

BookRoom Collections: Research Results

Introduction

BookRoom Collections has consistently followed a research-based instructional design. The library of leveled books has evolved to incorporate diverse themes, genres, and topics that reflect the complexity of today's world. This report highlights findings from five studies: two in which BookRoom Collections served as the core instructional resource, and three others in which the collections were used as part of the broader Benchmark Literacy program.

Although the studies vary in design and purpose, they collectively demonstrate the strength and flexibility of the BookRoom Collections instructional model. The report begins with an overview of the BookRoom Collections instructional framework, followed by summaries of the five studies and their key findings.

BookRoom Collections Instructional Design

The objectives of the BookRoom Collections are for students to:

- Develop reading skills across content areas and genres
- Develop content-area reading strategies for classroom and test-taking success
- Learn to monitor their comprehension and organize information
- Build content knowledge
- Develop both robust and academic content vocabulary strategies for the classroom
- Develop strong writing skills
- Receive concentrated modeling and guided practice so strategies can be applied in small-group and independent reading
- Become fluent readers through targeted literacy experiences

The books included in BookRoom Collections rely on Benchmark Education's Leveled Texts, which are consistent from book to book, allowing for literacy and language development. The leveled books within the BookRoom Collections are packaged in 6-packs for differentiated small-group instruction, allowing students with similar literacy needs to be within the same group. The comprehensive Teacher's Guide includes guided mini-lessons to build effective reading behaviors.

Practice, writing activities, support for English Learners, and more. The Text Evidence Question Cards provide teachers with questions that help students access complex text at different DOK¹ levels.

Research Study Results for BookRoom Collections

Southwest State Study of Small-Group Literacy Instruction

The initial study aimed to test the effectiveness of small-group literacy instruction with low-performing students who would otherwise have been eligible for Reading Recovery®. Reading Recovery was a more resource-intensive (one-to-one instruction) alternative to small-group literacy instruction with up to six students in a group simultaneously. The study tried to answer whether literacy instruction would be at least as successful as one-to-one instruction. The study took place in a state in the Southwest. The literacy instruction included the BookRoom Collections instructional design and materials, which provided consistent and efficient instruction because of the deliberate scaffolding of the guided reading texts.

Students were placed in the literacy instruction for up to 12 weeks, at which time they would be returned to regular classroom instruction, or if student progress was not satisfactory, the student would be moved to the Reading Recovery program. Of the 23 students participating in the literacy instruction, 13 (57%) exited successfully, 9 (39%) needed more intensive instruction (Reading Recovery), and one student moved. By the end of the year, students who exited successfully from the literacy instruction gained an average of 16.95 text levels. Students placed into Reading Recovery gained an average of 17.77 text levels by the end of the school year.

An independent-samples t-test was used to determine if there were differences between students who participated successfully in the literacy instruction and those who required one-on-one instruction. There was no statistically significant differences between these two groups of students ($M = 2.92$, $t(20) = 1.13$, $p = .273$). This finding indicates that instruction in small groups, using the Benchmark Education BookRoom Collections, helped improve reading performance with the same effectiveness as the more rigorous one-on-one intervention.

Large District in North Carolina Literacy Study

From a larger literacy initiative ($n = 3,375$) in a large district in North Carolina, a subset of students was randomly selected for further examination and of the original 63 students, representing 31 schools and 49 teachers, 52 (82.5%) had at least the pre-test and post-test for one of the three measures being used in the study. The literacy initiative included literacy groups that used Benchmark Education BookRoom Collections and met 4 days a week for 45 minutes daily. When students reached grade-level reading and writing competencies, they exited the literacy groups and were replaced by other students needing additional literacy instruction.

Participants in the literacy initiative were in kindergarten through 2nd grade and were selected based on reading book level standards and other assessments. The ethnicity of the students in this group included 50% African American, 34% White, 11% Hispanic, and 5% Two or more races or Other. Of this group, 53.6% received free or reduced cost meals, 15% were receiving Special Education services, and

¹ DOK refers to Webb's Depth of Knowledge (DOK) Levels: Level 1 = Recall, Level 2 = Skills and Concept, Level 3 = Strategic Thinking, and Level 4 = Extended Thinking.

about 9% were identified as English Learners. The randomly selected students reflected the same demographic characteristics as the larger group.

The assessment used for this smaller group of students was the Observation Survey², and the three skills measured in this study were phonemic awareness, phonic elements, sight word proficiency, and text reading and fluency level. The measures were Hearing Sounds in Words (HSIW), Writing Vocabulary, and Text Reading Level. Results on these three measures include:

- The Hearing Sounds in Words Assessment evaluates students' ability to identify up to 37 phonemic elements. The performance of this group of 49 students with both pre-test and post-test scores using a paired-samples t-test was statistically significant ($M = 17$, $t(48) = 10.03$, $p < .001$).
- The Writing Vocabulary Timed Assessment measures self-generated, correctly spelled words under timed conditions. The performance of this group of 50 students with both pre-test and post-test scores using a paired-samples t-test was statistically significant ($M = 28$, $t(49) = 11.43$, $p < .001$).
- The Text Reading Level Assessment calculated the total levels gained across the school year for 51 students. As with the other two measures, the difference between the pre-test and post-test levels using a paired-samples t-test was statistically significant ($M = 10.68$, $t(50) = 14.50$, $p < .001$).

The randomly selected group of students, representing a cross-section of the larger literacy initiative, showed statistically significant results for the literacy groups with BookRoom Collection instructional design and materials. Using literacy groups across the larger initiative resulted in 56 out of 62 (90%) schools meeting or exceeding the district's Reading Assessment thresholds. The mean score for all the at-risk students who received the literacy group instruction was within the grade level promotion range of Level III on the North Carolina End of Grade (EOG) for 3rd grade.

Research Studies Including BookRoom Collections

The following studies include several BookRoom Collections that are part of the instructional program being examined. These BookRoom Collections include English or Spanish books. The results of these studies cannot be split by BookRoom Collection; rather, the combination of the BookRoom Collections leads to the results achieved by the students participating in these studies. A brief description of the study, the BookRoom Collections, and key findings reported by the external evaluator, Main Street Academix, will be presented.

Benchmark Literacy: Scientifically Based Research Study Fairfax County (VA) Public Schools 2012

During the 2011–2012 school year, this study was conducted in Fairfax County Public Schools with students in grades K through 6 by Main Street Academix. The external evaluator designed the study, helped match the treatment and comparison schools, oversaw the administration of pretests and posttests, conducted fidelity of implementation visits/interviews, and compiled the results. Two large K–6 elementary schools were chosen for this study. Demographic and socioeconomic variables matched the schools. The treatment school implemented the Benchmark Literacy program and the comparison school used other literacy programs. The BookRoom Collections included in the Benchmark Literacy Program were Early Explorers, Early Connections, Genre Workshop, Navigators, Bridges, PRIME Science, and

² Clay, M. M. (1993). *An observation survey of early literacy achievement*. Portsmouth, NH: Heinemann.
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PRIME Social Studies.

Results and findings reported by Main Street Academix included:

- Grade K: The treatment students ($n = 126$) scored considerably lower than the comparison students ($n = 86$) in the fall but caught up and even surpassed the comparison students on the spring posttests. The difference in the fall scores was considerable, approximately 35% of a standard deviation or approximately 15 percentile rank points. The effect size³ when comparing the growth of kindergarten students in the treatment to comparison schools was $d = 1.38$. The lowest performing treatment students did not perform much worse than the average kindergarten student by the end of the school year – a vital equity result.
- Grades 1–2: The treatment school students ($n = 275$) gained 12.5 DRA2 (Developmental Reading Assessment, 2nd Edition) levels, and almost two additional DRA2 levels, on average, compared to the comparison school students ($n = 199$), a statistically significant difference. When comparing the growth of students in 1st and 2nd grades in the treatment to comparison schools, the effect size was $d = 0.49$.
- Grades 3–6: The treatment students ($n = 378$) performed similarly to the comparison students ($n = 305$) on the fall pretest but higher on the spring posttest by approximately 40% of a standard deviation unit or by about 16-20 percentile rank points. When comparing the growth of students in 3rd through 6th grades in the treatment to comparison schools, the effect size was $d = 0.46$.
- In summary, the treatment students improved their reading fluency and comprehension more than the comparison students. The improvements for students typically considered at educational risk were more impressive than the overall score improvements.

Research Study on the Effectiveness of Spanish Literacy Instruction Materials February 2015

During the 2013–2014 school year, Main Street Academix conducted this study in Fairfax County Public Schools with students in grades K through 6. The external evaluator designed the study, oversaw the administration of pretests and posttests, conducted fidelity of implementation visits/interviews, and compiled the results. One large K–6 elementary school participates in this study. The school in this study implemented Benchmark Education’s Spanish Literacy Program with 286 dual-language students. The BookRoom Collections in the Spanish Literacy Program included: Exploradores principiantes, Primeras conexiones, Navegadores, and Puentes.

Results and findings reported by Main Street Academix included:

- Analysis of the Spanish Oral Reading Records assessment showed that students made impressive gains in Spanish literacy achievement from Fall 2013 to Spring 2014 after implementing the Spanish Literacy Program. The effect size from fall to spring was $d = 0.38$.

³ The effect size calculation is based on Cohen (1988). The effect size compares the growth across the school year between the treatment and comparison schools. According to Cohen, effect sizes of $d = 0.2$ are considered small, $d = 0.5$ are medium, and $d = 0.8$ are large.

- The analyses of the results of the Developmental Reading Assessment, 2nd Edition (DRA2) in English showed that students in grades K-6 who received Spanish instruction made impressive gains in literacy achievement.
 - In kindergarten, Spanish literacy students gained more in terms of the DRA-WA (DRA Word Analysis), compared to the two previous school years.
 - In 1st and 2nd grades, the effect size for the change from fall to spring was $d = 1.5$.
 - In 3rd and 4th grades, the effect size for the change from fall to spring was $d = 1.14$ for fiction selections and $d = 0.88$ for non-fiction selections.
 - In 5th and 6th grades, the effect size for the change from fall to spring was $d = 1.27$ for the combination of fiction and non-fiction selections.
 - Additionally, the traditionally underperforming student groups did as well or almost as well on the DRA2 as the typically more advantaged student groups. This was particularly true for English learners.
- On the Standards of Learning (SOL) state assessment, a greater percentage of students receiving dual-language instruction with the Spanish Literacy Program reached the proficient or advanced performance levels compared to the school and the state, by 7 and 15 percentage points more, respectively.

Summary and Discussion

This report describes Benchmark Education's BookRoom Collections and two sets of studies. The first two studies showed the use of small-group instruction, in the form of literacy groups, including BookRoom Collections instructional design and materials, to improve outcomes for struggling students. The next two studies described in this report included results when BookRoom Collections were part of the instructional materials used in the studies.

The BookRoom Collections available from Benchmark Education (Table 1) provide a consistent instructional design with materials for teachers that help maintain consistent instruction across different book collections with various themes, genres, and topics. The studies included in this report show two things. First, the use of small group instruction with the BookRoom Collections instructional design was demonstrated to be effective. Second, keeping the instructional design consistent and including different book collections provided positive results in both English and Spanish.

Table 1. BookRoom Collection/Leveled Book Sets in English, Spanish, and Chinese

BookRoom Collections and Leveled Books		
Advance ALL (2–6+)	Anchor Comprehension Workshop (K–6)	Authentic Voices* (K–5)
Classic Tales (K–2)	Content Connections 1-2-3* (K–2)	Custom BookRoom & E-BookRoom (PreK–8+)
Early Connections (K–2+)	Early Explorers (K–2)	Early Rising Readers* (PreK–K)
English Explorers (3–8+)	Guided Reading Strategy Sets* (K–8)	Jump into Genre* (PreK–2)
Math Explorers (3–8+)	Multi-Genre Classroom Libraries* (PreK–6)	My SELF* (PreK–1)
Navigators/Bridges (3–6+)	PRIME Science & Social Studies (5–9)	Read At Home* (K–2 & 3–8)
Represent* (K–6)	Rising Readers* (PreK–1)	Sight Word Readers* (PreK–1)
Spot On™ Literature (K–5)	Spot On™ Science & Technology (K–5)	Spot On™ Social Studies (K–5)
Standards Close-Up (2–5)	Text Connections: Guided Close Reading (K–2)	Text Connections with Poetry* (K–6)
Spanish BookRoom Collections and Leveled Books		
Anchor Comprehension Workshop en español (K–6)	Around the Clock (PreK–2)	Content Connections en español (K–2)
Cuentos Clásicos (K–2)	Enfoque en Literatura (K–5)	Enfoque en Ciencia y tecnología (K–5)
Enfoque en Estudios sociales (K–5)	Exploradores principiantes (K–2)	Navegadores/Puentes (3–6+)
Primeras conexiones (K–2+)	Spanish BookRoom & E-BookRoom Collections (K–6+)	Text Connections en español (K–6)
¡Vamos a leer! (PreK–K)	Vitales (5–9)	
Chinese BookRoom Collections and Leveled Books		
Chinese Social Studies Classroom Libraries (K–2)	Text Connections in Chinese (K–2, 4)	

* Available in English and Spanish