Challenging the Achievement Gap in a Suburban High School:

A Multimethod Analysis of an Adolescent Literacy Initiative

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Introduction

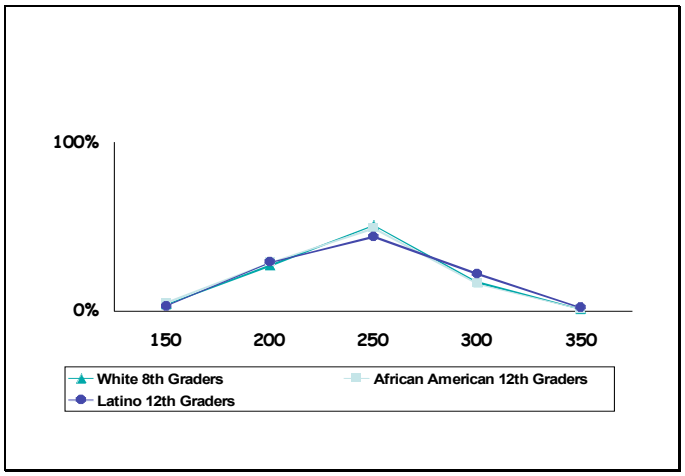
A substantial body of research has sought to explain racial achievement gaps in education (Ogbu, 2003; Lee, 2002; Jencks & Phillips, 1998; Ferguson, 1998a; Ferguson, 1998b). Although these gaps narrowed between 1970 and 1988 (Lee, 2002), they began to increase after that time. Most often, research exploring the gap has examined the relative influence of various factors exogenous to schools (e.g., students' race, social class, peer culture, and home environments) or school and classroom organizational factors (e.g., tracking and teachers' expectations of students). Much less research has examined the impact of school-based interventions designed to address directly the racial gaps in achievement. In this paper, we examine the impact of an adolescent literacy intervention intended to accelerate the learning of ninth- and 10th-grade students, particularly African-American students, who struggle with reading comprehension. This strategy combines an instructional intervention and a focus on building positive teacher-student relationships designed to enhance student achievement.

Race and Adolescent Literacy Achievement

We know a substantial amount about teaching and learning related to early literacy acquisition. However, researchers and practitioners are cautious not to draw conclusions about adolescent literacy from research on early literacy (Greenleaf, Schoenbach, Cziko, & Mueller, 2001). Very little research has focused on reading comprehension beyond the most basic skills: decoding and word recognition (Snow, 2002). However, particularly as students are faced with more challenging high school work, their ability to comprehend what they read across subject areas becomes critical.

Data on reading comprehension suggests that many students have trouble with this more complex material and that these difficulties correlate with racial group membership. African-American and Latino students enter high school with reading skills well below white students, and they typically do not "catch up" by the end of high school. As Table 1 shows, data from the National Assessment of Educational Progress (NAEP) demonstrate that the reading levels of African-American and Latino students at the end of high school are about the same as the reading levels of white eighth graders (Haycock & Huang, 2001).

Table 1. Reading Levels of African-American and Latino 17-Year-Olds Compared to Eighth-Grade Whites



Source: *NAEP 1999 Trends in Academic Progress: Three Decades of Student Performance* by Campbell, Hombo, and Mazzeo

Mirroring the national data, a survey of 40,000 students across 15 suburban school districts showed that African-American students understand substantially less of what they read for school than their white counterparts (Ferguson, 2002). Finally, Table 2 (see page 3) shows district-level data from the Metro School District—a pseudonym for the school district in this report—showing that racial gaps in achievement exist at every level of the ACT testing series.

Table 2. Student Achievement by Race and Ethnicity on the EXPLORE, PLAN, and ACT Exams

EXPLORE – Reading Scores – Grade 8, December 2001	
Caucasian American/white	18.5
African American/black	13.2
Puerto Rican/Cuban/Hispanic	15.3
Mexican American/Chicano	13.0
PLAN – Reading Scores, Fall 2000	
Caucasian American/white	21.2
African American/black	15.4
Puerto Rican/Cuban/Hispanic	19.3
Mexican American/Chicano	15.8
ACT – Mean Reading Scores, Graduating Class of 2001	
Caucasian American/white	27.1
African American/black	17.3
Puerto Rican/Hispanic	23.6
Mexican American/Chicano	16.5

Again, while all students make progress, the African-American and Latino students are not catching up with their white peers as measured by standardized test scores and grade-point averages.

Reading comprehension across subject areas (e.g., mathematics, science, social studies, and English) is critical to students' academic success in high school. We argue that racial disparities in reading comprehension are likely an important contributor to racial achievement gaps. If students do not understand the teachers' lessons and do not comprehend classroom reading materials well, it will be difficult for them to be successful in their coursework. In response to this challenge, teachers and administrators at Metro High School implemented an intervention designed to enhance the reading comprehension of students who struggle most with reading.

The Intervention

The Freshman Reading Intervention provides students who score below the 50th percentile on the reading section of the EXPLORE[1] test in eighth grade with an additional reading course in ninth grade. The course is designed to accelerate these students' test-score gains in reading comprehension and to improve their performance in other school subjects (e.g., mathematics, social studies, etc.). A subset of the students who participate in the Freshman Reading course are also enrolled in a "cluster program" in which they are clustered together in humanities (English and history) and pre-algebra/algebra 1 classes, and provided with additional time and extra assistance from teacher aides who support and encourage their performance. Also, teachers from different disciplines are teamed together in this cluster program and teach the same students, facilitating the teachers' ability to collaborate in providing student support.

When the students reach 10th grade—and most of them have left the formal reading classes because they have met the 50th percentile in reading—they continue to need support in applying reading strategies to their academic work. For this reason, about 60 students participate in "extended-support" courses that provide them with continued assistance. While we did not examine the level of implementation of the intervention, organizational changes (e.g., course enrollment and enrollment in the cluster program) did take place. Moreover, teachers report changes in their instruction practices (including explicit instruction in reading comprehension strategies and efforts to connect personally with students) as a result of professional development activities. We suspect that the teachers involved in the reading program engaged in practices that were more in line with the theoretical philosophy of the program than the practices of the typical ninth- or 10th-grade teacher.

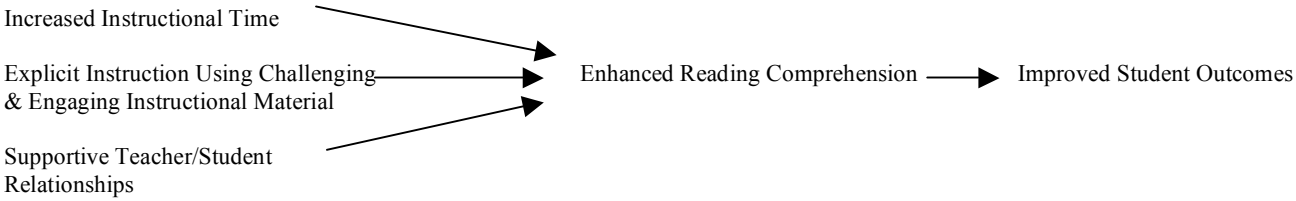
[1] ACT, Inc. developed the ACT exam, which is used nationally as a college entrance exam. Subsequently, ACT, Inc. further developed its testing program to include two precursors to the ACT exam: the EXPLORE® test, typically administered to eighth- or ninth-grade students, and the PLAN® test, typically administered to 10th-grade students. All three exams (EXPLORE, PLAN, and ACT) test students in English, mathematics, science reasoning, and reading.

Theoretical Framework

The theoretical framework that guides the Freshman Reading Intervention builds on current research on teaching and learning in classrooms and work on the organizational characteristics and practices that facilitate student achievement. Cohen and Ball (1999) argue that instruction is constituted in the interaction of teachers, students, and materials—the "instructional unit." Interventions that target multiple dimensions of the instructional unit are likely to have more leverage in changing students' outcomes than those targeting only one element. Therefore, this reading intervention focuses on the intellectual materials associated with literacy instruction, the nature of teachers' instructional practices, and the relationships between teachers and students. More specifically, it focuses on improving students' reading comprehension through increasing their opportunities to learn (creating a period of reading-specific instruction), engaging in explicit instruction in literacy skills around challenging material (rather than focusing on remedial basic literacy instruction), and emphasizing the relationship between teachers and students.[2]

In addition, the intervention builds on research that demonstrates the importance of social support (including teacher encouragement) and academic press for enhancing student achievement (Lee, Smith, Perry, & Smylie, 1999; Ferguson, 2002). This combination of support and press in the teacher-student relationship seems to provide leverage for enhancing student achievement. For example, research demonstrates that when teachers attend to students' social as well as academic needs, students report more "help seeking" from teachers (Ryan, Gheen, & Midgley, 1998) and increased levels of engagement (Ryan & Patrick, 2001). Building on these theoretical perspectives, the conceptual model for the intervention is presented in Figure 1.

Figure 1. Conceptual Model of the Freshman Reading Intervention



Three factors—increased instructional time; explicit instruction in reading comprehension strategies using challenging, engaging instructional materials; and supportive teacher/student relationships—are expected to increase students' reading comprehension and ultimately their overall educational outcomes.

[2] Ron Ferguson has developed a similar approach to understanding instruction. He argues for conceptualizing teaching and learning as part of an instructional tripod that includes content, pedagogy, and relationships. Using this framework he has developed The Tripod Project. For information on this project, visit the Web site (www.tripodproject.org).

Profile of the Reading-Program Students

Ninety-eight students participated in the reading program (i.e., they were enrolled in the reading course) during the 2000–01 school year. Of these students, 80 percent were African American, 12 percent were Hispanic, 6 percent were white, 1 percent were Asian, and 1 percent were multiracial. Therefore, the vast majority (92 percent) of students taking this course were either African American or Hispanic. While the district's free and reduced-price lunch percentage is slightly lower than 30 percent, the majority (62 percent) of the students enrolled in the reading course receive free or reduced-price lunches (a proxy for low-income status). The student population is 48 percent female and 52 percent male. Finally, 47 percent of the students enrolled in the course had cumulative grade-point averages (GPAs) of 2.0 or below (on a 4-point scale) while the remaining 53 percent had GPAs between 2.0 and 3.5.

According to their responses to the EXPLORE® Needs Assessment and Planning components, these students have educational expectations that extend beyond high school, and they desire professional careers. Fully 86 percent of these students plan to attend either a two- or four-year college upon gradation (74 percent plan to attend a four-year institution). The students also seek "professional" careers that include computers, engineering, technologies, medicine, psychology, health care, and education.

While these students have high educational and employment aspirations and expectations, they are also aware of some of the academic challenges they face. With regard to the kinds of academic help they believe they need, the reading-program students indicate needing much more help with their academic work than do students who did not take the course, which seems consistent with what we might expect given their prior achievement.

Table 3. Percentages of Reading-Program and Nonreading-Program 10th-Grade Students Who Reported That They Need Some or a Lot of Help With Academic Skills on the 2002 PLAN Needs Assessment

Academic Skills	Percentage of Reading- Program Students	Percentage of Nonreading-Program Students
Expressing my ideas in writing	65%	51%
Developing my public speaking skills	78%	68%
Increasing my reading speed	70%	52%
Increasing my understanding of what I read	72%	51%

As shown in Table 3, reading program students reported that they need "some" or "a lot" of help with expressing their ideas in writing, developing their public speaking skills, increasing their reading speed, and increasing their reading comprehension to a greater extent than students not in the reading program. They reported this *after* having completed the ninth-grade reading course.

The general story of these students is that while they have faced academic challenges, they possess high educational and career aspirations, and they are optimistic about their educational and professional futures. Most of these students recognize that they will need additional help to be successful, which suggests that they recognize their limitations but are willing to work to improve their educational performance and outcomes. The experiences of a subset of students with the reading program will be discussed, but first a discussion of the research methods for the study and the quantitative data, analysis, and results follows.

Data and Results

Our evaluation of the reading program at Metro is perhaps best described as a "retroactive" evaluation. Although some new data were collected, our research began after our research subjects (i.e., the freshmen reading program participants during the 2001–02 academic year) had already completed the reading program. Ideally, we would have had a carefully selected control group and pretests and posttests that measured program outcomes regarding reading ability, the development of closer student-teacher relationships, and academic achievement. We also would have attempted to gather qualitative data about the quality of the implementation of the reading program, as mentioned above. Given the circumstances of this study, employing these research practices was not possible.

However, it was still possible for us to collect and analyze data from multiple sources to learn and draw tentative conclusions about the reading program. We were informed by three complementary sources of data: (1) data collected using a survey instrument developed by John Bishop at Cornell University, the Ed-Excel Assessment of Secondary School Culture, (2) school archival data, and (3) interview data. While we did not have a formal control group, we did have data from each source for comparable students. And, although we were not able to use a carefully planned experimental or quasi-experimental design, the combination of the results from these three sources allow us to make some assertions about what we suspect to have been the impact of this reading program.

Ed-Excel Assessment of Secondary School Culture

The students who are the focus of this study were enrolled in the reading program as ninth graders during the 2001–02 academic year. We administered a "short form" of the Ed-Excel Assessment of Secondary School Culture to them in May 2003, toward the end of their tenth-grade year. We chose this instrument for two reasons: It contained items that addressed the goals of the reading program, and the full survey had been administered to all Metro students three years earlier (December 2000), providing comparative data. The original instrument had 47 items, and some of the items had multiple subitems. The survey covered topics such as academic performance, study habits, peer influences, parental influences, relationships with teachers, demographics, and more. We shortened the instrument to 25 items (some with subitems) so that the students would be able to complete it during their 18-minute homeroom period.

The 2001–02 reading-program students were scheduled for one of two sessions to complete the survey at a common location in their school during their homeroom period. There was also a third "make-up" session offered. Just over half of these students completed the survey. Of the students who did not come to any of the three survey administrations, most were neither reminded of it nor sent to the survey administration location by their homeroom teachers. That is, of the students invited from each homeroom, either all or none of them showed up. A secondary reason for nonattendance at the survey administrations was that a few students were no longer enrolled at the high school. Even though we did not have full participation from the reading-program

students, we think any bias in the data related to selection is minimal. The most reasonable explanation for why most of the students who did not come to take the survey has to do with their homeroom teachers and not the individual students. It is important to note that students are scheduled into homeroom classes intentionally to represent the heterogeneity of the high school, meaning that the composition of these classes follows no systematic pattern that would create a selection bias.

As previously noted, the full version of the Ed-Excel instrument was administered to all Metro High School students in December 2000. (None of the 2001–02 reading-program students were enrolled at Metro at that time.) We have created two comparison groups from the 2000 sample: *all Metro students* who took the survey, so we could compare the reading-program students to an overall profile of students at their high school, and *African-American tenth graders*, so we could compare the reading program students to a prior cohort similar to them in background—since almost all of the reading-program students are African American, and they were in 10th grade when we collected data from them in May 2003.

We selected items from the survey that most directly addressed the goals of the program. Two items were about reading, four related to student-teacher relationships, and three reasonably addressed academic performance. The survey questions as well as the means, standard deviations, and number of respondents for each are reported in Table 4 (see page 10) for the 2001–02 reading-program participants, who were surveyed in 2003, as well as for the two comparison groups surveyed in 2000: African-American 10th-grade students and all Metro students (inclusive of the first comparison group).

Because we don't have a pretest-posttest design in place, we cannot ascertain with certainty that we would have observed any differences in the responses of the reading-program students before and after their participation in the reading program. However, we can reasonably hypothesize a set of expectations of differences between the reading-program students and the students in each of the two comparison groups. We would expect that students identified as needing improvement in their reading skills will dislike reading, read less often, have more trouble with comprehension, and exhibit poorer academic performance than other students. We would expect them to have comparable relationships with teachers as their peers, although we could come up with some explanations for why they might or might not have closer relationships with their teachers (e.g., they might receive more attention because of reading-related struggles with course material or less attention because they try to "fly under" the teacher's "radar" because of their struggles with reading). We might also expect these students to be more disengaged from school because they have experienced academic failure.

Table 4. Means and Standard Deviations of Selected Items from the Ed-Excel Assessment of Secondary School Culture About Reading, Teacher-Student Relationships, and Academic Performance for Reading-Program Students and Two Comparison Groups

Variable	May 2003 Survey		December 2000 Survey			
	Reading-Program Students	N[a]	Metro H.S. African-American 10th Graders	N[b]	Metro H.S.	N[c]
How often do you read for fun? (1=almost every day, 3=1-2x/month, 5=never/hardly ever)	2.47 (S.D.=1.24)	51	2.84 (S.D.=1.35)	186	2.43 (S.D.=1.36)	2,446
How much of the material that you are asked to read for school do you understand well? (1=very little, 3=about half, 5=almost all)	3.08 (0.89)	51	3.31 (1.13)	187	3.52 (1.18)	2,442
I don't feel close to any of my teachers this year. (1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree)	2.82 (0.72)	50	2.66 (0.82)	199	2.72 (0.78)	2,595
How many of your teachers know how well you are capable of doing academically? (1=all, 2=many, 3=some, 4=none)	1.75 (0.89)	51	2.03 (0.95)	185	2.16 (0.92)	2,451
When you work really hard in school, which of the following reasons are most important to you?…						
...*My teachers encourage me to work hard*. (1=selected, 0=not selected)	0.71 (0.46)	51	0.46 (0.50)	205	0.36 (0.48)	2,640
...*The teacher demands it*. (1=selected, 0=not selected)	0.02 (0.14)	51	0.16 (0.36)	205	0.27 (0.45)	2,640
What was your GPA last term? (A = 4.0)	2.54 (0.81)	51	2.82 (0.74)	194	3.07 (0.79)	2,496
About what percent of the time do you completely understand the teacher's lesson? (1=10% or less, 3=about half the time, 5=90% or more)	3.76 (0.82)	50	3.58 (0.95)	201	3.67 (1.03)	2,595

a: 51 total survey respondents
b: 205 total survey respondents
c: 2,640 total survey respondents

Summary of Ed-Excel Findings

Reading. Students in the reading program may have become more interested in reading. They "read for fun" more often than the students in their same-race, same-age comparison group, and they read for fun as often as Metro students overall. However, the reading-program students report understanding less of the material that they read for school than either comparison group.

Student-Teacher Relationships. The results suggest relatively positive relationships for reading-program students with their teachers. They disagreed more than the comparison groups with the statement, "I don't feel close to any of my teachers this year." They also believed more strongly that their teachers knew what they were capable of academically. Of the three groups, they also cited teacher encouragement more often as a reason for working hard, and they hardly ever cited teacher demands as a motivator.

Academic Performance. On average, the reading-program students report lower GPAs than both comparison groups. However, they do report completely understanding their teachers' lessons slightly more often than the other two groups.

These results are encouraging because they suggest that the reading program may have led the students to read more, particularly for fun, and may have contributed to positive relationships between the students and their teachers. The reading-program students certainly report that they are influenced by teacher encouragement, feel that their teachers understand what kind of work they can do, and are closer to their teachers than others. However, some of the data is discouraging because the reading-program students do not earn grades as high as the students in the comparison groups and report understanding less of the material that they need to read for school. It may very well be that the teacher encouragement and support is in place for these students, but that more could be demanded of them. Has the bar been raised high enough to challenge them, while not so high as to discourage them? How closely are the reading strategies learned in the reading program applied to various academic subjects while they are being learned so that students not only learn about, but also experience, how to put these strategies into play for their own academic benefit?

Because we do not have pretest data, we cannot state in the absolute that the reading program has caused changes. What we can discuss is how these results differ from what we might have expected. Given that students who struggle with reading often also struggle in other aspects of their education, the nature of their relationships with their teachers and their reported similarity to other Metro students overall in terms of the frequency of their pleasure reading is notable. While their academic performance is below that of the comparison groups, we don't know if it has remained unchanged or if perhaps the performance difference, as measured by GPA, would have been even greater. The same is true for the reading-program students' reported lesser understanding of material that they read for school. The direction of the difference between their reported understanding and that of the comparison students is what we would expect, but would it have been even greater?

School Archival Data

To help us assess possible impact from the reading program on academic achievement, we collected data about GPAs and test scores from school records for the 2001–02 reading-program students. We also collected the same data about an additional group of students who were originally scheduled to participate in the reading program based on performance below the 50th percentile on the reading portion of the EXPLORE test. However, later in the year, these students scored high enough on a second test, the Degrees of Reading Power (DRP) exam, to become exempt from taking the ninth-grade reading course. To try to understand better the possible effects of the reading program, we also split the reading program students into two groups: one group of students enrolled only in reading and the other group enrolled concurrently in reading and the cluster program, the more comprehensive academic-support program described earlier. Therefore, we had three groups to compare: participants in the reading program only, participants in both the reading and cluster programs, and students originally required to participate in the reading program but who tested out before it began.[3]

GPA Data. The school reports GPAs on a 4-point scale, with A=4 and F=0. We compared the three groups in terms of the students' cumulative GPA at the end of their ninth-grade year (2001–02), the students' cumulative GPA a year later at the end of their 10th-grade year, and the change in their GPA from 2001–02 to 2002–03. The results are displayed in Table 5.

We would expect that the students in the reading program only would tend to have higher GPAs than the students in both the reading and cluster programs, who arrived at the high school in need of greater academic support. We might also reasonably expect that the students who tested out of reading before school started would do better than the students in reading. These expectations are evident in the data. At the end of 2001–02 and at the end of 2002–03, the mean cumulative GPA of the reading-program students was higher than that of the reading/cluster students and lower than that of the students who tested out of reading.

Table 5. Means and Standard Deviations for Cumulative GPA by Program/Comparison Group and Academic Year

Group	N	Cum. GPA: end of 01-02 Mean (Std. Dev.)	Cum. GPA: end of 02-03 Mean (Std. Dev.)	Change in GPA Mean (Std. Dev.)
Reading/Cluster	64	1.83 (0.88)	1.78 (0.69)	-0.05 (0.41)
Reading Prgm.	56	1.95 (0.75)	2.07 (0.60)	0.12 (0.40)*
Passed DRP	16	2.33 (0.63)	2.27 (0.52)	-0.07 (0.27)
All	136	1.94 (0.80)	1.96 (0.66)	0.02 (0.39)

*Statistically significant change for the reading-program students from 2001–02 to 2002–03, p<=0.05 (two-tailed test). The amount of change in mean GPAs is also significantly different from the change exhibited by the reading/cluster students (p<=0.05) and the students who tested out of reading (p<+0.10).

[3] There are slight variations in the numbers of students in each group in different analyses. These variations are the result of some students leaving the school or program between freshman and sophomore year or the students not having taken both the EXPLORE and PLAN tests. These variations did not have a significant impact on the results of our analyses.

The real question, however, lies in whether there was change in the GPA of these students over time, and if so, what was the nature of that change (i.e., how much change and in what direction, positive or negative)? Answering these questions could possibly reveal some impact of the reading program. The data showed that of the three groups, the only group to show statistically significant change in cumulative GPA from the end of freshman year to the end of sophomore year was the group of students enrolled in the reading program only. While there is evidence of an increase in their GPA, compared to decreases in the GPAs of the other two groups (albeit not significant decreases), the increase is slight—only 0.12 on a 4-point scale. The positive direction is encouraging, but the amount of change is negligible. However, it is important to note that moving from below a 2.0 GPA to above it (1.95 to 2.07 for the reading-only students) holds particular significance at Metro. Carrying less than a 2.0 GPA makes a student ineligible for school-sponsored extracurricular activities from athletics to debating, drama, and music.

Testing Data. We also analyzed test-score data. Student results from the EXPLORE test administered to eighth graders in the fall before they enter Metro are one of a few methods used to place students in their ninth-grade classes. Students who score below the 50th percentile on this exam are scheduled for the reading course—the intervention of interest to us. (They can "test out" of reading if they score high enough on the DRP test later on.) Students also take the PLAN® test in the fall of 10th grade. By design, these tests are predictive (i.e., a student's EXPLORE score suggests a range within which he or she would be expected to score on PLAN). We looked at the results of the students in our three groups on the 2000 EXPLORE test and the 2002 PLAN test, allowing us to do two things: (1) compare how students in our three groups performed relative to one another on each test in both reading and overall (their "composite scores") and (2) assess how the students in each group did over time, that is, did they fall below, match, or exceed their predicted PLAN scores?

We would expect the reading/cluster students to score the lowest because their placement in both programs was partially a result of lower performance on the EXPLORE test. We would reasonably expect the students who eventually tested out of reading to score the highest, since presumably they need the least academic assistance of all the students. Thus, the students enrolled in the reading course only would score between the other two groups. These expectations have been met by the test results (see Table 6 on page 14). The reading scores and composite scores on both the EXPLORE and PLAN tests show that the students who tested out of reading scored higher than those students enrolled in the reading course, and that the reading-program students scored higher than their peers in the cluster program.

Table 6. Means and Standard Deviations for Reading and Composite Scores and National Percentiles by Program/Group

EXPLORE Test: December 2000	N	Reading Scale Score: Mean (Std. Dev.)	Reading Percentile: Mean (Std. Dev.)	Composite Scale Score: Mean (Std. Dev.)	Composite Percentile: Mean (Std. Dev.)
Reading/Cluster	37	7.08 (2.13)	21.24 (11.55)	8.81 (1.29)	17.38 (8.79)
Reading Prgm.	42	8.24 (2.55)	27.64 (13.17)	10.57 (1.55)	30.45 (11.39)
Passed DRP	16	9.13 (2.25)	32.38 (12.76)	12.06 (1.73)	42.31 (13.75)
All	95	7.94 (2.44)	25.95 (13.03)	10.14 (1.89)	27.36 (14.07)
		Composite Scale Score: Mean			
PLAN Test: October 2002	N	Reading Scale Score: Mean (Std. Dev.)	Reading Percentile: Mean (Std. Dev.)	Composite Scale Score: Mean (Std. Dev.)	Composite Percentile: Mean (Std. Dev.)
Reading/Cluster	37	12.73 (2.66)	31.89 (20.50)	13.65 (1.55)	27.19 (15.67)
Reading Prgm.	42	13.57 (3.36)	38.26 (22.41)	14.41 (1.84)	35.29 (18.13)
Passed DRP	16	14.25 (2.67)	44.88 (19.91)	15.25 (1.88)	44.44 (19.67)
All	95	13.36 (3.01)	36.90 (21.56)	14.25 (1.81)	33.67 (18.35)

Table 7. Relationship of Actual PLAN Composite Score in 2002 to Predicted PLAN Score Range by Group

Group	N	Exceeded	Matched	Fell Below
Reading/Cluster	37	7	29	1
Reading Prgm.	40	4	33	3
Passed DRP	16	3	12	1
All	93	14	5	5

Table 7 shows that, on the PLAN test, the majority of the students in all three groups scored within the range predicted from their EXPLORE scores. There is no evidence here that any intervention or lack of intervention has significant impact on raising student performance beyond that range. What we don't know, however, is whether or not it would have been more likely for any of the students to score below the predicted range had they not been supported by the reading and/or cluster programs.

Generally speaking, the testing data is inconclusive about any impact of the reading program on participating students. It may have helped some students not backslide in their achievement or it may not have had an impact at all.

Student Interview Data and Findings

Because this evaluation was "retroactive," we were not able to collect data on the implementation of the project as it unfolded. Instead, we sought to develop a sense of how students experienced the program. To gain an understanding of this, we interviewed seven students who participated in the program. Based on the program's conceptual model and the findings from the quantitative analyses, we focused on issues of classroom instruction (the comprehension strategies and curricular materials that students found most useful) and students' relationships with teachers (the teacher practices that communicated encouragement and high expectations to students). We also interviewed a comparable group of seven students with similar academic characteristics who did not participate in the program.

While we were interested in this broader set of students, we were most concerned about the students who were the lowest performers, those with GPAs below 2.0. We believe that these students face the greatest challenges in reaching their educational and professional goals and likely need the most academic support and growth. In the section that follows, we draw on interview data to discuss the experiences of these students with the reading program.

Findings From the Interviews

Explicit Instruction in Reading Strategies. A critical goal of the reading program is to teach reading comprehension strategies that students will use across subject areas during and after they are enrolled in the class. We asked students (all of whom were African-American 10th graders) a general question about the Freshman Reading course: "What did the teacher do in Freshman Reading that was most helpful for you?" And a more specific question about reading strategies: "What strategies did the Freshman Reading teacher share with you about reading?" Students felt that they had learned useful strategies from the class. One set of strategies involved jotting notes on the material they were reading, writing more involved summaries of the reading material, and working in large groups during class. Carol, one of the students, briefly discussed the strategy of jotting down notes as she read. (All names used in this report are pseudonyms.)

> *Interviewer:* What does the teacher do that's the most helpful to you when you get a reading assignment?
>
> *Carol:* She may tell us like how when we read, we can maybe write things down … to help us.

Another student, Jason, discussed the utility of a more elaborate process of summarizing text.

> *Interviewer:* Okay. What does the teacher do that's most helpful to you when you get a reading assignment?
>
> *Jason:* She makes us read in big groups and then she makes—she'll break down like easy essays. Like we get a chance to read like one chapter, and then after we read that one chapter, we just write her a little summary on it.

Interviewer: So the fact that she asks you to make little summaries of what you read is helpful?

Jason: Yes.

This student feels that reading one chapter at a time is useful and that "breaking down" the material helps him gain a better understanding of it. This suggests that rather than simply "plowing through" the material, being provided more time helps him to fully grasp its content. Another student, Steven, in discussing his difficulty with a particular text, *Romeo and Juliet,* talked about the issue of fully grasping the material before moving on. He stated, "I … just didn't like that 'cause it was too much going for me. Everything happened too fast, and the way they did the whole thing, I just didn't—me and that book … just didn't click." He goes into more detail, adding that "when I was in freshman year, I was the type of person like if I didn't get it like the first chapter or first two chapters, I'd just blow it off." He attributes this characteristic to his own immaturity, but the need for teachers to attend to students' understanding before moving on is clear. Another student, Regina, explained that "sometimes, you know, you read it and you don't really understand what they're talking about."

In addition to this pacing issue, writing longer summaries of the material also helped students with comprehension.

Both Jason and Regina believe that working in larger groups helps with reading comprehension. Regina discussed the value of reading aloud and engaging in whole-class activities.

Interviewer: Okay. What did the teacher do [in Freshman Reading] that was most helpful for you?

Regina: Reading out loud.

Interviewer: And why was that [helpful]?

Regina: Because you really get to hear yourself.

Interviewer: Okay.

Regina: And the other people hear you.

Interviewer: Okay. And why did you—when you were able to hear yourself, did that help you? How did it help you?

Regina: It helped me a lot.

Jason also contended that the act of reading aloud and hearing himself and others helped him with reading. Finally, Daryl suggested that skimming through the material before reading it was useful in helping him gain a better understanding of what he read.

While students had some things to say about the reading strategies that were helpful to them, overall the students had a difficult time recalling strategies that had been particularly useful. Moreover, they were seldom able to discuss the strategies in detail. This suggests that the strategies may not have been used in other classes, that students did not internalize the strategies in a deep and enduring way, or that teachers in these classes

did not convey the strategies in ways that helped students fully internalize them. In any case, it is likely that in order to enhance the program, attention will need to be paid to the more effective transfer of reading strategies to students.

Challenging and Engaging Content. In addition to instruction in reading strategies, the program also emphasized challenging and engaging content. Students emphasized the need for instructional material that was interesting and related to their daily lives. Therefore, students felt that the material they read for the class mattered. When the material was relevant to their lives, they were more engaged with it. Steve, for example, was asked to reflect on the class.

> *Steven:* Half the stuff we did, I did not like at all.
>
> *Interviewer:* What stuff didn't you like?
>
> *Steven:* [The play] *Romeo and Juliet,* stuff like that, I did not really like. I like stuff that … was like somewhat based on a true story, like something that was real, like *A Raisin In the Sun*—we read that. Now that explained an actual family that lived in Chicago, and on the south side. So, I mean, I was actually liking that book, and I got a good grade. I got a B+ on that 'cause, I mean, that's the way I like to relate to things in school.

Clearly, this student is more interested in content to which he could relate. Regina also indicated that books about teenagers were interesting to her.

However, even when the material was not interesting on its face, there were things that teachers did to help students connect to the material and feel more competent as readers. Steven shares one such effort.

> *Interviewer:* When you were finished with it [the course], did you feel like you were able to read better? It seems like you understood better.
>
> *Steven:* Yeah, 'cause we did better things like projects.
>
> *Interviewer:* What kind of projects?
>
> *Steven:* Like, like … like she did one—we did one big project. It's like where you had to—when we read, when we got through the book—pick a part in the book that you liked and then make something out of it, like a collage or something like that, like a box or anything. [He explained that a fight scene in *Romeo and Juliet* was the part he liked. For the project, he built a "scene" that showed how his own concepts of fighting related to the play.] "I got a couple of my little brother's toys or whatever, and I had—I got a new pair of shoes and I had the box in my closet—so I just used that. [I] went around, designed the back … and all of that stuff and had it going, so."

The student was uninterested in the material being read for class (which was challenging in content). However, when the teacher allowed him to create his own interpretation, he felt as if he connected to the material more effectively and that this enhanced his comprehension skills. When he left the class, he felt as if he had learned skills that enhanced his ability to understand reading material. In fact, all of the students we

interviewed felt that they were better readers when leaving the class. Some, such as Steven, attributed this to the course and their increasing maturity and willingness to stick to the reading tasks; other students suggested that the improvement related to the strategies they had learned. Still other students felt that the time they spent reading in the class helped them. As one student argued, "I got the chance to read more often because I don't like reading a lot, but reading in class makes me read." Students' increased confidence as readers may be reflected in their leisure reading behavior discussed earlier. If students felt more confident as readers, they may have been more likely to read for fun because the activity would be experienced as enjoyable.

Relationships With Teachers. The reading program also emphasized the connection between teachers and students. The quantitative data indicate that students in the reading program felt closer to their teachers and believed that their teachers knew more about what they were capable of academically than other students at Metro. When we asked the students we interviewed about their relationships with teachers, they identified certain practices that they found particularly encouraging. These included providing one-on-one help when they faced difficulties, establishing high expectations for students' performance, and recognizing their academic accomplishments. While these practices are not all exclusively tied to the reading program, they reflect the kinds of practices that we suspect are associated with the closer connections that reading-program students experience with their teachers.

Several students emphasized that they felt encouraged and closer to teachers when teachers provided them with one-on-one help with their school work. Carol exemplifies this experience.

> *Interviewer:* As far as your experiences with teachers here, what adult in the school do you feel closest to?
>
> *Carol:* (long pause) My English teacher.
>
> *Interviewer:* Is there a particular reason you feel closest to that person?
>
> *Carol:* She helps me out with my work. If I get a bad grade on something, she gives me another chance to make it better.
>
> *Interviewer:* What kinds of things do teachers do that feel supportive to you?
>
> *Carol:* If I'm asking for help, like they'll come help me. They can come help me [with] like whatever I need help on.

Carol appreciated the help she received from her teachers when she struggled with school work and felt closer to those teachers who provided such support. She also believes that her connection to teachers is stronger when she is given the opportunity to improve her work. Jason stated that teachers who are encouraging "sit down and do the work with you if you don't understand it. They'll sit down and take you step by step through it." Another student, Daryl, explained how teachers work with him and enhance his relationship with them.

Interviewer: Give me an example of something she [your teacher] did that you thought was really encouraging. Tell me the scene. What was happening?

Daryl: I mean, like she's like—I was like, "I can't do this, I can't do this." She's like, "Yes, you can. Yes, you can." And she'll keep pushing me and eventually I was like, "I don't know this." Then she would like give me like something, like say something we went over [remind me of something], and then I'll get it. And then I'll do the work.

Daryl's statements suggest that he feels encouraged when teachers stick with him even when he struggles with his work and becomes frustrated. His statement also suggests that he appreciates when teachers view him as capable.

Other students suggested that they feel connected to teachers when those teachers hold high expectations for them. One student reflected on her experiences during her freshman year.

Subject: My freshman year I messed up pretty bad, and she [the teacher] just looked at my grade. She said, "I know this … isn't you," and she really helped me like get on that straight path to do good.

Interviewer: Can you give me an example of what she did to help you get back on the path?

Subject: She just … she took the class to a field trip called Oakton Community College … and [she] was like, "You know, it's not really that hard to get into a college. It's just [that] you have to be willing to do good in school, and just be prepared to go to college."

This student appreciated that the teacher thought that she was capable of success in school and that she had the potential to go on to college. The teacher's effort to encourage the student and express high expectations for her improved the student-teacher relationship.

Finally, students stated that they felt closer to teachers when the teachers recognized students' accomplishments. One student, Jalen, captured this sentiment in response to the question about how teachers can enhance their relationships with students.

Jalen: Congratulate you when you, you know … get a good grade on something. … After—it doesn't have to be in front of everybody. You know, I don't try to be a show-off or anything. But, you know, after class, "Good job," you know? "Keep up the good work." Or, if they notice a couple of assignments have gone downhill, talk to you—don't wait 'til the end of the semester before they tell you you're doing bad. …Talk to you as soon as possible so things can come back up, or ask, "Are you having any problems with a certain … area?"

Jalen believes that teachers should reward students by telling them when they have done well. He also believes that teachers should pay attention to students' academic

performance and intervene when students show signs of having difficulty. Daryl echoes Jalen's statement, arguing that he likes "when people … give me compliments."

Discussion and Conclusion

The Freshman Reading Intervention at Metro High School emphasizes improving students' reading comprehension ability and academic achievement by giving students an extra class period for reading instruction, teaching students reading comprehension strategies, and building positive teacher-student relationships. Our data from surveys, archival data, and interviews with students suggest that this intervention has succeeded in reaching some of its goals and been less successful in obtaining others. More specifically, data indicate that students who participated in the reading intervention had stronger relationships with their teachers, spent more time on leisure reading, and improved their overall GPAs at a faster rate than nonparticipants. These students also reported feeling that they had learned useful reading strategies and had better comprehension skills after completing the program. In contrast, data indicate that the overall GPAs of program participants were lower than those for comparable students and that these students continued to comprehend less of what they read for school than their peers. Still other data was inconclusive. When we compared students' PLAN test results to those projected from their EXPLORE results, we saw no clear indication that reading-program students demonstrated more growth than other comparable students, suggesting that the program did not have a substantial impact on students' test score outcomes.

We believe that these findings have implications for future efforts to address the needs of adolescent students who face challenges in reading comprehension. We have seen that teachers can form positive relationships with students when school programs support such efforts and when teachers reach out to students, encourage them to do their best work, and maintain high expectations for them. Future programs should be explicitly designed to build the relationships between teachers and students. Based on the experiences of the students we interviewed, these efforts should include offering one-on-one support to students (repeatedly if necessary), recognizing students' academic *and* personal needs, maintaining high expectations for students, and combining praise with critiques of students' work.

We suspect that the formation of positive teacher-student relationships might be connected to the rise in students' overall GPA for a few related reasons (though we do not have data to support these conjectures). First, students who feel more connected to school and have positive relationships with at least one adult inside a school are likely to be better connected to resources and support when they face academic or personal challenges. Second, as students' GPAs rise above 2.0, the students gain access to school-based extracurricular activities (e.g., sports, clubs, etc.). Access to such school programs, if acted upon, probably increases students' overall school commitment and may be reflected in better outcomes.

We have also seen that students' relationship to reading, and their beliefs about themselves as readers, can be improved through such interventions. As indicated above, students who participated in the reading program spent more time engaged in leisure reading and believed that they were better readers when they left the class. We believe that spending more time engaged in leisure reading may connect with better long-term outcomes and that teachers should capitalize on students' reading behavior by

encouraging it and building on students' reading interest during classroom instruction. We also suggest that curricular materials should be relevant to the personal lives of the students (or made relevant to them). For example, drawing on material that discusses students from similar racial and ethnic backgrounds, age cohorts, and geographic regions as the students in the classroom might enhance students' connection to course content.

Unfortunately, students' improved relationships to reading and their teachers did not translate into consistently improved outcomes. Students who participated in the reading course did experience more GPA growth, albeit slight, but their GPAs were still lower than comparable peers. Moreover, their actual versus projected growth on the ACT testing series yielded inconclusive results. We suspect that these results might be attributed to several issues. First, the time frame for this analysis is very short. It could be the case that students' academic gains from participation in the reading program will come over time. The data indicate positive growth for reading-program students in terms of GPA. Perhaps changes in testing outcomes will occur but take longer. Second, while students reported strategies that they felt helped them understand more effectively what they read for school, they had a difficult time recalling those strategies. This suggests that the students may not be using the strategies in their contemporary reading tasks. Third, students learned strategies in the reading class, but they were not always extended across subject areas. Therefore, students did not learn to apply comprehension strategies in mathematics and science courses, for example. Fourth, most students did not continue to receive additional reading support following the freshman school year. This means that the strategies they learned were unlikely to be reinforced over time (a more likely explanation than the delayed-testing-outcome impact suggested above). It is worth mentioning that Metro has begun to implement a sophomore follow-up program for those students still struggling with reading—an "enriched" humanities class that combines English, history, and reading support.

Based on our investigation of the Freshman Reading Intervention at Metro High School, we believe that this type of intervention—which capitalizes on increased time focused on reading instruction, teaches comprehension strategies using challenging material, and emphasizes the development of close relationships between teachers and students—offers opportunity to improve students' reading skills and academic achievement. Similar interventions would benefit from a developmental structure through which students first learn reading strategies, then are supported as they gradually apply these strategies to coursework beyond the reading program. We further suggest that students not be "cut loose" suddenly at the conclusion of the program or the end of the year, but that they be provided with less intense and continuing support while they become more independent and gradually exit the program. In addition, if other schools were to implement similar programs, it would be beneficial to monitor the implementation more closely and plan a carefully designed program evaluation *before* implementation so that more conclusive statements could be made about the impact of the program on student outcomes. We believe that learning from the successes and challenges of this intervention will help teachers and administrators address the needs of adolescents who struggle with reading comprehension. Dedicated effort of this type, based on cumulative knowledge, should help move us closer to reducing racial gaps in achievement.

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