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MORNINGSIDE ACADEMY

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ABSTRACT: Morningside Academy is a private school in Seattle, Washington, offering an academic program for students in grades K-10. Many of the students have performed below their potential. Some have been diagnosed as having Learning Disabilities and others are said to have attention deficit hyperactivity disorder (ADHD). Some are behind their peer group for no diagnosed reason. Initial remediation of academic skills is accomplished through the use of a combination of Direct Instruction for mastery of basic academic skills and Precision Teaching to build rate. Once students have learned required basic skills, instruction shifts from Direct Instruction to concentrate on teaching thinking skills in reading comprehension, math, social studies and science. This is accomplished through the use of Talk-Aloud-Problem-Solving (TAPS) and peer tutors. Staff receive pre-service and ongoing in-service training. Teaching is adjusted as needed based on student performance. Ten years of standardized test data support gains in reading, language arts, and math averaging over two years gain per academic year.

Sixteen years ago, Dr. Kent Johnson founded Morningside Academy in Seattle, Washington, to provide behaviorally-designed academic and social programs for children. As a Washington-state approved private school, Morningside offers a school year program with a money-back guarantee if students do not progress two years in one and, in the 6-week summer school program, a money-back guarantee if students do not progress one year in the skill of greatest deficit.

The Morningside program is based on a mastery learning approach and is a synthesis of several educational technologies. By "technology" is meant a method of instruction that is replicable; it can be specified, taught to others, and performed by them with consistent outcomes. These technologies include Engelmann's Direct Instruction (DI) (Engelmann & Carnine, 1982), Lindsley's Precision Teaching (PT) and Fluency-building (Lindsley, 1990; Johnson & Kevo, 1993), Keller and Sherman's Personalized System of Instruction (PSI) (Sherman, Ruskin, & Semb, 1982), Goldiamond's nonlinear constructional approach (Goldiamond, 1975) and most recently, Whimbey's Talk-Aloud-Problem-Solving (TAPS) (Whimbey & Lochhead, 1982). These technologies are included because they produce substantial gains in student performance. This amalgamation of technologies is called the Morningside Model of Generative Instruction. Any teaching method that has been demonstrated consistently to increase students' performance and can be codified and taught to others can qualify as an ingredient in the mix.

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Program Description

Students attending Morningside range in age from 5 to 18, grades Kindergarten through 10th. They typically perform below their potential in school because of either (a) deficient basic academic skills such as reading, writing, and mathematics; (b) deficient learning skills, such as listening, noticing, thinking, studying, and organizing; or (c) deficient performance skills involving the inability to perform tasks in a timely, accurate, and organized manner without disrupting others or causing themselves undue grief.

Some have been diagnosed with Learning Disabilities, others are said to have attention deficit hyperactivity disorder (ADHD). Some are behind their peer group in school for no diagnosed reason. Some have poor relations with family members and friends, but most do not.

Students with poor learning, and performance skills are placed in classes using Direct Instruction (DI) reading, writing, and math programs to learn these basic academic skills. During DI classes, from the Teachers Guides teachers present structured lessons to students who are then asked to answer teacher questions about the lessons in unison as well as individually. Teachers provide quick, descriptive feedback to students throughout different phases of the lessons, praising correct answers and correcting errors. The explicitness and careful progression of Direct Instruction lessons assures that students progress quickly.

Immediately following completion of a DI lesson, students continue to practice their freshly learned skills using techniques developed in the Precision Teaching model. This involves having students build skills to fluency either independently, with a teacher, or through the use of peer tutors. The goals of fluency-building are to ensure that students permanently retain the skills they have learned, can perform them for extended periods, and can easily apply them to known and to new situations.

Once students have learned a substrate of basic academic skills, instruction changes focus to concentrate on teaching thinking skills in reading comprehension, mathematics, social studies and science, using a method called Talk-Aloud Problem-Solving (TAPS). Teachers model and coach students to think out loud, using specially designed protocols that represent various ways to work through problems. Then students coach each other to become fluent in using the TAPS protocols to solve a range of problems.

The gradual shift from Direct Instruction to Talk-Aloud Problem-Solving allows students to master basic academic skills as well as highly advanced problem solving and thinking skills. They also progress from teacher-directed instruction to independent learning.

In addition to the academic programs, students with poor performance skills are provided additional support by a variety of procedures, most notably a daily report card showing points earned for performing various academic, organizational, and learning skills, as well as for personal conduct. As needed, procedures to help students and their families solve personal and social problems are also implemented.

Staff training and support includes initial pre-service instruction covering the procedures, materials, and instructional technologies used as well as topics such as classroom discipline. This is followed by in-classroom observation, coaching, and helping staff members with student placement. Additional workshops are scheduled periodically.

Evaluation

Collection and Use of Ongoing Criterion-Referenced Data

Morningside measures student performance on a daily basis. Teachers and students use these data to make decisions about the instructional program. Students might be required to receive more instruction in a skill or may be allowed to skip certain instruction based on evidence that it has already been mastered. The instructional technologies used by Morningside are designed specifically to be "generative," that is, they produce skills that are not directly taught. As a result, students often are able to skip certain portions of instruction as indicated by daily data.

This data-based decision-making model builds a self-correcting mechanism into the Morningside method. It helps to produce more student growth per unit time than methods that are not data-driven.

Standardized Tests

Although most efforts at measurement are directed toward collecting data on an ongoing basis used to guide instruction, for a ten-year period (1981-1982 school year through 1990-1991 school year) Qlassroom teachers administered the California Achievement test (1981-1982 through 1988-1989) and then the Metropolitan Achievement Test (MAT6) to all students in September and in June. The number of students tested each year ranged from 11 to 75.

During this period, children at M.Qrningside gained an average of 2.5 grade levels per school year and maintained this track record over the course of 10 years. Children attend Morningside for one to four years of their elementary, middle, or high school years before returning to mainstream or "regular" schools. Over the ten-year period mentioned; average gains in reading ranged between 2.0 and 2.8 years per year (median 2.3), in Language Arts 1,6 to 3.8 years per year (median 2.8), and in Math 1.9 to 3.9 years per year (median 2.2).

These grade-level gain scores are shown in Figure 1.

Year	Reading Mean Gain	Language Arts Mean Gain	Math Mean Gain
1981-1982	2.4	1.6	2.1
1982-1983	2.3	1.9	1.9
1981-1984	2.4	1.9	2.0
1981-1985	2.5	2.7	2.2
1981-1986	2.0	3.0	2.5
1981-1987	2.3	2.3	1.9
1981-1988	2.3	3.5	2.2
1981-1989	2.5	3.0	2.7
1981-1990*	2.8	3.3	2.4
1981-1991 *	2.2	3.8	3.9
1981-1992*	2.6	2.9	3.1

* Astensked Items on Metropohtan Achievement Test (MAT6).
All others are on the California Achievement Test.
(From Johnson and Layng, 1992.)

Figure 1. *Morningside Academy Children's Mean Grade-Level Gains on Standardized Achievement Tests*

Financial Data

Start-up costs for a school desiring to implement this model include training costs due to the technologies and procedures that may be unfamiliar to teachers and administrators. Costs vary with existing school personnel and resources, as well as student and staff size, but it is estimated that a typical school needs 200-500 hours of training and support expertise for implementation. Initial costs for instructional and fluency materials, timers, and charts for about 400 students average between $50,000 and $75,000 ($125-$187 per student). This replaces some, but not all, of the traditional school materials.

Continuing annual costs for materials and supplies range between $10,000-$20,000 ($25-$50 per student). Ongoing costs for additional training or consultation vary with each situation and school or district resources.

Use in Other Settings

Under the direction of Dr. Joe Layng, starting in 1987 with a grant from the federal government through the Job Training and Partnership Act, the Morningside model was tested at Malcolm X College with adults whose reading, writing and math skills were below U.S. literacy and numeracy standards (grade 8). Over a 2-year period, adult learners gained an average of two grade levels per month of instruction (20 hours per skill area). This rate of gain has been maintained for 10

semesters running. Adults who enter the college with third to sixth grade skills test at the college level within one to two semesters. At a Motorola Corporation semiconductor manufacturing plant in Phoenix, Arizona, machine operators and technicians improve their job-related reading, thinking, writing, and math skills using the same model.

Morningside currently maintains programs for children in the Nechako school district in British Columbia, the Chicago school district, as well as in individual schools in Atlanta, Seattle, Marysville, Washington, and Anaheim, California. Morningside works with several Native American tribes in British Columbia, helping them develop programs in their schools and adult literacy centers. These projects have been in operation for six months to two years. Early data from the British Columbia project show, for example, that 79% of students entering second grade are reading at grade level, as compared to 44% prior to the Morningside program, and suggest gains of 1.5 to 3.5 years in reading and writing in the second year. A comprehensive report of student performance in reading and writing in the British Columbia and Chicago school districts will be available in summer, 1997.

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