

Empirical Data Supporting Technology Transfer of the Morningside Model of Generative Instruction



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Morningside has more than 20 years of commitment to the ideals of educational accountability and empirically verified approaches to instruction, a model that places the responsibility for student success squarely on the shoulders of educators. Schools are not to act as mere sorting machines for determining degrees of natural, genetic, or pre-existing talent. Instead they must act so that all children are literate and can function as effective citizens in a democracy.

Four features of the Morningside Model constitute the core of the approach:

- (1) Learner-verified instructional methods, tools and programs are incorporated for basic academic and learning skill development
- (2) A significant amount of school time is allocated to practice, using fluency and celeration
- (3) Children learn reasoning, thinking, problem solving, research and cooperative learning skills
- (4) Children are transitioned into more independent learning environments in which they apply their basic academic, reasoning, research, and cooperative skills to learning social studies, science, and literature, according to their interests

Morningside Academy arranges such a learning environment for its children and youth, and they make enormous progress in school.

The remarkable results of Morningside Academy's initial 11-year study of its children's mean standardized test gains in reading, language arts, and mathematics have been reported elsewhere (Johnson & Layng, 1992). Student reading scores averaged 2.5 years of growth per school year. By the end of

the study, language arts scores approached an average of 4 grade levels of growth and mathematics scores rose more than 3 grade levels in a single school year.

Morningside completed the development of its formal lab school evaluation process in the spring of 1992. Currently it assesses its students in September and June on a variety of in-house, state, and national measures. Children's median achievement test performance increases remain above 2 grade levels per year in reading, language arts, and math.

Since 1991, Morningside Teachers' Academy (MTA) has successfully implemented programs with over 17,000 students in Illinois, Washington, Georgia, Pennsylvania, British Columbia, South Dakota, and Oklahoma. Students in the Chicago Public Schools, the Nechako School District in British Columbia, the Seattle Public Schools, DeKalb County Georgia Public Schools, and elsewhere have profited from our services. MTA has also contracted with several First Nation and American Indian schools in British Columbia, Washington, South Dakota, and Oklahoma, helping them to develop programs in their schools and adult literacy centers. Adult learners in the City Colleges of Chicago and at Motorola Corporation in Phoenix have also made enormous strides in their reading, writing, reasoning, and math skills. A sampling of standardized achievement test results for 13 of our 83 external partnerships is presented below.

After Fort Fraser Elementary School, a small rural public school in northern British Columbia, formed a partnership with MTA, students' reading, mathematics, and writing performance improved substantially. Figures 1 and 2 show Fort Fraser student gains in national percentile ranking on the Canadian Test of Basic Skills (CTBS) over a 5-year period. One group of students was tracked from fifth grade through their seventh grade graduation. Another group was tracked from third grade through their seventh grade graduation. Figure 7 shows changes in reading test scores, and Figure 8 shows changes in mathematics test scores. The 1996 bars in each chart show student performance prior to MTA implementations. 1997-2000 data show student performance after implementing MTA-certified programs, training, and coaching. Both groups made steady gains in both mathematics and reading percentile rankings, achieving scores at the national norms within 2 years. After 4 years, both groups ranked well above average in both reading and math. Since working with MTA, Fort Fraser student performance has risen from a ranking of 13th in a district of 25 schools, to second in math and fifth in reading. Writing performance was also systematically measured in 1 year of the project. At the beginning of the year, only 39% of students were at

grade level. After 9 months, 80% of students were at grade level.

Morningside Reading
@ Fort Fraser Elementary, British Columbia
CTBS National Percentiles

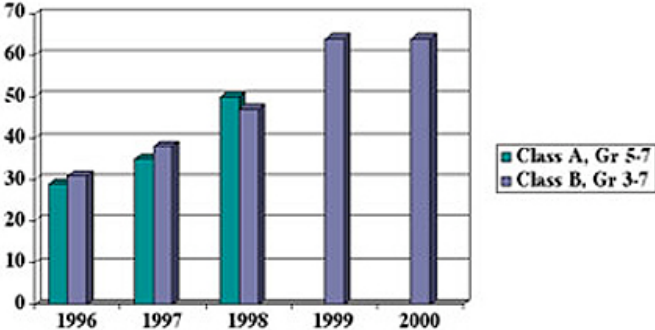


Figure 1. Reading data from a Morningside implementation at Fort Fraser School in British Columbia, Canada.

Morningside Mathematics
@ Fort Fraser Elementary, British Columbia
CTBS National Percentiles

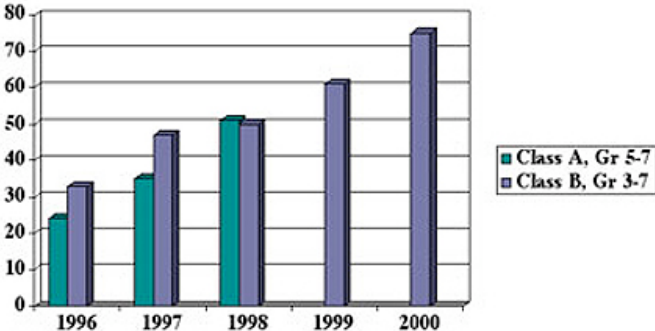


Figure 2. Mathematics data from a Morningside implementation at Fort Fraser School in British Columbia, Canada.

MTA-certified programs have similar effects on students in the primary grades. Figures 3 and 4 show how the distribution of first grade students' national percentile ranks on reading test scores at Mouse Mountain Primary School in British Columbia shifted in one school year. At the beginning of the school year, over 40% of the students were in the "below average" (<1st-29th

percentiles) test score range. Over 50% were in the "average" range (30th-70th percentiles). Only 6% were in the "above average" range (71st-99th percentiles). By the end of the school year, the distribution of test scores at the school reversed. There was a 24% decrease in the number of students in the "below average" range, a 10% decrease in the "average" range, and a 35% increase in the "above average" range. This reflects an upward migration of student competencies. Students with below-average scores tended to achieve average scores with MTA reading programs. Students with average scores tended to achieve above-average scores.

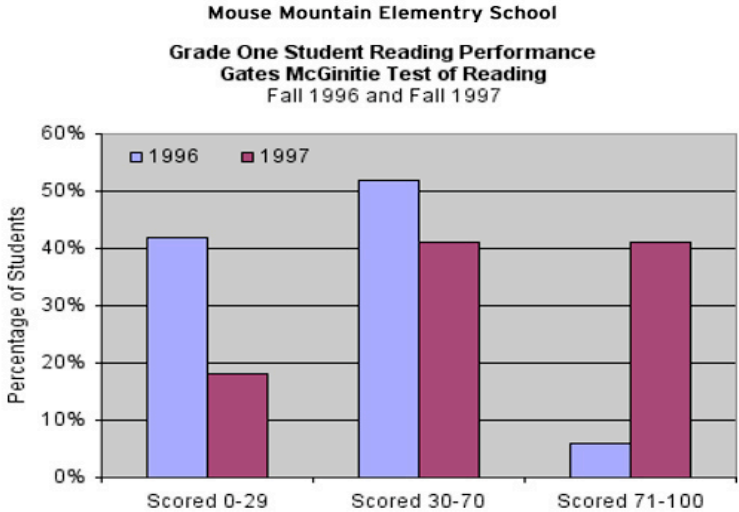


Figure 3. Improvements in national percentile rank in reading following a Morningside implementation among first graders at Mouse Mountain Primary School in British Columbia.

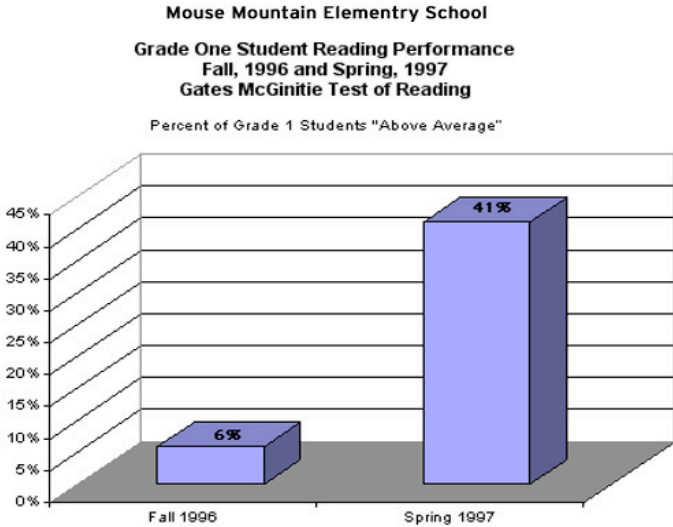


Figure 4. Increases in percentage of reading "above average" following a Morningside implementation among first graders at Mouse Mountain Primary School in BC.

Implementation of the Morningside Teachers' Academy has similar effects in urban schools. Figures 5, 6, and 7 show Washington Assessment of Student Learning (WASL) results for grade 4 students in three Seattle Public Schools that implemented MTA reading programs. WASL results are reported as the percent of students who met or exceeded ("passed") the state standard. 1999 data in each figure show the results prior to MTA implementation. 2000 and 2001 data show the results after MTA reading programs were implemented.

Thurgood Marshall WASL Reading Achievement before and during Morningside services (with TM math, district reading, and state reading comparisons)

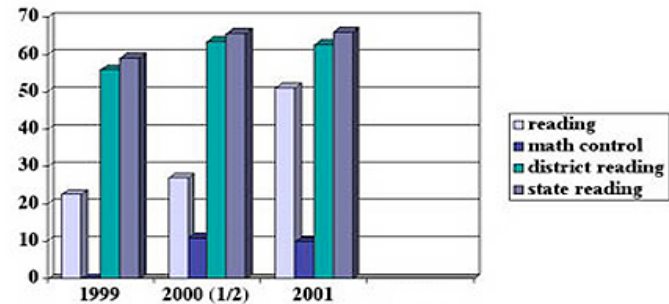


Figure 5. Improvements in reading scores on the Washington Assessment of Student Learning (WASL) following a Morningside implementation at Thurgood Marshall Elementary School in Seattle, WA.

Emerson WASL Reading Achievement before and during Morningside services (with Emerson math, district reading, and state reading comparisons)

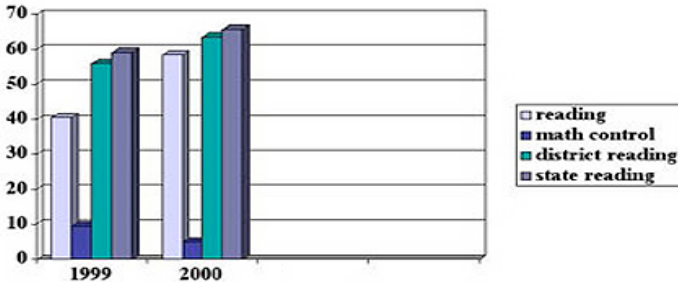


Figure 6. Improvements in reading scores on the Washington Assessment of Student Learning (WASL) following a Morningside implementation at Emerson Elementary School in Seattle, WA.

Highland Park WASL Reading Achievement
before and during Morningside services
(with HP math, district reading,
and state reading comparisons)

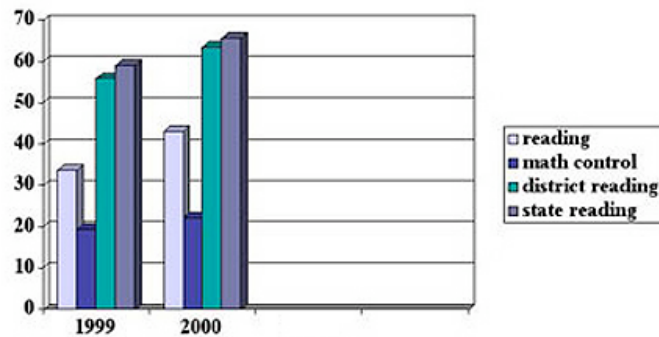


Figure 7. Improvements in reading scores on the Washington Assessment of Student Learning (WASL) following a Morningside implementation at Highland Park Elementary School in Seattle, WA.

Each year shows 4 bars. The first bar indicates the percentage of students who passed the reading test. The second bar indicates the percentage of students who passed the math test. Since MTA did not implement a math program in these schools, these data serve as a quasi-experimental control. The third bar indicates the percentage of students who passed the reading test across the Seattle School District. The fourth bar indicates the percent passing the reading test across Washington State. In each case, substantial gains occurred after MTA reading was implemented, all 3 schools were rapidly approaching average district and state levels, and math scores did not increase, providing some confidence that other changes in the school were not responsible for the growth in reading achievement.

These results are even more significant when one considers the impoverished economic levels of students in these schools. 76% of students at Thurgood Marshall qualify for free and reduced lunch services, 64% at Highland Park qualify, and 81% at Emerson qualify, compared to 44% in the school district. Only eight other schools in the district have 75% or more students who qualify for free lunch. The average WASL reading gain in those 8 schools since the test was instituted in 1998 was 7%. The average WASL reading gain in the 3 schools that implemented MTA reading programs was 22%.

MTA also implemented a summer school skills enhancement program for 176

Seattle Public Schools fifth graders who were at-risk for advancing to middle school. Each student studied 2 foundations areas (reading, writing, mathematics). In a friendly bet with Superintendent John Stanford, MTA was paid \$200 above its normal contract fees for each student who gained at least eight months in the 5-week program. 80% (141 students) gained at least 8 months in at least one skill area. 62% (110 students) gained at least 8 months in their skill of greatest deficit.

Mayor Richard Daley's team invited Morningside Teachers' Academy to participate in the original Chicago Public Schools' Children's First Initiative from 1996-1998. 17 schools in the district volunteered to partner with MTA. The Children's First Initiative was perhaps the first district-wide effort to raise student achievement in large inner-city schools by partnering with outside experts. In an initial pilot project, after 7 months of MTA reading programs, eighth grade students at Carter-Woodson Elementary School in Chicago gained an average of 2.3 grade levels on the Metropolitan Achievement Test 6. Not a single student was at grade level at the start of the program. Within 7 months, 27% of the students were at grade level.

Figures 8, 9, and 10 show student growth in reading on the Iowa Test of Basic Skills (ITBS) at 3 other schools in Chicago. At Hearst Elementary School, children were gaining 8 months for every 10 months of reading instruction before MTA. After implementing MTA reading programs, students averaged 12 months gain for 10 months taught. At McKay Elementary School, children were gaining 8 months for every 10 months of reading instruction prior to the implementation of MTA. After implementing MTA programs, students averaged 15 months gain for 10 months taught. At Herzl Elementary School, children were gaining 8 months for every 10 months of reading instruction before MTA. After implementing MTA reading programs, students averaged 20 months gain for 10 months taught, representing a doubling in reading growth per month.

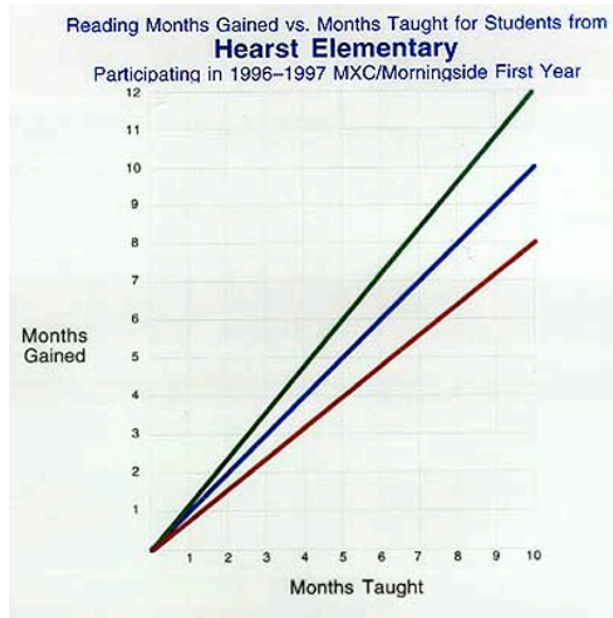


Figure 8. Improvements in reading scores on the Iowa Test of Basic Skills following a Morningside implementation at Hearst Elementary School in Chicago, IL.

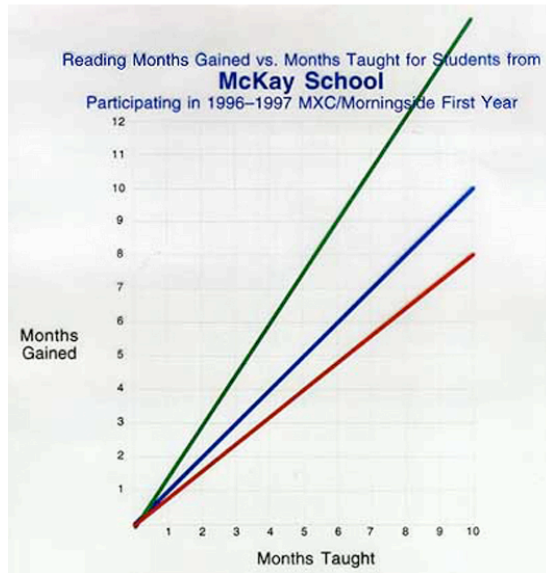


Figure 9. Improvements in reading scores on the Iowa Test of Basic Skills following a Morningside implementation at McKay Elementary School in Chicago, IL.

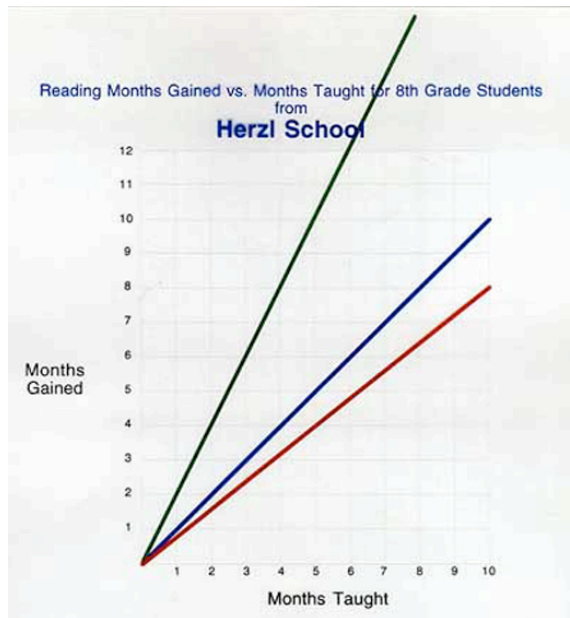


Figure 10. Improvements in reading scores on the Iowa Test of Basic Skills following a Morningside implementation at Herzl Elementary School in Chicago, IL.

Figures 11 and 12 show the percentage of students whose scores were at or above the 50th percentile in reading comprehension on the Iowa Test of Basic Skills (ITBS) in each grade in 2 of the MTA/Chicago partnerships. The first bar for each grade represents the mean percentage of students who were at or above the 50th percentile for a 7-year period (1990-1996) prior to implementing MTA reading programs. The second bar for each grade represents the mean percentage of students who were at or above the 50th percentile after 1 year of MTA. The third bar for each grade represents the mean percentage of students who were at or above the 50th percentile after 2 years of MTA. Students at each grade level performed significantly better in 1997, 1998, or both years than they did in the previous 7 years.

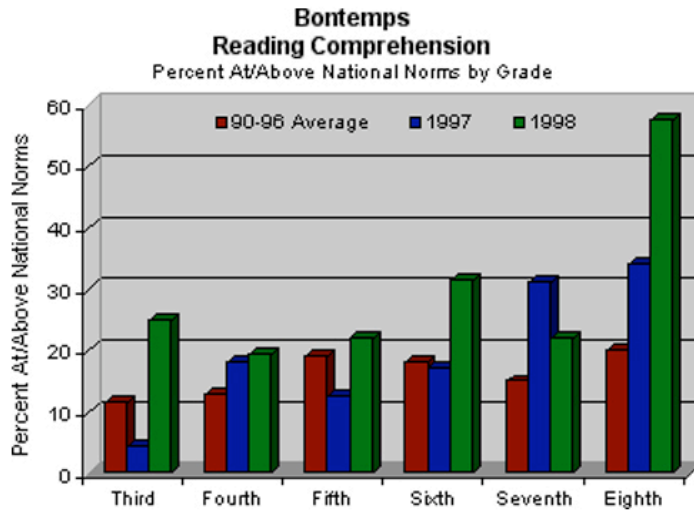


Figure 11. Improvements in reading comprehension scores on the Iowa Test of Basic Skills following a Morningside implementation at Bontemps Elementary School in Chicago, IL.

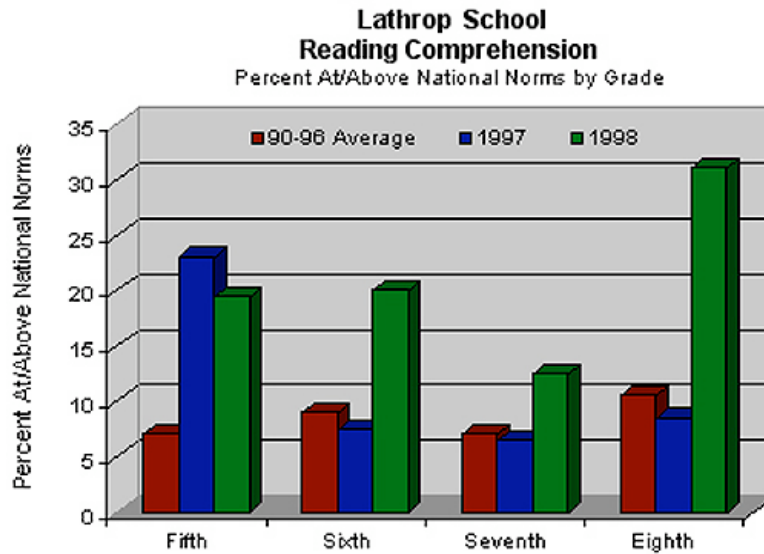


Figure 12. Improvements in reading comprehension scores on the Iowa Test of Basic Skills following a Morningside implementation at Lathrop School in Chicago, IL.

Figure 13 presents summary data in reading comprehension performance averaged across the 17 Chicago Public Schools that partnered with MTA. In general, these data show that students at each grade level performed significantly better in the years of MTA implementation than in the previous 7 years.

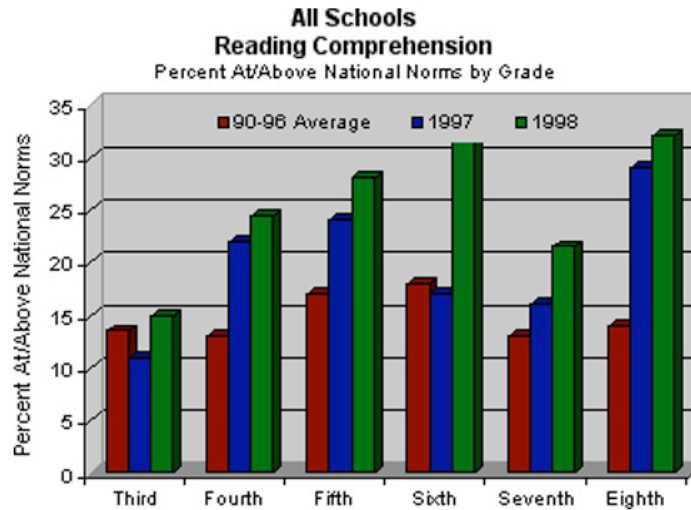


Figure 13. Improvements in reading comprehension scores on the Iowa Test of Basic Skills across all 17 Chicago public schools that implemented the Morningside model.

In a recent partnership with Pine Ridge Indian School in South Dakota, the results after 1 year are very encouraging. Mean percentile scores on the spring 2002 Stanford Achievement Test 9 (SAT-9) indicate that all grades made improvements in reading achievement. Student performance in each grade was compared with their performance in the previous grade, approximating a within-group analysis. Figure 14 shows three grades that showed substantial gains in national percentile ranks. First graders made almost 2 years growth, increasing from the 27th percentile in kindergarten to the 41st percentile in first grade, a 14-percentile point increase. Third graders made more than 1 years growth, increasing from the 26th percentile in second grade to the 34th percentile in third grade, an 8-percentile point increase. Sixth graders also made more than 1 years growth, increasing from the 22nd percentile in fifth grade to the 31st percentile in sixth grade, a 9-percentile point increase. It is very unusual for students performing in the first quartile to make such large gains. These data reverse the long-term trend at Pine Ridge of declining achievement in reading as one advances from grade to grade.

Pine Ridge Indian School
 Average National Percentile Rank in Reading Achievement, SAT-9.
 Students' Current Performance With Morningside Reading for 4
 Months Compared With Their Performance in the Previous Grade
 Before Morningside.

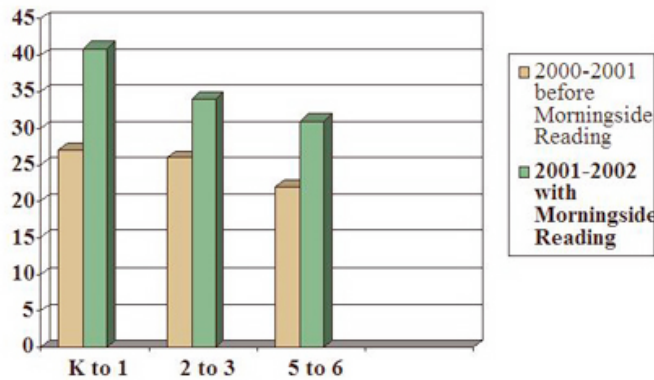


Figure 14. Improvements on the 2002 Stanford Achievement Test 9 following a Morningside implementation at Pine Ridge Indian School in South Dakota.

Results are even more striking for adult learners. Wherever Morningside has implemented an adult literacy program, be it in a community college such as Malcolm X College in Chicago, a state university such as Jacksonville State University in Alabama, or a manufacturing company such as Motorola Corporation in Phoenix, learners have gained approximately two grades per month of instruction (Johnson & Layng, 1992).

Epilogue

We've inherited children who have been left behind and we've helped them catch up and move ahead. We've believed that if the child wasn't learning, we weren't teaching. We've included learners in the teaching process, as coaches with each other. We've reformed our practices until the evidence revealed that our practices work for kids. We've shared the effective practices with others whose children were left behind. We've stood behind our practices, offering parents money-back learning guarantees. In the end we believe we've helped define what it means to leave no child behind.