



Reading Plus® National Research Project Galatas Elementary Study Summary 2005 – 2006

Second grade students from Galatas Elementary School in The Woodlands, Texas participated in this controlled study using Reading Plus®. Thirty-four students in the treatment group received at least 40 sessions of Reading Plus®, which included PAVE™, D-Code™, Word Memory™, Cloze Plus™, Comprehension Power™, and at least 40 lessons in Guided Reading™. Forty-five students in the control group used leveled reading books and both groups spent equal time in reading instruction. The treatment group's average score on the Gates-MacGinitie Reading Tests improved significantly (.015) by an average gain of 1.25 Grade Equivalents, while the control group made a less average gain of .72 Grade Equivalents. In pre and post Visagraph™ recordings, the treatment group also made substantial improvements in reports of fewer regressions and fixations, and a greater improvement in reading rate over the control group. Reading improvement was also seen in the progress made by the treatment group in Guided Reading™ training, with most students showing gains of at least one content level and average increases of 63 more words per minute. Texas standardized tests administered the following year after the study resulted in 71.72% of treatment students receiving a commended performance score of 94% or better, as compared to the state average of 36%.



Reading Plus® National Research Project Galatas Elementary Study Overview 2005 – 2006

Introduction

A study involving a total of twelve schools during the 2005-2006 school year was coordinated by Dr. John Shelley-Tremblay, Researcher and Assistant Professor in the Department of Psychology at the University of South Alabama. Second grade students from Galatas Elementary School, located in a suburban area of The Woodlands in Texas, participated for half a year as part of this study. A total of 102 students with mixed reading abilities from below to above average were randomly selected to participate in the study, 52 students in the treatment group and 50 students in the control group. During the course of the study, some students from both groups moved from the school district and did not complete the post testing, therefore excluding them from the concluding analysis. Thirty-four treatment students who used Reading Plus® based on the requirements set forth in this study and forty-five remaining control students were considered in the final analysis.



Purpose of Research

This research project was conducted to investigate whether the use of Reading Plus® contributes significantly to students' gains made in standardized test scores on the Gates-MacGinitie Reading Tests and Visagraph™ eye movement appraisals. Many individual studies have been conducted in the past using Reading Plus®, and standardized test results have proved to be promising; however, few studies prior to this exploration have been conducted with second grade students using the Reading Plus® system. Hence, the present study was conducted to show the effectiveness of Reading Plus® on these lower reading levels.

Methodology

All 79 second grade students considered for final analysis (34 treatment, 45 control) were administered the Gates-MacGinitie Reading Tests, Level 2, Pre (Form S) and Post (Form T) to measure reading achievement along with Pre and Post Visagraph™ eye movement recordings to measure reading efficiency. The Reading Plus® usage of the 34 treatment students averaged 3 times per week. These students used Reading Plus® for half a school year, completing the minimum required 40 or more sessions of Reading Plus® programs, including 40 or more lessons in Guided Reading™ fluency development.

The control group received small group reading instruction from leveled books such as *Rigby Literacy* by Harcourt Rigby Education, *Wright Group Literacy* by Wright Group/McGraw Hill, and *Orbit* by Pacific Learning. Lessons taught in these books consisted of vocabulary and comprehension development skills.

The two groups spent an equal amount of time on their reading instruction.

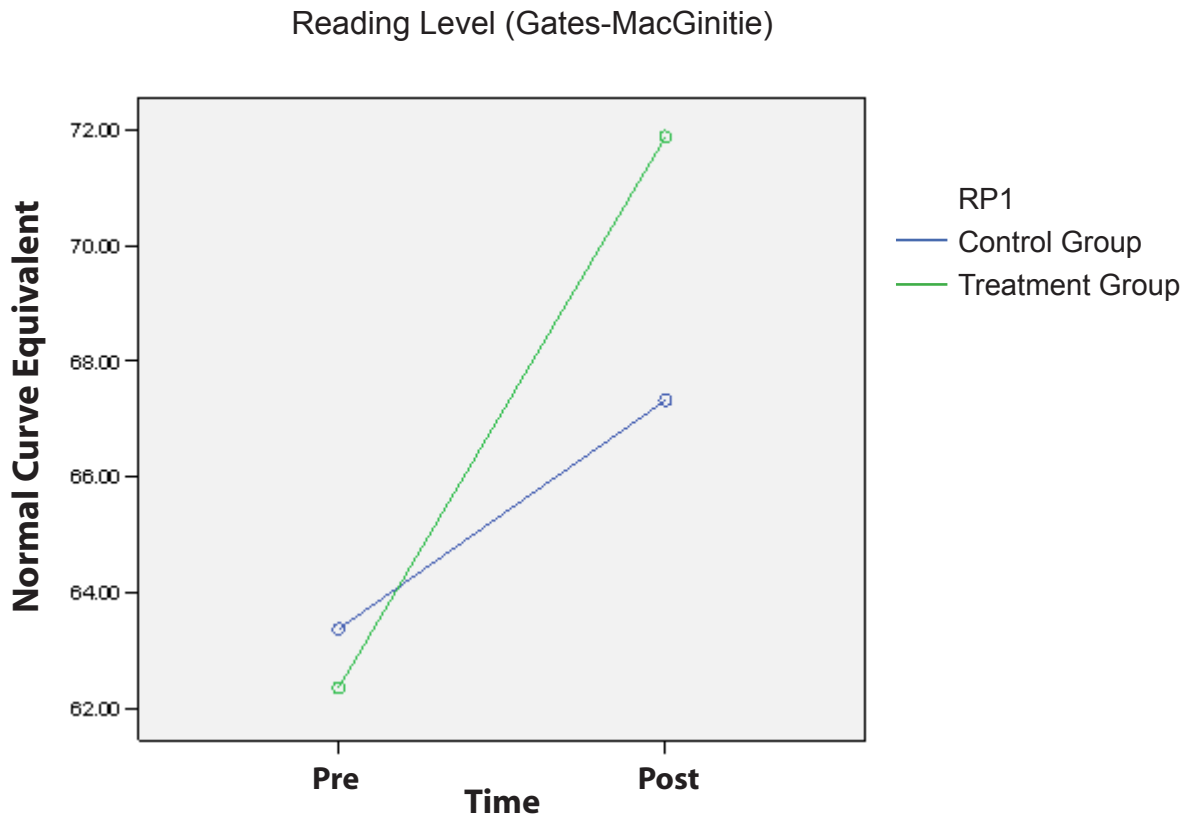
Results

An analysis was conducted to determine the relative effectiveness of Reading Plus® in producing changes in Reading Comprehension scores as measured by Gates-MacGinitie scores. Data from all second grade participants was entered into repeated measures ANOVA performed on the mean Gates-MacGinitie Normal Curve Equivalent (NCE) scores for experimental ($n = 34$) and control ($n = 45$) participants separately using the pre and post-treatment scores. For this analysis, a main effect of time appeared as $f(1,078) = 36.413, p < .001$, but an additional interaction between Time and Group also appeared, $f(1,078) = 6.218, p = .015$, indicating that the Reading Plus® treatment group improved in reading significantly more than the control group on the Gates-MacGinitie Test.



The following graph shows the results of the pre and post Gates Reading Tests for both Treatment and Control groups.

The metric used for ANOVAs is the Normal Curve Equivalent:



The Average Grade Equivalents (Gates-MacGinitie) are as follows:

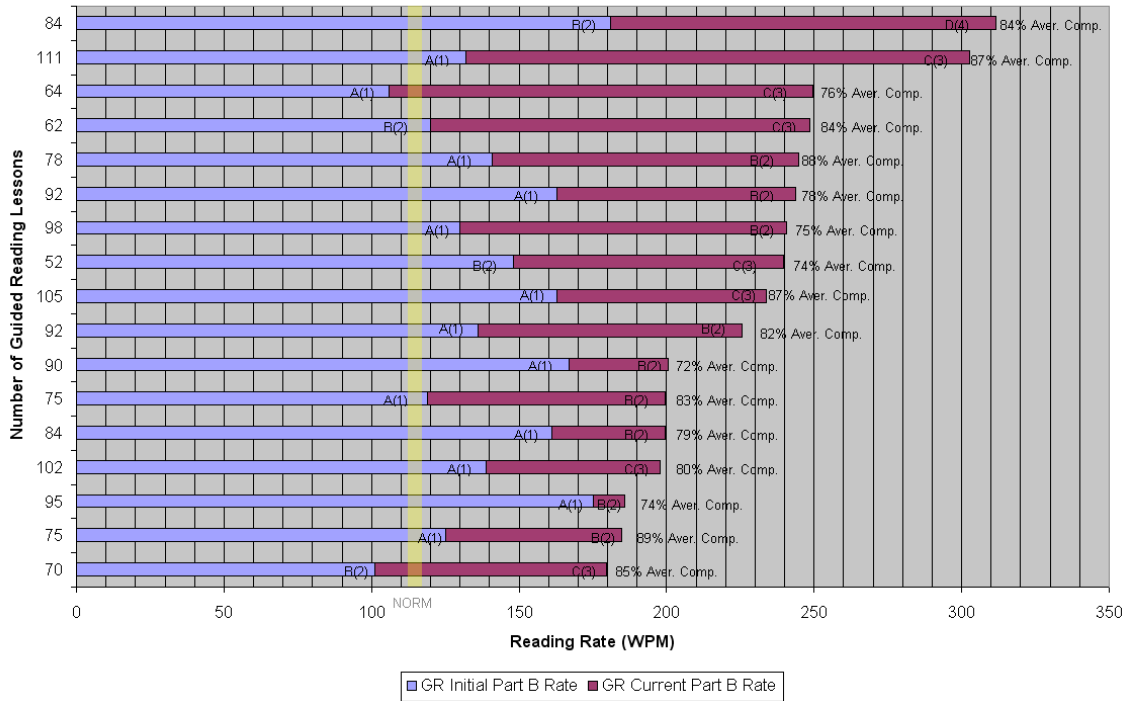
| | PreTest Mean | PostTest Mean |
|-----------|--------------|---------------|
| Control | 3.20 | 3.92 |
| Treatment | 3.16 | 4.41 |

The following bar graphs show the treatment group's Reading Plus® Guided Reading™ rate changes. The treatment students read an average of 74 Guided Reading™ lessons with an average comprehension rate of 76%. On average, the students initially read at 118 words per minute. Upon completion of the study, students were reading an average of 181 words per minute, an average rate gain of 56%. The majority of students also increased their reading levels by one grade level above their initial assigned reading level, while others increased by two grade levels.

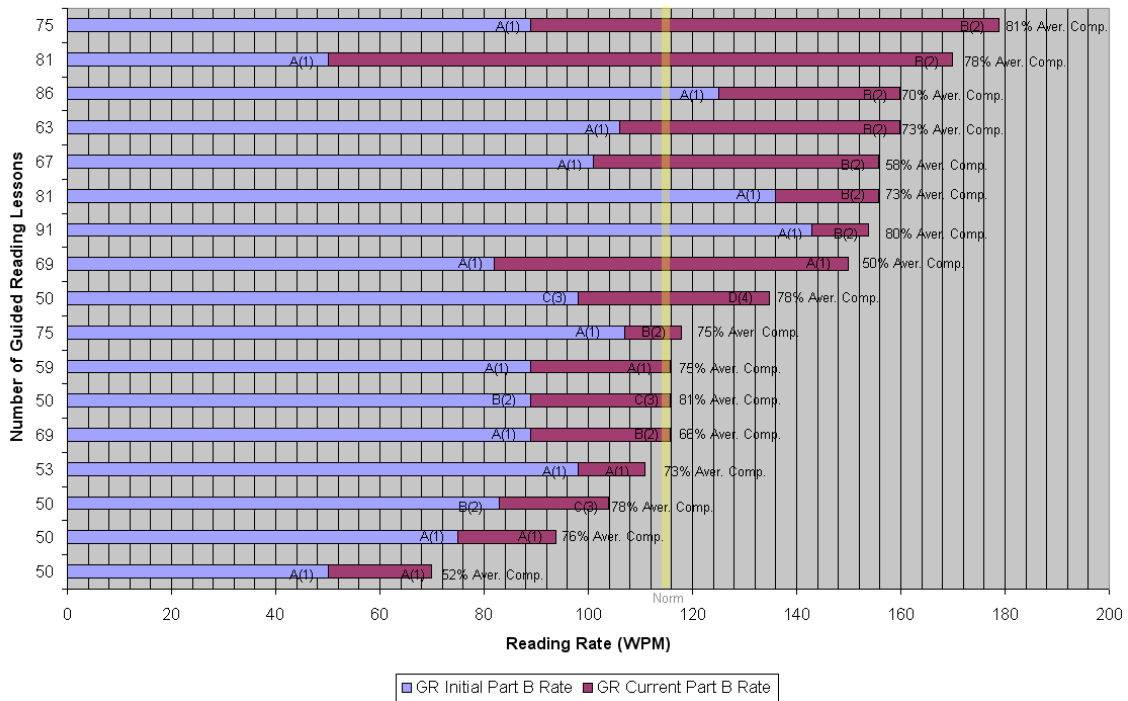


Galatas Elementary School 2005-2006

2005-2006 Galatas Elementary School (1)



2005-2006 Galatas Elementary School (2)





The results of the Visagraph™ eye movement recordings, which measure reading efficiency or fluency in silent reading, for both treatment and control groups are as follows:

Visagraph™ Average Grade Level Equivalent (GLE):

| | Pre GLE | Post GLE |
|------------------|---------|----------|
| Control | 3.43 | 3.96 |
| Treatment | 2.36 | 4.16 |

The treatment group made a substantial average gain of 1.8 GLE, or over a year and half grade level gain when post tested on the Visagraph™. By contrast, the control group made a lesser average grade level gain of only 0.53, a half year gain in their GLE.

Visagraph™ Average Fixations:

| | Pre Fixations | Post Fixations |
|------------------|---------------|----------------|
| Control | 173 | 167 |
| Treatment | 196 | 152 |

The treatment group made fewer fixations after using Reading Plus® than the control group. On average, fixations decreased by 22.45% in the treatment group, and only 3.47% in the control group.

Visagraph™ Average Regressions:

| | Pre Regressions | Post Regressions |
|------------------|-----------------|------------------|
| Control | 29 | 30 |
| Treatment | 37 | 25 |

The treatment group made fewer regressions after using Reading Plus®, while the control group made no improvement at all. On average, regressions decreased by 32.43% in the treatment group, and actually increased by 3.45% in the control group.



Visagraph™ Average Reading Rate (WPM):

| | Pre Rate | Post Rate |
|-----------|----------|-----------|
| Control | 126 | 146 |
| Treatment | 108 | 157 |

The treatment group increased their reading rate by an average of 45.37%, or 49 more words per minute, while the control group experienced a smaller increase of 15.87%, or an average of 20 more words per minute. For perspective, according to the study conducted by Taylor, Frackenpohl, and Pettee (1960) on National Grade Level Norms, the national norm rate for second grade at mid year is 115 wpm and the norm rate for fourth grade is 158 wpm.

Conclusions and Summary

This study examined the benefits of implementing Reading Plus® with second grade students with varying reading abilities. The treatment group used various programs in Reading Plus® for half a school year: PAVE™, D-Code™, Word Memory™, Guided Reading™, Cloze Plus™, and Comprehension Power™. The students used Reading Plus®, on average, 3 times per week, for the minimum required forty sessions, including forty or more lessons of Guided Reading™. The control group used leveled reading books, and both groups spent equal time on their reading instruction.

Reading Plus® was designed to help students with foundational reading fluency skills which include achieving adequate reading rates, reaching or exceeding grade level content, and improving vocabulary and comprehension skills. The results of this study clearly show that the treatment group students who used Reading Plus® according to the required and recommended usage of at least 40 sessions with 40 or more Guided Reading™ lessons did significantly better in achieving these goals than the control group who used other reading instructional methods. Although both groups did make improvements over the course of the study in each of the testing variables, the Reading Plus® treatment group made a more substantial gain in all forms of analyses. In the Gates-MacGinitie Reading Test, the treatment group made a significant improvement in reading achievement with average grade equivalent gains of over one grade level, while the control group made less than a grade level gain. The Visagraph™ results, after pre and post recordings, also indicated a much greater improvement in the treatment group's Grade Level Equivalent, number of fixations and regressions, and reading rate than in the control group's.



Galatas Elementary School 2005-2006

Improvements in reading by treatment students can also be seen in the gains made in Reading Plus®. More than half of these students made at least one level gain in content levels of Guided Reading™, with some students reading two levels higher at the end of the study. Average words per minute increased from 118 to 181, or by 63 more words per minute, while students maintained an average comprehension level of 76%.

The long term effects of implementing Reading Plus® can be seen in the test results from the following year (February 2007) Grade 3 students' Reading TAKS (Texas Assessment of Knowledge and Skills). While as second graders during the course of the study, the treatment group used Reading Plus® for the first half of the school year, and the control group had the opportunity after the study was completed to use Reading Plus® for the second half of the school year. Not only did all students pass the TAKS as third graders, but 71.72% had a commended performance score of 94% or higher, as compared to the state average of only 36% commended performance reported for February 2007. This marks the second year in a row that this school had such a high rate of commended performance after using Reading Plus®.

It should also be noted that while the treatment group students used Reading Plus® from mid September through the first week in December 2005, they were able to retain the gains made for over a year, as seen in their February 2007 TAKS score results. The control group used Reading Plus® at a later date, from early March through May 2006, and also achieved outstanding TAKS scores. The average scaled scores were nearly the same for both groups, 2460 for the treatment group and 2474 for the control group, indicating retention from both groups, but a longer span of retention for the treatment group.