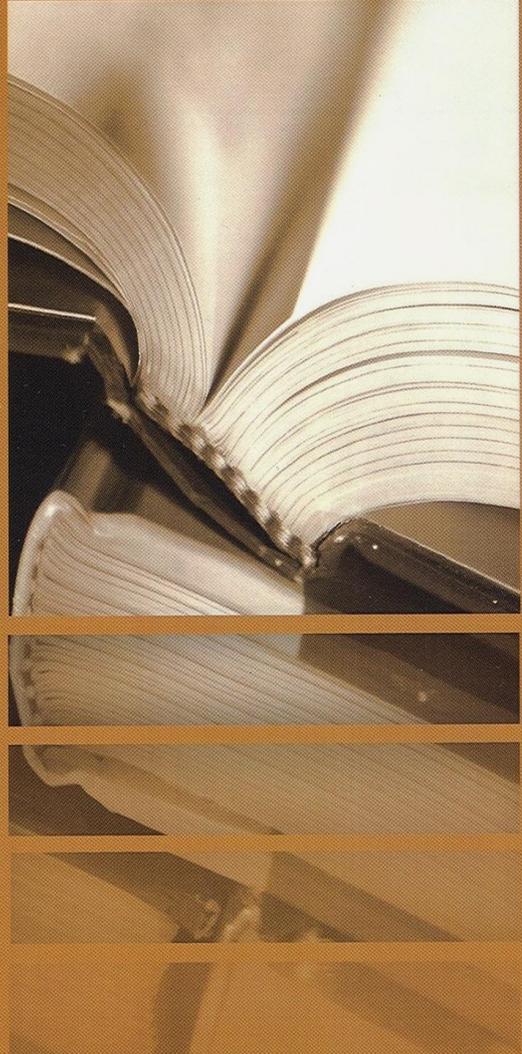


FOUNDATIONS & FRAMEWORKS



RESEARCH SUMMARY

Foundations & Frameworks
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Introduction

From its initial implementation in 2001, *Foundations & Frameworks* has been the subject of serious academic research. The following summaries highlight the findings from this research.

Initial Research – 2003

Mrs. Debbie Robertson conducted the initial research on *Foundations & Frameworks* in northwest Missouri. The project formed the basis for Mrs. Robertson's master's thesis and was overseen by Dr. Julie Albee of Northwest Missouri State University.

Third and fourth grade teachers administered the Test of Reading Comprehension-3 (TORC-3) to fifty-two third and fourth grade students at the research site in September 2002 and again in May 2003. Under Dr. Albee's guidance, Mrs. Robertson analyzed the pre-/post-test results for gain.

The results, summarized in the table below, indicate significant gains made between the pre-testing in the fall and the post-testing in the spring.

Mean Pretest Percentile Ranks	Mean Posttest Percentile Rank	Significance
55.9	70.5	0.01
Mean Pretest Stanine	Mean Posttest Stanine	Significance
5.3	6.3	0.01

The following details highlight some of the study's additional findings:

- 92% of the students maintained or increased stanine scores
- 56% of the students increased on or more stanines
- 55% of the students increased their percentile rank by ten percentage points or more
- 100% of the students displayed increased reading comprehension abilities

Research Project – 2004

After guiding Mrs. Robertson's research, Dr. Julie Albee designed a more extensive research project. In Fall 2003, 1,528 students in grades 3-6 from six different schools in Alabama, Georgia, Mississippi, Missouri, New York, and Wisconsin were given the *Gates-MacGinitie Reading Test, 4th Edition (GMRT-4)*, Form S. The same students were tested with Form T of the GMRT-4 in Spring 2004. Approximately seven months passed between the pre-testing and the post-testing. Reading comprehension and vocabulary pre-test and post-test scores were analyzed for gain. Results were reported in grade equivalencies and compared with the expected results (+.7). The table below presents the results for each grade level.

Vocabulary			
Grade	Mean Grade Equivalency Gain	Growth Beyond Expected Results	Significance
3	1.26	0.56	0.005
4	1.9	1.2	0.001
5	1.39	0.69	0.003
6	1.92	1.22	0.001
Reading Comprehension			
3	0.93	0.23	0.07
4	1.54	0.84	0.001
5	1.25	0.55	0.002
6	1.3	0.6	0.001

Dr. Albee states:

Foundations & Frameworks shows excellent potential as a reading program resulting in success for students. The percentage of children who achieved more growth than expected achievement in both vocabulary ($p < .000$) and comprehension ($p < .000$) was highly significant. According to the National Assessment of Educational Progress (2001) only thirty-two percent of the nation's fourth graders performed at or above the proficient (comparable to grade level) achievement level, therefore it is important to note that the average growth in students' vocabulary scores was between 1.26 and 1.92 for all grade levels (3-6) in seven months, and the average growth in students' comprehension was .93 to 1.54 in seven months. This growth is even more significant when considering that the scores from the highest achieving students in all grade levels are not included due to their high pre-test scores. (p. 13)

In this research project, $\frac{1}{4}$ of the fifth grade students and $\frac{1}{3}$ of the sixth grade students had post-test scores that exceeded the GMRT-4's ability to accurately measure. For this reason, as Dr. Albee indicates, their scores were not included in the analysis.

Comparative Research – 2006

Dr. Kevin Washburn conducted a twofold research project focused on middle school reading instruction. First, it examined the quantitative effects of two reading programs on reading comprehension and critical thinking achievement of fifth grade students in rural Wisconsin. Second, the study presented a rubric to use in considering the following instructional considerations: 1) neurocognitive elements, 2) instructional processes, 3) instructional materials, and 4) professional development components.

In September 2004, teachers administered the *Gates-MacGinitie Reading Test, 4th Edition*, Form S, to the fifth grade population. In May 2005, the *Gates-MacGinitie Reading Tests, 4th Edition*, Form T, was administered. In September 2004, teachers within the research site school system administered the Cornell Critical Thinking Skills Test, Form X, to the fifth grade population. In May 2005, the Cornell Critical Thinking Skills Test, Form X, was re-administered.

Between the pre- and post-testing, half of the research population received reading instruction in *Foundations & Frameworks* and half of the research population received reading instruction in a commercially-produced basal reading series program. As indicated by the following table, significant correlations were found to exist between the reading program used for instruction and student achievement in reading comprehension and critical thinking.

	Foundations & Frameworks	Basal Series Program
Reading Comprehension		
Mean Gain	22.38	11.9
Significance	0.046	
Critical Thinking		
Mean Gain	10.42	6.21
Significance	0.012	

In both reading comprehension and critical thinking, the mean gain of students in the *Foundations and Frameworks* group was significantly greater than that of the students in the basal series program group. The reason for this difference may be explained by the rubric-based assessment of each program. *Foundations & Frameworks* was assessed as having “consistent alignment with research findings” in neurocognitive elements, instructional processes, instructional materials, and professional development components, the rubric’s highest possible score. In contrast, the basal series program was assessed as having “limited alignment with research finding” in the same areas.

Urban School Study – 2008

Dr. Cheryl Blackmon conducted a three-part study in urban Christian schools to investigate the effectiveness of *Foundations & Frameworks* after seven months of implementation. First, results were examined from a pretest-posttest comparison of fourth and fifth grade achievement in reading comprehension and vocabulary. Secondly, a comparison was conducted of actual growth to expected growth for reading comprehension and vocabulary. Thirdly, achievement in reading comprehension and vocabulary was compared between schools that implemented *Foundations & Frameworks* and schools that did not implement *Foundations & Frameworks*.

Students from five urban schools that implemented *Foundations & Frameworks* were given the *Gates-MacGinitie Reading Test, 4th Edition* (GMRT-4), in Fall 2005 (Form S) and Spring 2006 (Form T). Results from 60 fourth grade students and 70 fifth grade students were analyzed. Significant differences were observed in pretest and posttest scores for vocabulary and reading comprehension at both grade levels, with effect sizes of $d = .55$ and $d = .60$ for fourth grade vocabulary and reading comprehension and $d = .62$ and $d = .64$ for fifth grade vocabulary and reading comprehension. Results are summarized in the following table:

Vocabulary				
Grade	Mean Pretest Score	Mean Posttest Score	Difference	Significance*
4	474.93	492.68	17.75	.00
5	497.66	515.71	18.06	.00
Reading Comprehension				
4	468.43	481.77	13.33	.00
5	491.59	508.19	16.60	.00

*Significant at $p < .05$

In the comparison of actual growth to expected growth following seven months of *Foundations & Frameworks*, a highly significant difference was observed in vocabulary and reading comprehension for fifth grade students ($p = .001$). Although results did not reach the level of significance ($p < .05$), achievement in vocabulary for fourth grade students exceeded expectations. Results are summarized in the following table:

Vocabulary				
Grade	Expected Growth	Actual Growth	Difference	Significance*
4	13.07	17.75	4.68	.07
5	9.34	18.05	8.71	.00
Reading Comprehension				
4	---	---	---	---
5	10.41	16.60	6.19	.00

*Significant at $p < .05$

Results from the Stanford Achievement Test – 10th Edition (SAT-10), which was administered in consecutive years and provided pre- and posttest data, were analyzed for comparison of 52 fourth and fifth grade students in *Foundations & Frameworks* schools and 51 fourth and fifth grade students in schools that did not use *Foundations & Frameworks*. No significant differences in results were noted. However, results of the comparison study were encouraging because students in *Foundations & Frameworks* schools exhibited comparable growth during the initial implementation of a program that required a major paradigm shift for teachers and students.

Conclusion and Discussion

Foundations & Frameworks, a program characterized by consistent alignment with research findings, appears to positively affect student achievement in reading comprehension. Robertson (2003), Albee (2004) and Washburn (2006) validate the program's influence on reading comprehension and critical thinking. In analyzing *Foundations & Frameworks*, three characteristics that likely contribute to its success become evident:

1. Implementation of the program follows extensive professional development. Teachers gain theoretical knowledge, organizational knowledge, and practical knowledge prior to implementing the instructional program. As a result, teachers gain intentionally over the instructional process and develop units addressing student needs.
2. Implementation of the program occurs within a flexible but guiding instructional design. As a result of professional development, teachers know how to sequence effective instructional methods to achieve optimal results. Yet the program features sufficient flexibility for teachers to pace and provide instruction in accordance with student needs. Teachers know the plan, providing confidence in implementation, but also gain awareness of student needs, enabling differentiated instruction as necessary.
3. Implementation occurs under the direction of clearly stated goals and clearly defined levels of proficiency. Teachers know the goal of instruction and have a basis for evaluating student ability and for providing students with beneficial instructive feedback.

Each major characteristic of *Foundations & Frameworks* corresponds with a significant theoretical implication of research findings. Snow (2002) states the following:

Regardless of the quantity and quality of research-based knowledge about comprehension, students' reading achievement will not improve unless teachers use that knowledge to improve their instruction. There is good reason to look closely at this issue: Researchers find that most teachers, even those who say they use reform models, still rely primarily on traditional practices. Other researchers point to the importance of teacher quality as a critical variable in student achievement. (p. xviii)

Darling-Hammond (2000) claims that teacher quality and expertise consistently and accurately predicts student reading achievement. Sykes (1999) claims that significant curricular reforms, including improvements in reading instruction, fail without adequate professional development. Ferguson (1991) quantifies the teacher's contribution to student achievement at 43%, a factor of major significance. Snow (2002) presents the logical conclusion: "Thus, the teacher must be front and center as we discuss how to improve comprehension instruction in schools today" (p.49).

"Numerous studies, policies, and programs have addressed the persistent problem of underachievement among poor urban students and its array of possible causes. The No Child Left Behind Act (NCLB) links teacher quality to improved student achievement, especially among low-income urban children of color. Consequently, improving teacher quality has become one of the hallmarks of current reform efforts." (Foster, Lewis, & Onafowora, 2005, p.29)

Foundations & Frameworks emphasizes teacher knowledge and instructional processes, and research validates its positive effect on student reading comprehension and critical thinking achievement. The teacher develops successful instruction based on a "deep knowledge about the reading process and reading comprehension" and "knowledge and skills to implement research-based instructional strategies in their teaching" (Snow, 2002, p. 49).

Increased intentionality raises teaching to both an art and a science. Intentional teachers create instruction that is both imaginative and supportive by findings from scientific research. *Foundations & Frameworks* represents a fusion of these two perspectives on teaching. With 70% of American Students not achieving proficiency in reading (Scherer, 2005), reading instruction needs the strengths of both the artist and the scientist that *Foundations & Frameworks* provides.

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