Efficacy Study of Raz-Plus

A Blended Learning Platform for K–5 Reading

Findings suggest that Raz-Plus is an effective supplemental resource to improve elementary student reading achievement and interest level.

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McREL INTERNATIONAL

Hsiang-Yeh Ho, Ph.D.
304.347.1845 | hho@mcrel.org

Executive Summary

In the spring of 2018, McREL International conducted a study of Learning A–Z's Raz-Plus elementary reading program to determine how often K–5 teachers used the program and whether it made a difference in students' achievement and interest level in reading.

The 13-week study involved 662 students from 39 classrooms in three rural elementary schools in the southeast U.S. All three schools served predominantly low-income, minority student populations.

Findings

- Most teachers used the Raz-Plus program as a supplemental resource to support their existing curriculum plan.
- On average, teachers used the Raz-Plus materials 3–5 times per week for a total of 60–90 minutes.

- Students whose teachers used the program had higher average reading achievement scores than the control group.

- Students whose teachers used the program showed a higher level of interest in reading than the control group.

The findings suggest that Raz-Plus is an effective supplemental resource to improve elementary students' reading achievement and interest within high poverty and high racial/ethnic minority rural schools.

About Raz-Plus

Raz-Plus is a blended learning platform that supports multiple levels of K–5 teacher practice and student experiences. It is designed to serve students at every reading level and incorporates differentiated and personalized online reading instruction, classroom instructional resources, formative assessment, and data-driven reporting to enhance student reading performance and help teachers plan future instruction. The program includes more than 50,000 resources, including developmentally-appropriate leveled books; other reading resources in multiple formats (printable, projectable, online, and mobile); lesson plans, activities, and assessments to guide teacher instruction around leveled books; and instruction-informing, data-driven online reports at both the individual and classroom levels.

About the Study

Learning A–Z contracted McREL to design and manage this study. McREL conducted the study using an objective methodology and analysis, and with adherence to national standards for research practices.

Participating Population

Thirty-nine K–5 English language arts teachers from three rural elementary schools in two Southeast U.S. districts participated in the study. A total of 662 students were enrolled in the participating classrooms during the 2017–18 spring semester, when the study occurred. All students from the participating schools received free or reduced-price lunch (an indicator of poverty status), and the schools primarily served students from racial/ethnic minority backgrounds (80–96%), predominantly African-American.

Research Design and Procedure

McREL used a three-level multisite randomized control trial study design, with participating teachers randomly assigned to treatment or control groups within school and grade level strata.

The 21 teachers assigned to the treatment condition used the Raz-Plus program with their students during the 13-week-long spring semester of the 2017–18 school year. These teachers were provided with two professional development sessions.

The first PD session, delivered onsite before the study began, gave the teachers an overview of Raz-Plus, the developer's recommended curriculum plan, the Raz-Plus online portal, and expectations on program use and implementation. Since Raz-Plus was designed as a supplemental resource that teachers can use as frequently as they want to support classroom instruction, Learning A–Z did not have guidelines regarding how much time per week teachers should use Raz-Plus. After consulting with Learning A–Z, the McREL evaluation team established two implementation guidelines for the study's treatment teachers: Integrate the recommended curriculum plan with your existing curriculum plan, and use the program materials in your instructional and/or student activities at least 150 minutes per week.

The second PD session was delivered in person or via webinar, depending on teachers' availability, during weeks 5 and 6 of implementation. This PD focused on data-driven instruction using the Raz-Plus online portal, and teachers had opportunities to ask questions regarding program use and implementation. Additionally, the treatment teachers received unlimited access to the pre-recorded online professional development sessions as well as technical support that the program developer provides to all of its Raz-Plus customers.

The 18 teachers who were assigned to the control condition were instructed to conduct business as usual during the study period. As thanks for their participation after the study was completed, the control-group teachers were offered the program and the same professional development as their treatment colleagues had experienced.

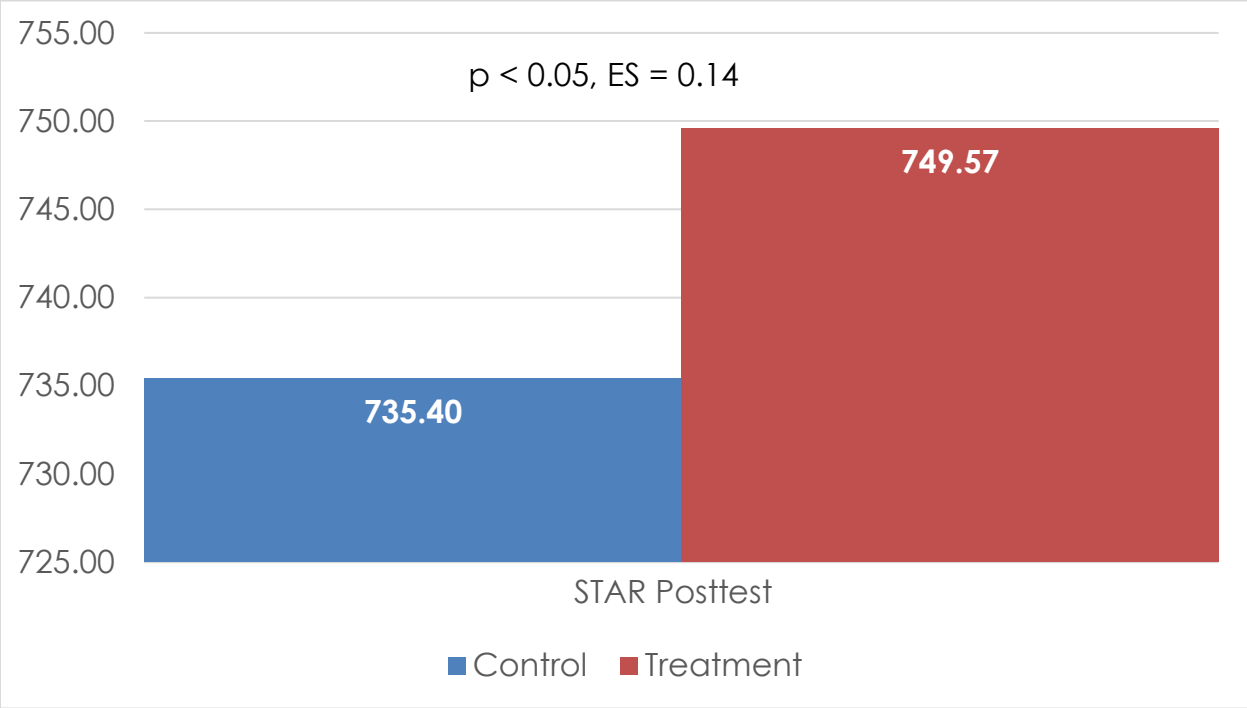
Mixed methods were used to collect data on teachers' use of Raz-Plus, including classroom observations and interviews with treatment teachers, surveys of treatment and control teachers, and usage data collected through the Raz-Plus online portal.

The STAR assessment was used for both pre- and post-assessments of student literacy skills (Renaissance Learning, 2016a; Renaissance Learning, 2016b). The Elementary Reading Attitude Survey (ERAS) was used for both pre- and post-assessments of student interest in academic and recreational reading (Kazelskis et al., 2005). The ERAS was only administered to students between grades three and five.

Detailed Findings

Figure 1 shows the mean difference on student reading achievement outcomes between the treatment and control groups (i.e., 14.17 points difference). Although the effect size was small (ES = 0.14), the difference between groups was statistically significant ($p < 0.05$).

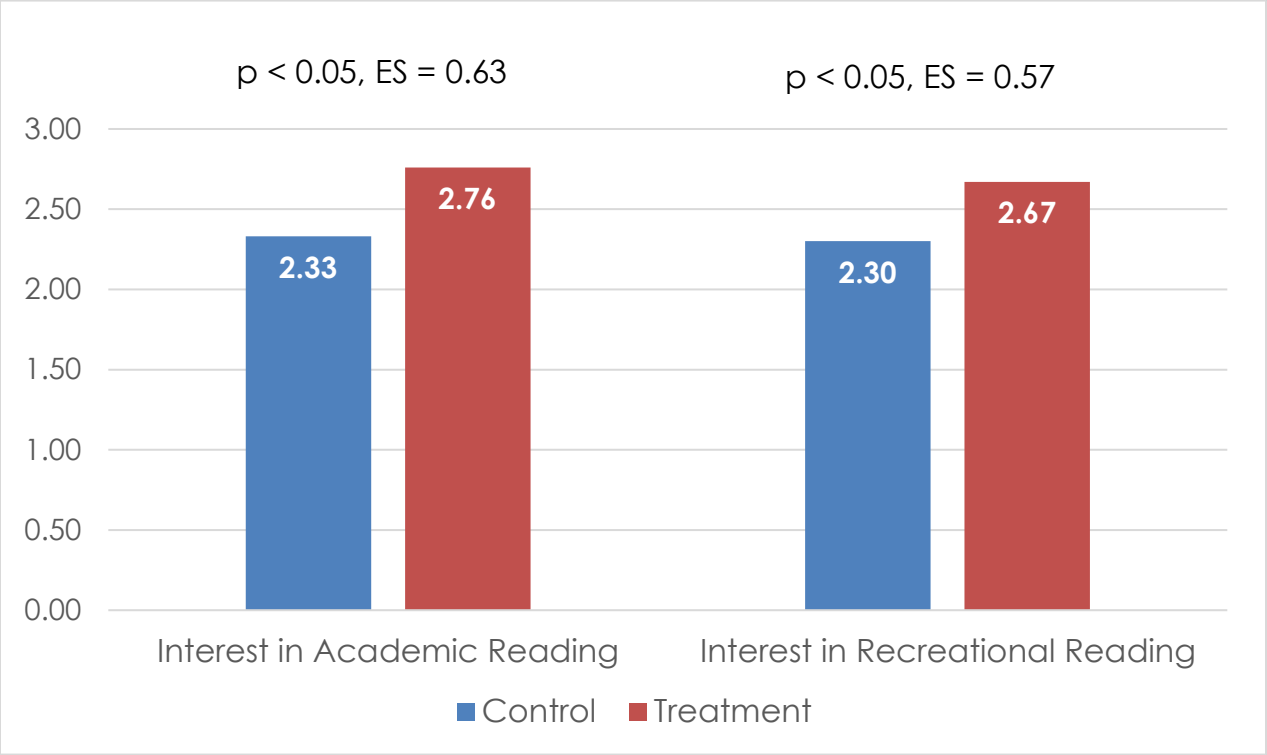
Figure 1. Student reading achievement, mean difference between treatment and control condition (post test)



Means presented are adjusted, accounting for the covariates including pre-test data.

Figure 2 shows the mean differences on student interest in academic reading (i.e., 0.43 points difference, $p < 0.05$) and recreational reading (i.e., 0.37 points difference, $p < 0.047$). The effect size was large on student interest in academic reading (ES = 0.63) and student interest in recreational reading (ES = 0.57).

Figure 2. Student reading attitude, mean differences between treatment and control condition (post test)



Means presented are adjusted, accounting for the covariates including pre-test data.

References

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