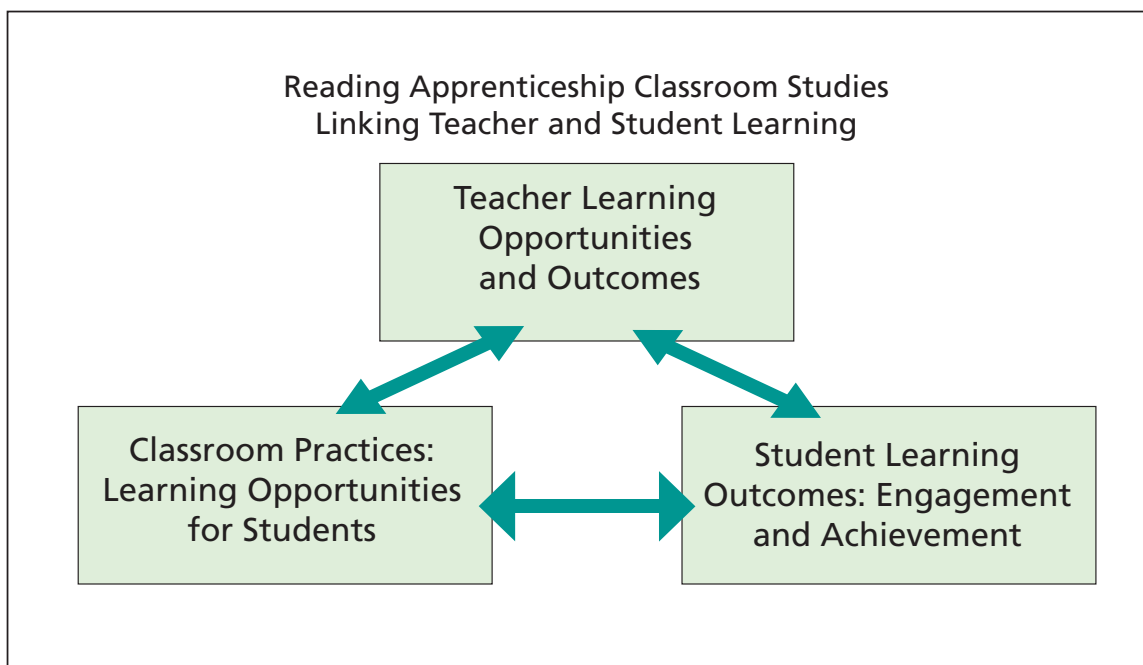

2001–2004 • Reading Apprenticeship Classroom Study Linking Professional Development for Teachers to Outcomes for Students in Diverse Subject- Area Classrooms

Support for this research was provided by the Carnegie Corporation of New York, the William and Flora Hewlett Foundation, and the Stuart Foundations. Support for the ongoing professional development activities of SLI was also provided by the Carnegie Corporation of New York, the Stuart Foundations, the William and Flora Hewlett Foundation, the W. Clement & Jessie V. Stone Foundation, the Walter S. Johnson Foundation, the Flora Family Foundation, and the Stupski Family Foundation.

The purpose of the Reading Apprenticeship® (RA) Classroom Study is to learn how teachers who participate in inquiry-based professional development incorporate Reading Apprenticeship approaches into their subject-area instruction, and how these literacy experiences in turn affect student reading achievement and engagement.



In this on-going research study, SLI researchers are taking an in-depth look at teacher learning, classroom practice, and student learning in eleven middle and high school classrooms to address the following set of questions:

- What literacy experiences are offered to students in classrooms of secondary teachers who are attempting to integrate reading instruction into their ongoing subject-area teaching?



2001–2004 Reading Apprenticeship Classroom Study

- What difficulties and successes do these teachers experience and what professional development experiences, activities, and resources are most helpful to them?
- How do the literacy learning opportunities offered by these teachers affect students' reading development and subject-area learning?

Classrooms Studied

The Reading Apprenticeship Classroom Study took place in the context of ongoing professional development activities of SLI in the greater San Francisco Bay Area of California. Middle and high schools in this region serve highly diverse populations of students, a large proportion of whom are members of language or cultural groups that have experienced a disproportionate amount of school failure and have been historically under-represented in institutions of higher education. Teachers selected for the Reading Apprenticeship Classroom Research study were members of the SLI's Continuing Networks, ongoing professional learning communities for teachers working to implement Reading Apprenticeship in their subject-area teaching.

SLI's research team identified 7 subject-area teachers for a study tracing their participation in the Continuing Network, their classroom implementation of Reading Apprenticeship, and their students' learning opportunities and outcomes during the 2001–2002 school year. During the 2002–2003 school year, the team identified an additional 4 subject-area teachers for study. These teachers represented a diverse range of subject areas, student populations, and school contexts.

Subjects – 2001–2002 School Year	Grade Levels
Academic literacy	9
Pre-algebra	7
Pre-algebra	9
Biology	10
Chemistry for English learners	10–12
English language arts	8
English	9
Subjects – 2002–2003 School Year	Grade Levels
Introduction to Chemistry	10–11
English	10
English language development	10–12
Honors History	11



Study Design and Methodology

Because the Reading Apprenticeship framework emphasizes the role of teachers as orchestrators of classroom learning environments, and the role of students as inquiry partners, close documentation of classrooms was central to the research design for this study. Classroom talk is a major source of evidence of teacher knowledge, student learning opportunities, and student knowledge. Data collection and analysis methods were designed to document the types of literacy practices and learning environments offered to students in classrooms of participating teachers, and to measure the impact of these classroom experiences on student engagement and achievement.

The questions guiding the study included:

- What literacy experiences are offered to students in classrooms of secondary teachers who are attempting to integrate reading instruction into their ongoing subject-area teaching?
- What difficulties and successes do these teachers experience and what professional development experiences, activities, and resources are most helpful to them?
- How do the literacy learning opportunities offered by these teachers affect students' reading development and subject-area learning?

Data collection consisted of the following:

For teachers:

- Field notes in professional development sessions
- Formal beginning- and end-of-year interviews with classroom teachers

For students:

- Pre-post student reading surveys
- Pre-post Degrees of Reading Power Tests
- Pre-post standardized state tests of reading comprehension
- Curriculum-Embedded Reading Assessments
- Class work samples



2001–2004 Reading Apprenticeship Classroom Study

- Weekly audio/videotaped classroom lessons
- Lesson materials, handouts, texts
- Audio-taped Literacy History Interview
- San Diego Quick Test of Word Reading
- Audio-taped Dynamic Reading Assessments

Findings to Date

The research team began by analyzing classroom and student data from “high implementation” Reading Apprenticeship classrooms— that is, those classrooms where teachers offered frequent opportunities for supported reading experiences; gave abundant and explicit coaching (apprenticeship) in effective, discipline-based, strategic thinking processes; fostered a collaborative, inquiry-oriented learning environment; and supported and modeled metacognitive conversation and awareness. In these classrooms, close study of the reading of individual focal students corroborated the case studies of ninth grade students carried out by SLI researchers from 1995 to 1998). However, in addition, the Reading Apprenticeship practices in place in these classrooms advanced the literacy learning and participation of these students.

Findings from Student Case Studies in High Implementation Reading Apprenticeship Classrooms (2001-2003 data)

1. Many students hold conceptions of reading and of their own capacity, based on experiences in school, that do not serve them well. For instance, that
 - reading is merely saying the words
 - reading should be effortless
 - reading is boring
 - reading is for testing, not teaching or learning
 - reading is solely a school-based activity, disconnected from their literacy practices outside of school
2. Many students are profoundly inexperienced with academic reading and literacy tasks, as they demonstrated in dynamic reading assessments, showing:
 - unfamiliarity with the world referenced by the text
 - unfamiliarity with how to work with unknown words



2001–2004 Reading Apprenticeship Classroom Study

- unfamiliarity with how academic language works
 - ~ Syntax
 - ~ Text features
 - ~ Graphics and illustrations
- 3. Despite students' (mis)conceptions and inexperience, in one-on-one interviews and in classroom reading tasks, students repeatedly demonstrated the ability and stamina to marshal a wide range of cognitive strategies, and to grapple with and think through perplexing comprehension problems, showing a great deal of potential and promise.
- 4. In Reading Apprenticeship classrooms where students had ongoing opportunities to be mentored in the reading and thinking processes of the disciplines, we witnessed profound shifts in students' conceptions of reading, reading practices, and identities as readers and students.
- 5. In these classrooms, metacognitive literacy routines provided ongoing opportunities for students to interact with the teacher and their classmates in order to reach fuller understandings of disciplinary concepts and literacy processes.
- 6. Frequently, these shifts in strategy, agency, ownership, and identity were accompanied by improved course grades, decisions to take additional academic classes, and score increases on standardized tests of reading comprehension.
- 7. Based on preliminary data, when students have more than one Reading Apprenticeship teacher in the same year or over two years, the impact appears to be more pronounced.

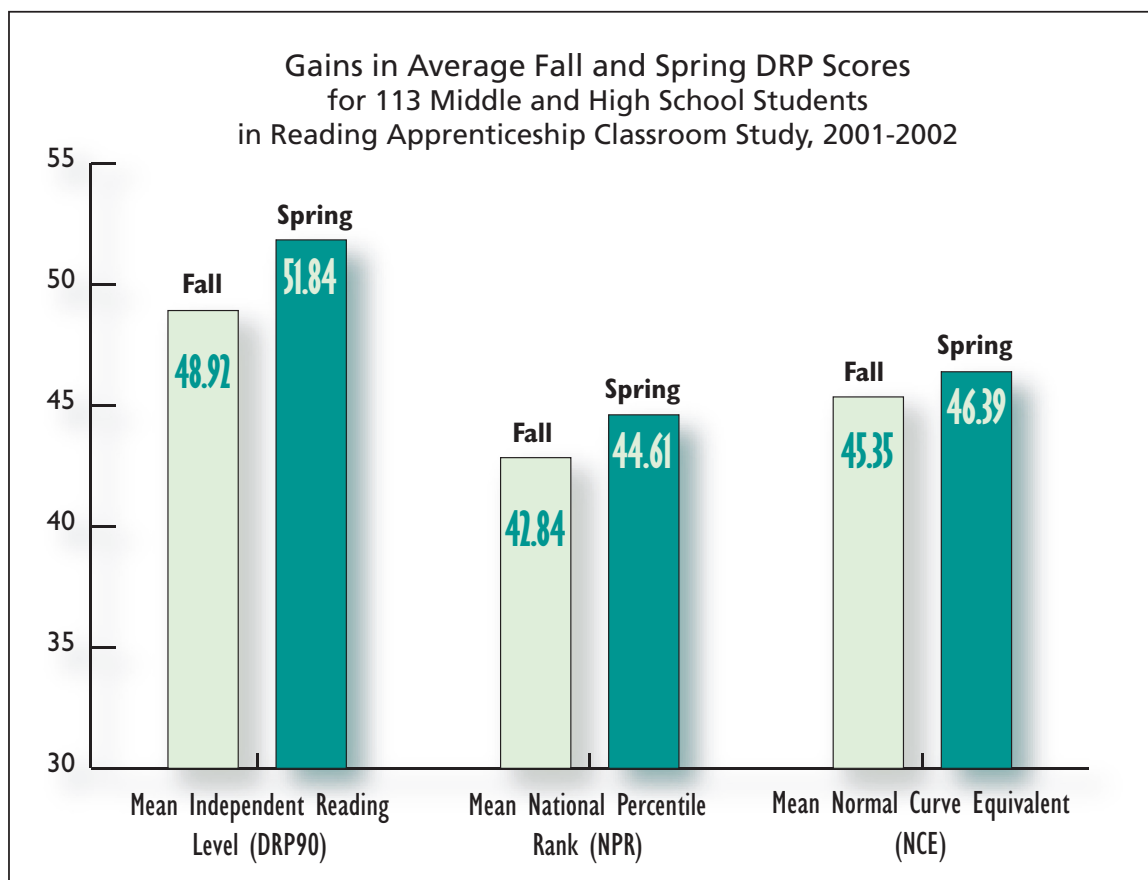
Data from these individual case studies of focal students across the Reading Apprenticeship Classroom Study are providing rich resources for professional development. Tracing individual students' literacy development across the year in a subject area has been particularly powerful for classroom teachers participating in Reading Apprenticeship professional development. Drawing from a variety of sources — including performance on class assignments, participation in class discussions and activities, interviews, teacher reflections, and more formal tests and assessments — these case studies offer windows into student thinking and development over time.

Beyond case studies of focal students in high implementation classrooms, the SLI research team has analyzed the performance of students in these classrooms on the Degrees of Reading Power (DRP) standardized test of reading comprehension (www.tasaliteracy.com). Across the 7 classes studied in the 2001–2002 school year, the 113



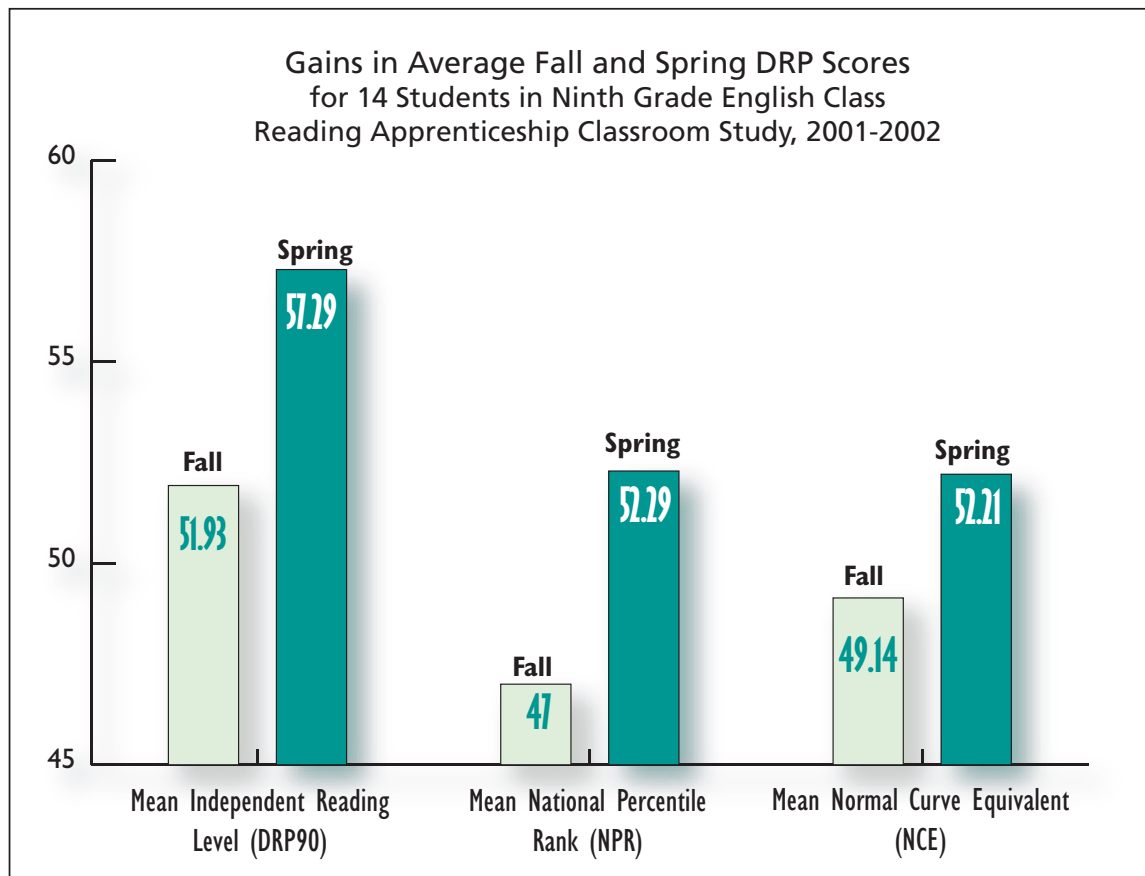
2001–2004 Reading Apprenticeship Classroom Study

students who took both the pre- and the post-test increased their independent reading levels 3 points, on average ($p < .000$). Compared to a norming population, average national percentile and normal curve ranks also increased among the students in these classrooms, as the following graph shows.



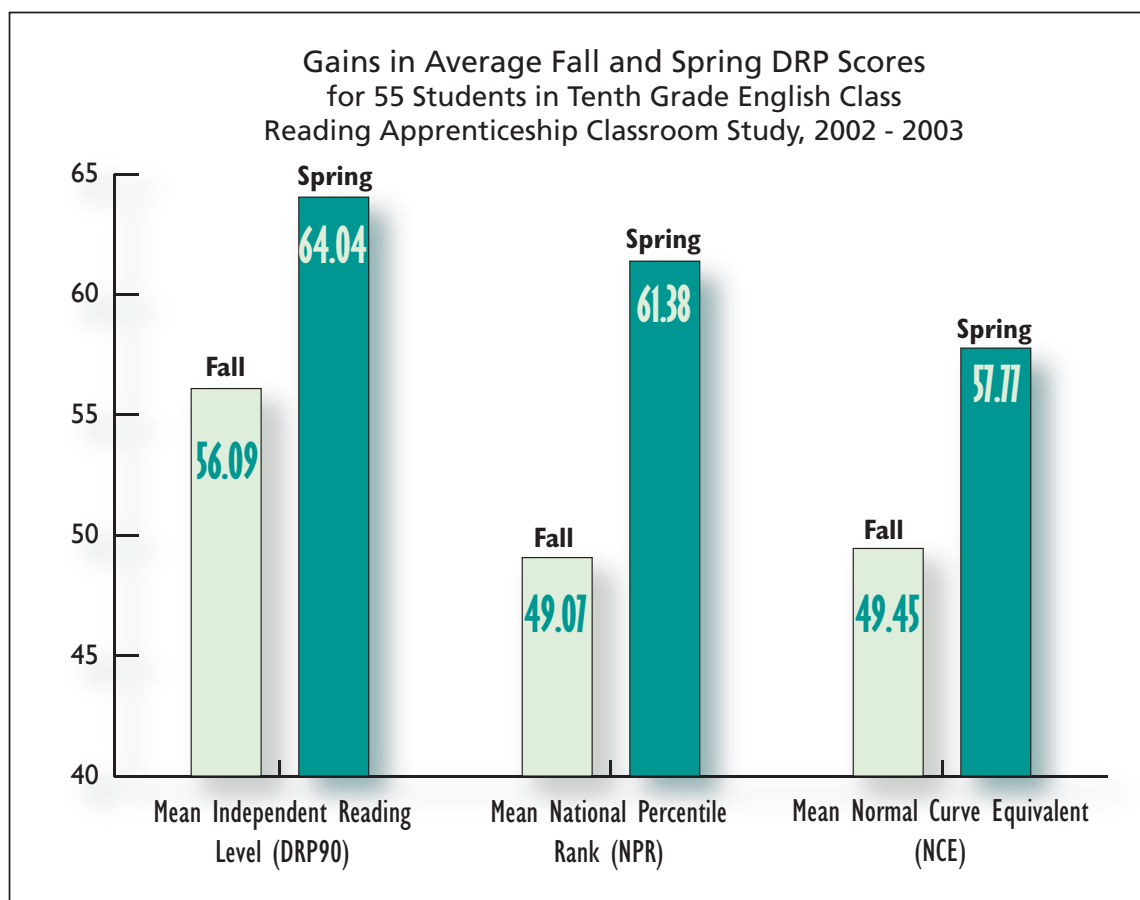
2001–2004 Reading Apprenticeship Classroom Study

In one ninth grade English class, the teacher chose to move with her students up to the tenth grade in the following year. SLI researchers were able to follow the development of these students, and of their teacher, over two years of study. In the first year (2001–2002), only 14 students took the pre- and post-test. Their gains were impressive—growth of over 5 points, on average, in independent reading levels, over 5 points in national percentile rank, and movement up the normal curve of 3 points.



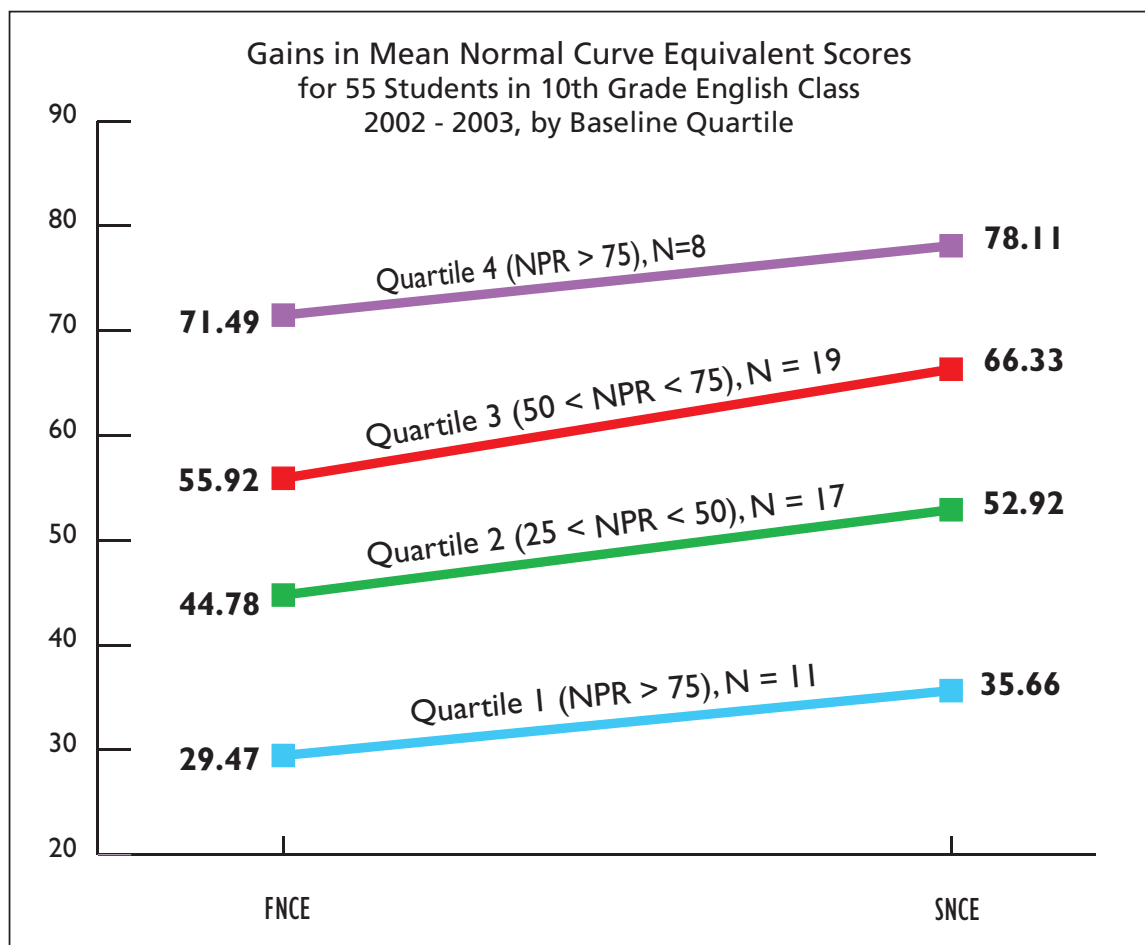
2001–2004 Reading Apprenticeship Classroom Study

The following year, these students (and new class members) continued to grow in reading proficiency. The larger group of students gave statistical power to the analysis of pre- and post-scores in independent reading levels, national percentile ranks, and normal curve scores, which all demonstrated highly significant gains ($p < .000$). Leaping from the 49th percentile to the 61st percentile nationally, students in this English class in a rural high school serving high percentages of low-SES and Latino students made impressive gains from the beginning to the end of their tenth grade year.



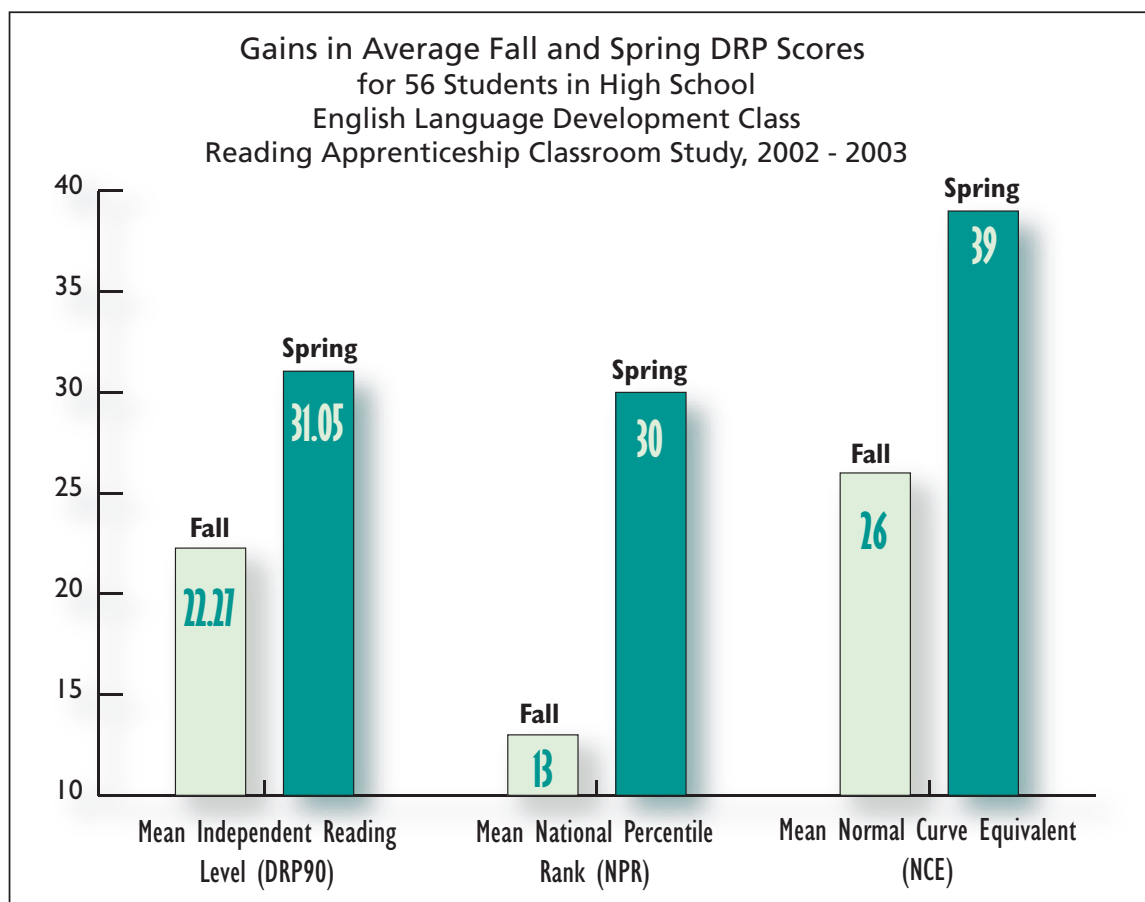
2001–2004 Reading Apprenticeship Classroom Study

When these data are analyzed by incoming quartile levels, students in each quartile moved up the normal curve by more than 6, and as many as 10, points. In the case of this classroom and school, many of these students had had more than one teacher implementing Reading Apprenticeship, whether during their tenth grade year or cumulatively from ninth to tenth grade.



2001–2004 Reading Apprenticeship Classroom Study

Educators have become increasingly sensitized to the fate of English learners in our schools, particularly those students who enter the school system late, as secondary students. In this same rural high school, a teacher was working to implement extensive reading practices from Reading Apprenticeship into his English Language Development class for a largely Mexican migrant population in the school. Using a form of the Degrees of Reading Power test made for English learners, this teacher documented the growth of his English Language Development class, as the following graph shows.



Analyses to date from this study of Reading Apprenticeship classrooms confirm earlier findings: that students make impressive gains in reading achievement, closing the performance gap as they make substantially more than a year's growth during a single academic year. Students in all performance quartiles benefit from Reading Apprenticeship instruction, as do English Learners.



This study of Reading Apprenticeship classrooms has enabled the SLI research staff to identify features of classroom instruction that show a high fidelity to the core practices of Reading Apprenticeship, as well as to characterize some of the “less than optimal” implementation of Reading Apprenticeship practices that professional development might address more pointedly.

Some characteristics of “less than optimal” implementation:

- A focus on declarative knowledge about reading rather than demonstration of procedural knowledge during reading tasks
- Implementation is sporadic, non-routine, with no continuity across the school year
- Routines and strategies are not scaffolded to move students toward independent ownership
- Instructional practices are not equitably distributed to all students
- Reading does not occur in class, where opportunities to provide support and mentoring may emerge
- Reading tasks remain individual, rather than social and collaborative
- Reading instruction is not embedded in authentic curricular tasks and texts

Analysis of the data collected for this study is ongoing. A chapter based on the study of one chemistry teacher’s implementation of Reading Apprenticeship, and its impact on his diverse, urban students, has been published (Greenleaf, Brown, & Litman, “Apprenticing Urban Youth to Academic Literacy” in *Bridging the Literacy Achievement Gap, Grades 4–12*, edited by Strickland and Alvermann, Teachers College Press, 2004).

