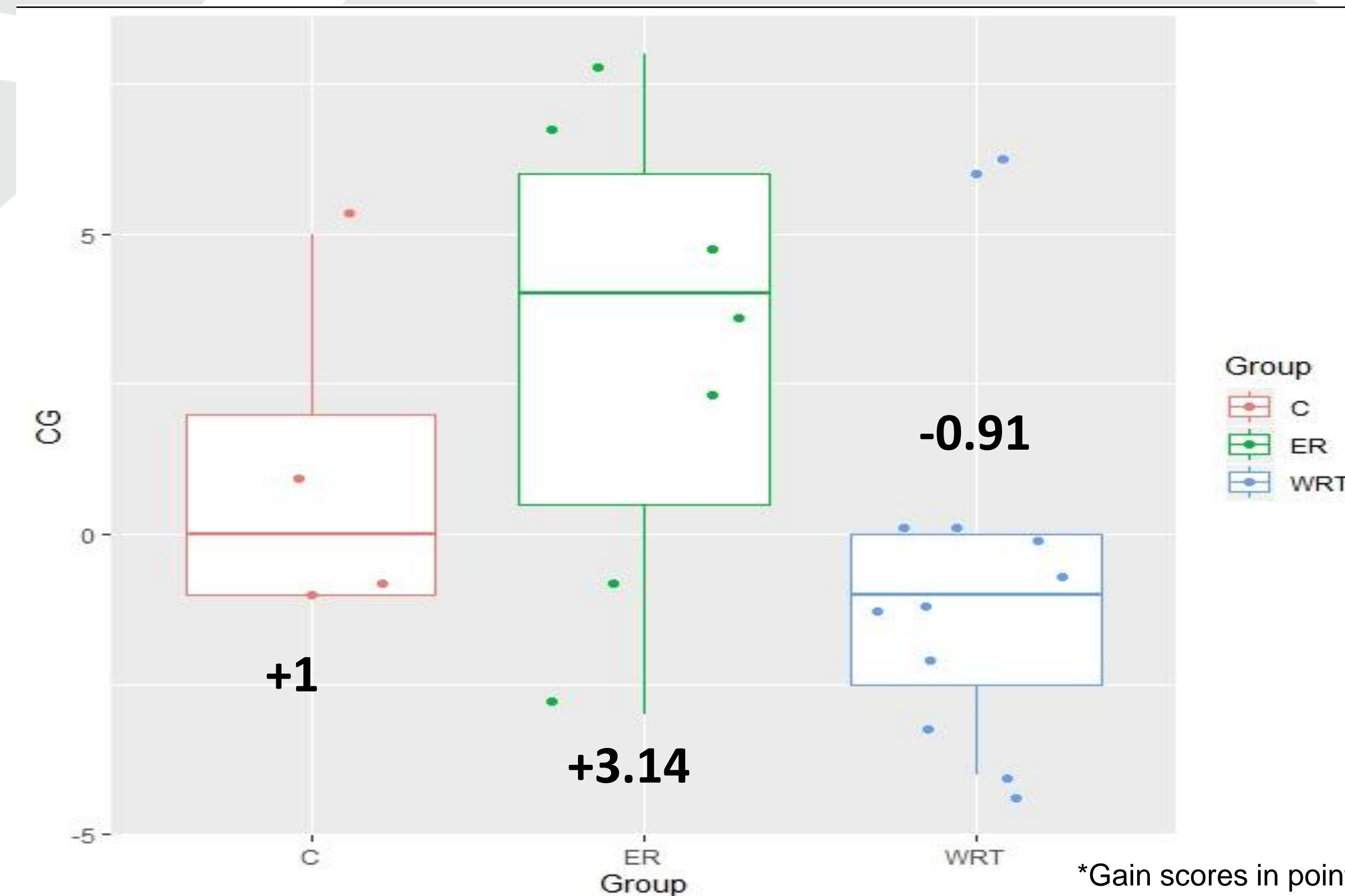
- Simple linear regression (Plonsky and Oswald, 2016)
 - Model #1: Outcome variable = Comprehension Gains, Predictor variable = Group
 - Model #2: Outcome variable = Fluency Gains, Predictor variable = Group

RESULTS

RQ1:

Descriptives: Comprehension Gains

Group	N	Mean CG	SD	SE	CI
Control	4	1.00	2.83	1.41	4.50
ER	7	3.14	4.06	1.53	3.75
WRT	11	-0.91	2.74	0.83	1.84



Model 1: Simple Regression for Comprehension Gains

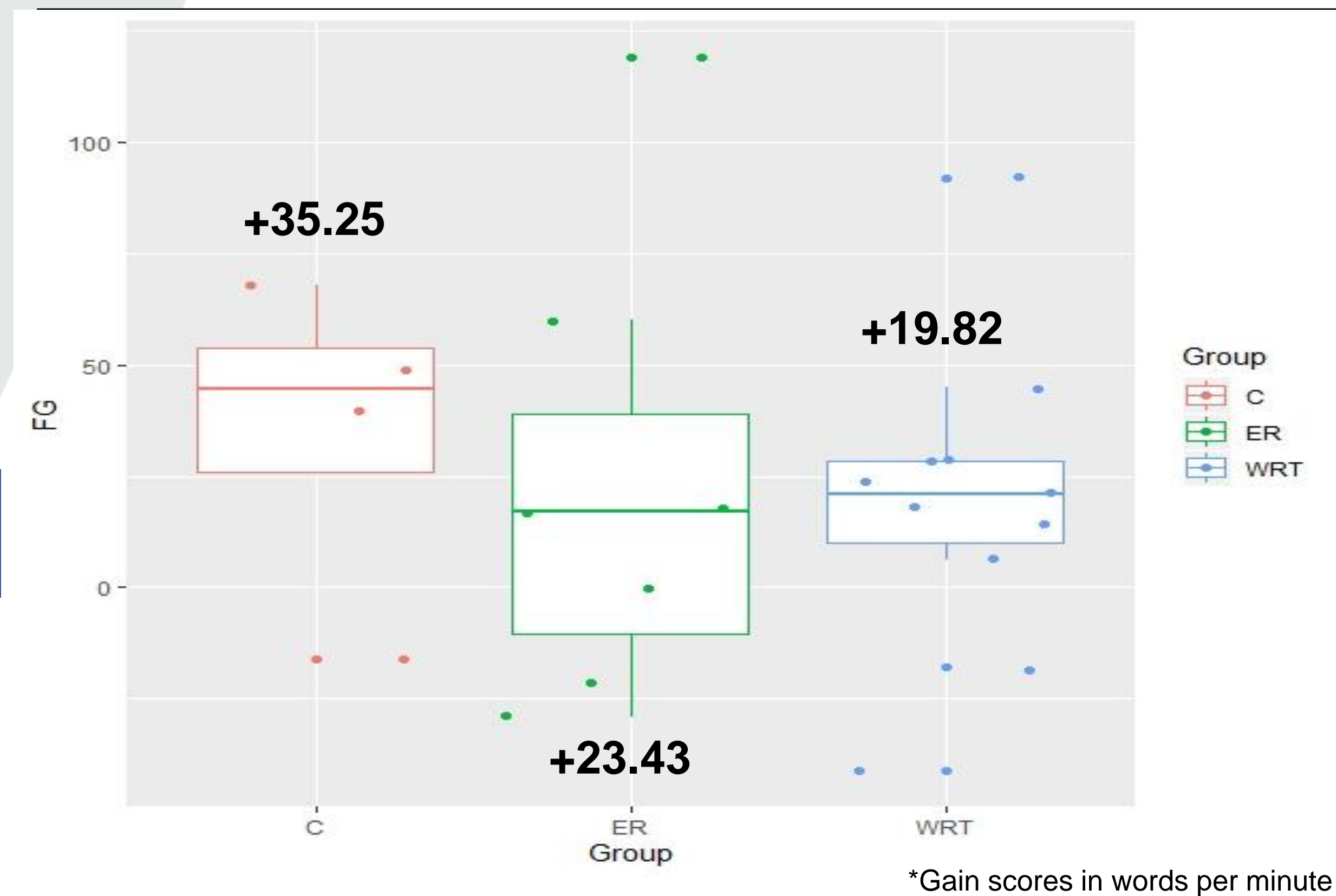
Coefficients	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	1.00	1.61	0.62	0.54
ER Group	2.14	2.02	1.06	0.30
WRT Group	-1.91	1.88	-1.01	0.32

Note. Residual standard error: 3.226 on 19 degrees of freedom, Multiple R-squared: 0.2631, Adjusted R-squared: 0.1855, F-statistic: 3.391 on 2 and 19 DF, p-value: 0.05503

RQ2:

Descriptives: Fluency Gains

Group	N	Mean FG	SD	SE	CI
Control	4	35.25	36.11	18.05	57.45
ER	7	23.43	51.34	19.40	47.48
WRT	11	19.81	33.72	10.17	22.65



Model 2: Simple Regression for Fluency Gains

Coefficients	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	35.25	20.23	1.74	0.98
ER Group	-11.82	25.36	-.47	0.65
WRT Group	-15.43	23.62	-0.65	0.52

Note. Residual standard error: 40.46 on 19 degrees of freedom, Multiple R-squared: 0.0220, Adjusted R-squared: -0.08094, F-statistic: 0.2138 on 2 and 19 DF, p-value: 0.8094

DISCUSSION, LIMITATIONS & IMPLICATIONS

Discussion

- ER was better for comprehension over both the control and WRT
- ER was better for fluency gains than WRT, but not over the control/intensive reading, though all groups showed gains
- The decrease in comprehension in WRT group may be because of the heavy focus on orthographic training over the other aspects, such as semantic that would help with meaning

and comprehension

- Overall, ER resulted in more gains than WRT

Limitations

- Length of study and of sessions
- Resources
- Technology

Implications

- More participants
- Try combining ER and WRT in new experimental group (Holsworth, Ogawa, Marlow & Asaba, 2019)
- Add in word level fluency and comprehension (LDT)

RESEARCH QUESTIONS

RQ1: Does extensive reading over a 6-week period lead to improvement in reading comprehension? Does word recognition training over a 6-week period lead to improvement in reading comprehension? Which leads to greater improvement?

RQ2: Does extensive reading over a 6-week period lead to improvement in reading fluency? Does word recognition training over a 6-week period lead to improvement in reading fluency? Which leads greater improvement?

METHODS

- 6-week study

Participants

- 22 intermediate ESL university students at 2 universities with L1s of Arabic (18), Chinese (3), and Korean (1)

Groups

- 2 experimental groups (WRT and ER) and 1 control

Treatments

- See handout