

Effect of Self-Regulated Strategies on L2: A Meta-Analysis

Unkyoung, Maeng

Ajou University

My5329@ajou.ac.kr

Abstract

The purpose of this study is to examine an overall picture of the effect of self-regulated learning strategy (SRLS) on L2 learning by providing reliable common effect sizes. This study also aims to analyze a moderating variable (school levels) on language learning ability. Through a comprehensive search, a total of 32 primary studies were selected and analyzed to compute the effect sizes using Comprehensive Meta-Analysis software. The major findings are as follows: 1) SRLS is effective to enhance the ability of L2. An overall a medium to large effect size are shown. 2) The effect size of SRLS on L2 proficiency shows no moderating effect between school levels whereas the effect size of correlations between SRLS and L2 proficiency was found between middle and high school level.

Keywords

self-directed learning strategy, self-regulated learning, English proficiency, meta-cognitive strategy, meta-analysis

Introduction

Through developing self-regulated skills learners can be independent and strategically successful in learning L2 (Abbasian & Hartoonian, 2014). Self-regulation can be defined as “processes that learners use to activate and maintain cognition, emotions, and behavior to attain personal goals” (Zimmerman & Kitsantas, 2014, p.145). Learners manage and regulate their cognition, metacognition, motivation, and behavior to obtain their goals (Pintrich, 2004, Schunk, 2005). Thus enhancing self-regulated learning strategy is important in successful L2 learning.

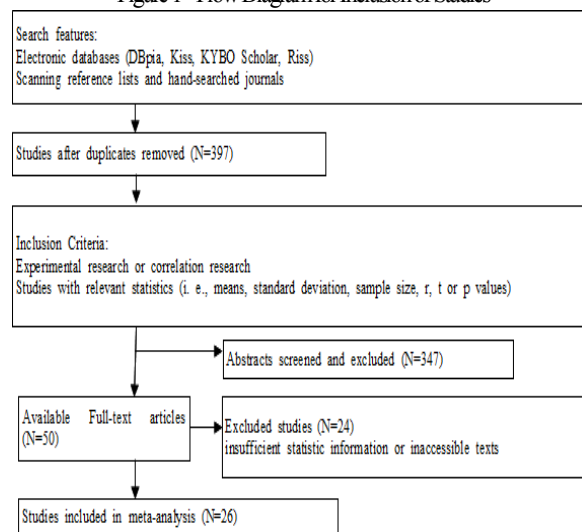
However, the empirical studies conducted in Korea to investigate the effectiveness of SRLS showed mixed results. Some studies reported the positive effect of SRLS on English proficiency of elementary and secondary school students (Part & Im, 2013; Moon, Lee & Kim). Other studies showed no relationship between SRLS and students’ English proficiency. Furthermore, studies reporting the same effect of SRLS were conducted across different research settings, sample sizes, and type of measurements. Thus, it is necessary to verify a common effect of SRLS on Korean learner’s English proficiency and the association of a variable such as institution (school levels). Due to these variables, the true

effectiveness of SRLS on L2 learners in Korea is unknown. The purpose of this study is, therefore, to find out the overall picture of the effect of SRLS on English proficiency of Korean L2 learners. For this the study synthesized the findings of previous experimental and correlational research conducted in Korea inclusively and systematically.

2 Method

This study used multiple data bases to collect relevant studies to perform a meta-analysis. Through the steps shown in Figure 1, 26 studies were included in the present meta-analysis. The collected studies were coded into a database using the coding categories shown in Table 1.

<Figure 1> Flow Diagram for Inclusion of Studies



<Table 1> Data Coding Scheme

Variable	Coding Categories
Identification	1) Author 2) Title of Study 3) Publication Year
Type of Publication	1) Article 2) Dissertation 3) MA Thesis
Moderator Variable	Institution 1) E: Elementary 2) M: Middle School 3) H: High School
Data	1) Based on Correlations (r) 2) Based on Means (M, SD, t)
Outcome	1) English Test (Achievement Test, KCSAT, Mid & Final Exam, PELT, TOEFL, TOEIC) 2) Korean Test (Achievement Test, KCSAT, Mid & Final Exam)

By computing Hedges'g using the software Comprehensive Meta-Analysis 3.0 the effect sizes were calculated based on 55 independent samples from 26 studies.

3 Results

Sine there is no publication bias in the studies, the reported effect is considered to be valid. As shown in Table 3 homogeneity does not exist among primary studies and a random effect model is more reliable to compute the effect size. The overall average effect size of SRLS is .60 indicating a medium to large effect on Cohen's scale¹ (1988).

<Table 2> Overall Effect Size of SRLS on L2 Proficiency

	[95%CI]		Heterogeneity		
	k	ES	Q	df(Q)	P
Fixed	55	0.557[.508-.606]	172.730	54	0
Random	55	0.604[.509-.699]			

The effect sizes of SRLS based on correlations and means were also computed separately. Table 3 shows the effect size computed based on means (.600) and it represent a medium to large effect.

<Table 3> Effect Size of SRLS on L2 Proficiency (Comparison Studies)

	[95%CI]		Heterogeneity		
	k	ESsm	Q	df(Q)	P
Fixed	32	0.464[.383-.544]	90.235	31	0
Random	32	0.600[.448-.751]			

Moderate analysis was conducted to compare the effect of SRLS for subgroups, school level. Although the value of Q_{between} indicates that school level had no significant moderating effect, the effect size of SRLS of elementary school students is the highest and that of middle school and high school students follows in order.

<Table 4> Effect Size of Moderator (Comparison Studies)

Moderator		[95% CI]			Heterogeneity	
		k	ESsm	p	Q_{between}	p
L2 Proficiency	E	8	.661[.345-.976]	.000	391	.820
	M	12	.620[.382-.858]	.000		
	H	12	.539[.284-.794]	.000		

. Table 5 shows the effect size computed based on correlations (.617) and it also represent a medium to large effect.

Moderate analysis was also conducted and the result showed in Table 6. Correlation studies on SRLS were not conducted in the elementary school level. 4 samples of correlation were excluded from moderating analysis since there was no information indicating school level.

¹ Small, medium, and large effect size are .20, .50, and .80 respectively.

<Table 5> Correlation btw SRLS and L2 Proficiency (Correlation Studies)

	[95%CI]		Heterogeneity		
	k	ESr	Q	df(Q)	P
Fixed	23	0.613[.551-.675]	74.231	22	.000
Random	23	0.617[.500-.735]			

The value of Q_{between} indicates that school level had a significant moderating effect. The ESr of middle school level is .386, representing a small to medium effect. The ESr of high school level is .698 and it represents a medium to large effect.

<Table 6> Effect Size of Moderator (Correlation Studies)

Moderator		[95% CI]			Heterogeneity	
		k	ESr	p	Q_{between}	p
L2 Proficiency	M	4	.386[.146-.626]	.000	7.565	.022
	H	15	.608[.470-.745]	.000		

4 Conclusion

The study found some important factors related to the effect of SRLS. Overall SRLS has a medium to large effect on enhancing Korean students English proficiency. The study also found that the effect size of correlations between SRLS and English proficiency of high school students is higher than that of middle school students whereas the effect size based on means represents a medium to large effect regardless of school levels.

References

- Abbasian, G. R. & Hartoonian, A. (2014). Using Self-regulated Learning Strategies in Enhancing Language Proficiency with a Focus on Reading Comprehension. *English Language Teaching*, 7(6), 160-167.
- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. (2009). *Introduction to meta-analysis*. New York: Wiley
- Cohen (1988). *Statistical power analysis for the behavioral sciences* (2nd ed), New Jersey: Lawrence Erlbaum Associates.
- Park, Jimin & Im, Byung-Bin(2013). The effects of metacognitive reading strategies training on English reading motivation and proficiency. *Journal of Linguistic Studies*, 18(1), 89-113.
- Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4), 385-407.
- Schunk, D. H. (2005). Self-regulated learning: The educational legacy of Paul R. *Educational Psychologist*, 40(2), 85-94.
- Zimmerman, B. J., & Kitsantas, A. (2014). Comparing students' self-discipline and self-regulation measures and their prediction of academic achievement. *Contemporary Educational Psychology*, 39(2), 145-155.