

# Schools Attuned and Mentor Applications of Schools Attuned

Final Study Report

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March 2007



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## EXECUTIVE SUMMARY

Since 2000, the All Kinds of Minds (AKOM) Institute has provided Schools Attuned training as a yearlong, professional development program designed to equip teachers with the knowledge, skills, and tools to meet the diverse learning needs of K-12 students. This innovative, neurodevelopmental approach, developed by Dr. Mel Levine, intends to improve the academic and social lives of students through focusing on some root causes of academic and behavioral problems that frequently have adverse affects on students, teachers, and schools.

All Kinds of Minds contracted WestEd, a non-profit research and development agency, to study the affect of Schools Attuned training on students, teachers, and schools, as well as explore the added benefits of mentoring programs. WestEd designed a quasi-experimental study with two main components: 1) a broad study to examine teacher-level effects in multiple settings; and 2) an in-depth study involving case studies to explore how Schools Attuned was implemented in different schools, and the affect of Schools Attuned on the school, teacher, and student. In addition to these two components, an exploratory study was conducted to identify the aspects and potential added benefits of mentoring programs.

Schools Attuned was originally designed as a training program for classroom teachers to give them the knowledge, understanding, and strategies to reach students with learning differences. As designed, implementation occurred at the classroom level with teachers attuning and demystifying individual students. However, teachers adapted their classroom implementation to fit their needs and available time.

Teachers reported that attending the training increased their understanding and awareness of student learning differences. They reported having more empathy and sympathy for students who were struggling and that the training gave them more tools to better meet the needs of struggling students. The Schools Attuned training also resulted in changes to teachers' instructional practices. The training provided teachers with new strategies to use in their classrooms, and increased teachers' confidence and willingness to work with students before prematurely referring them for special education services. Overall, Schools Attuned had a positive affect on teachers' instructional practices.

Teachers having success using Schools Attuned often shared their experiences with their peers and administrators. At some sites, Schools Attuned grew from the bottom up and was quickly adopted as a school-wide program. School-level approaches to implementation identified in our study schools included classroom-level implementation, full-school implementation, lead teacher/team implementation, and student curriculum implementation.

Specific details of implementation varied by school, but some common themes related to successful school-level implementation emerged. Successful implementation strategies included

developing a strategic implementation plan, starting small, building the infrastructure, and customizing Schools Attuned to meet the needs of the school, teachers, and students. Additional factors important for implementing and sustaining Schools Attuned included having a supportive administration, having an advocate/support person, training a core group of teachers, and integrating Schools Attuned with existing school policies and initiatives.

Examining mentor applications of Schools Attuned was an exploratory study component. Our study was the first step in looking at mentoring and its added benefits. Overall, added mentoring services were beneficial to both the schools and teachers. For schools, mentors provided information about upcoming trainings, supported administrators with school level implementation issues, and served as a general reminder that Schools Attuned was available as a resource for teachers, parents, and students. For teachers, the mentors provided the additional support they needed to implement Schools Attuned in their classrooms, including attuning individual students and adopting classroom strategies to help all students learn.

Based on the findings from our study, several opportunities for program improvement were identified. These included: a) streamline the formal Attuning a Student process, b) develop a user-friendly web-based system for identifying accommodations and modifications linked to the student data, c) provide teachers with models for classroom level implementation, d) provide models for school level implementation, and e) develop a system for teacher follow-up.

Further, additional research should be conducted to examine the links between implementation and outcomes. The original intent of our study was to examine the effects and outcomes of Schools Attuned at the school, teacher, and student levels. During the first year of data collection, it became apparent that understanding how Schools Attuned was implemented was necessary to interpret findings and potential outcomes. However, our study was limited to schools within California. Additional data should be collected regarding other implementation methods used by schools and teachers.

A better understanding of levels of implementation and how that interacts with the school context (e.g., public, private, small, large) is needed to accurately link outcomes to specific implementation methods and to identify exemplary models of implementation. Additional research should be conducted to examine how teacher-level implementation is related to school-level implementation, and how both are related to student outcomes. Further, findings from the exploratory study of mentoring indicated added mentoring programs are beneficial to schools and teachers. Additional research should more closely examine the relationship between the types and intensiveness of mentoring services available to teachers and teacher level implementation and outcomes.

# INTRODUCTION

Since 2000, the All Kinds of Minds (AKOM) Institute has provided Schools Attuned training as a yearlong, professional development program designed to equip teachers with the knowledge, skills, and tools to meet the diverse learning needs of K-12 students. This innovative, neurodevelopmental approach, developed by Dr. Mel Levine, intends to improve the academic and social lives of students through focusing on some root causes of academic and behavioral problems that frequently have adverse affects on students, teachers, and schools.

All Kinds of Minds contracted WestEd, a non-profit research and development agency, to study the effect of Schools Attuned training on students, teachers, and schools, as well as explore the added benefits of mentoring programs.

The report begins with a description of the Schools Attuned program followed by a description of the study and study methodology. This is followed by teacher-level implementation and outcomes, school-level implementation and outcomes, and student-level findings. We then discuss the added benefits of mentoring programs. The report ends with conclusions and next steps for future study.

## The Schools Attuned Program

Schools Attuned is a professional development and service delivery program designed to help educators acquire the knowledge and skills to address the diverse learning needs of K-12 students. It includes a system of innovative tools for teachers to better identify and meet student needs. Schools Attuned assists educators in using neurodevelopmental content in their classrooms to create success and provide hope and satisfaction for all struggling students. Schools Attuned offers educators new methods to recognize, understand, and manage students with differences in learning in order to help all students in their classes succeed.

Schools Attuned is a comprehensive yearlong professional development program for K-12 educators. Participants register for one of two “paths,” Generalist or Subject Specialist (added in 2005). The different paths are designed to address the areas of interest and expertise of educators and other service professionals (e.g., school psychologists, resources specialists) based on the grade levels and/or subject areas they teach. Both paths share the key features of the Schools Attuned program: pre-course work, a 35-hour core instructional course, and a minimum of 10 hours of applied follow-up experiences (practicum). The training curriculum is based on focused study (content) and school based application (process) of eight neurodevelopmental constructs that affect learning, such as attention, ordering, memory, and higher-order cognition. (For more information on learning constructs, see *A Mind at a Time*, Levine, 2002.)

Schools Attuned is designed to reflect the most current, research-based principles of professional development to change teaching practice and have a positive impact on student outcomes. The Schools Attuned staff at All Kinds of Minds and other experts review the program using the National Staff Development Council's standards and other research findings. Schools Attuned incorporates these critical features:

- **New Framework for Understanding Learners:** presents the science of neurodevelopmental content in the context of teaching.
- **Guiding Principles:** offers a set of guiding principles that describe how educators can support rigorous goals for all students by creating a system of educational care in the classroom.
- **Attuning a Student:** a systematic process whereby educators, students, and parents use neurodevelopmentally based observation instruments to understand student learning profiles and eliminate the mystery of the learning process.
- **Alliance Formation:** a unique partnership that enables students, parents, and teachers to understand and talk about learning differences, appreciate student strengths, and take responsibility for achieving standards.
- **Professional Conversation:** strengthens the skills required for participants to bring neurodevelopmental understanding and the Guiding Principles of the Schools Attuned Program to discussions with colleagues and parents about struggling learners.
- **Instructional Resources and Classroom Accommodations:** research-supported strategies linked to the neurodevelopmental content, including strategies students can use to manage their own learning profiles.
- **Subject and Lesson Analysis:** analysis of the neurodevelopmental demands of curriculum and instruction and its impact on student learning.

During the 35-hour *Core Course* training, participants learn methods to understand differences in learning, ways to communicate with parents about their child's learning, ideas for collaborating with colleagues, and how to develop strategies to meet the learning needs of students. The training includes small group work, watching videos, reading articles and passages

from books, case studies, demonstrations, and opportunities for practice. Teachers also learn about the Attuning a Student process, which involves collecting information from the teacher, parents, and student through Schools Attuned *Views*. The *Views* include a rating scale linked to the neurodevelopmental constructs that teachers and parents can use to document their observations about the student's learning, and the student can use to provide additional input into the process. Once completed, the *Views* are analyzed and a student profile is developed. The teacher can then use the student profile to select appropriate accommodations and strategies in the classroom to help the student overcome learning challenges. The teacher then meets with the parents and student for demystification, where the student profile is shared and the family learns the needs of the student so they can become advocates for that student's learning. A diagram outlining the formal Attuning a Student process is presented in Appendix A. (For more information about Schools Attuned, visit the All Kinds of Minds website at <http://www.allkindsofminds.org>).

## Study Overview

WestEd's study was designed to a) examine the effects of Schools Attuned on schools, teachers, and students; and b) identify the essential elements and potential added benefits of Schools Attuned mentoring programs. The original research questions addressing the effects on students included:

- Does Schools Attuned lead to improved student performance and academic outcomes?
- What are the academic gains made by targeted students who are *attuned* and how do their gains compare with gains made by a similar group of students?
- What are the whole class effects when specific neurodevelopmental content is taught?
- Do Schools Attuned strategies and management plans improve the targeted students' self-concept, sense of efficacy, and/or self-advocacy? If so, what is the impact of these improvements on academic performance and outcomes?
- Is there a reduction in behavior disruptions and disciplinary issues, increase in school attendance, and/or decrease in bullying behavior when teachers apply neurodevelopmental knowledge?

The original research questions examining the impact of the Schools Attuned training on teachers included:

- Does Schools Attuned measurably increase teachers' knowledge of how students learn?
- Do teachers who successfully complete the Schools Attuned training demonstrate more effective instructional practices when addressing student learning challenges?
- Does Schools Attuned enhance teachers' professional judgment regarding student learning challenges?
- Do teacher-parent-student relationships measurably improve due to the Schools Attuned process, and with what impact?
- Do teachers exhibit more positive thoughts about difficult students and greater empathy toward families of struggling students?

Additional research questions guiding the study were:

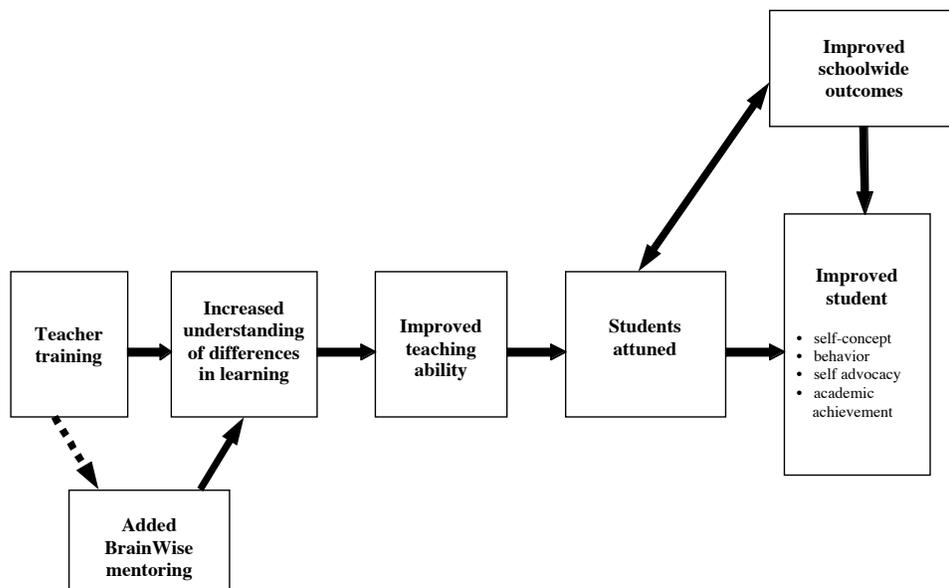
- What impact has Schools Attuned had at the school level in terms of student performance, engagement, and overall attitude?
- At the school level, what impact has Schools Attuned had on special education referrals, and how does it link to student outcomes?
- What do mentoring programs offer and what do they have in common?
- What are the potential added benefits of the added mentoring components?

The WestEd study of Schools Attuned was divided into two main components to address the research questions. The first was broad in scope to examine Schools Attuned in multiple school settings such as public and private schools. The second component was an in-depth study, including intensive site visits to selected schools. Additionally, the study included an exploratory element to examine the characteristics and potential added benefit of mentoring programs.

WestEd developed a conceptual framework (also known as a logic model) to guide our thinking and understanding of Schools Attuned. The proposed framework was based on written documentation provided by All Kinds of Minds and showed a series of direct links between teacher training and student outcomes. The original conceptual framework is presented in Figure 1.

**Figure 1**

*Original Conceptual Framework*



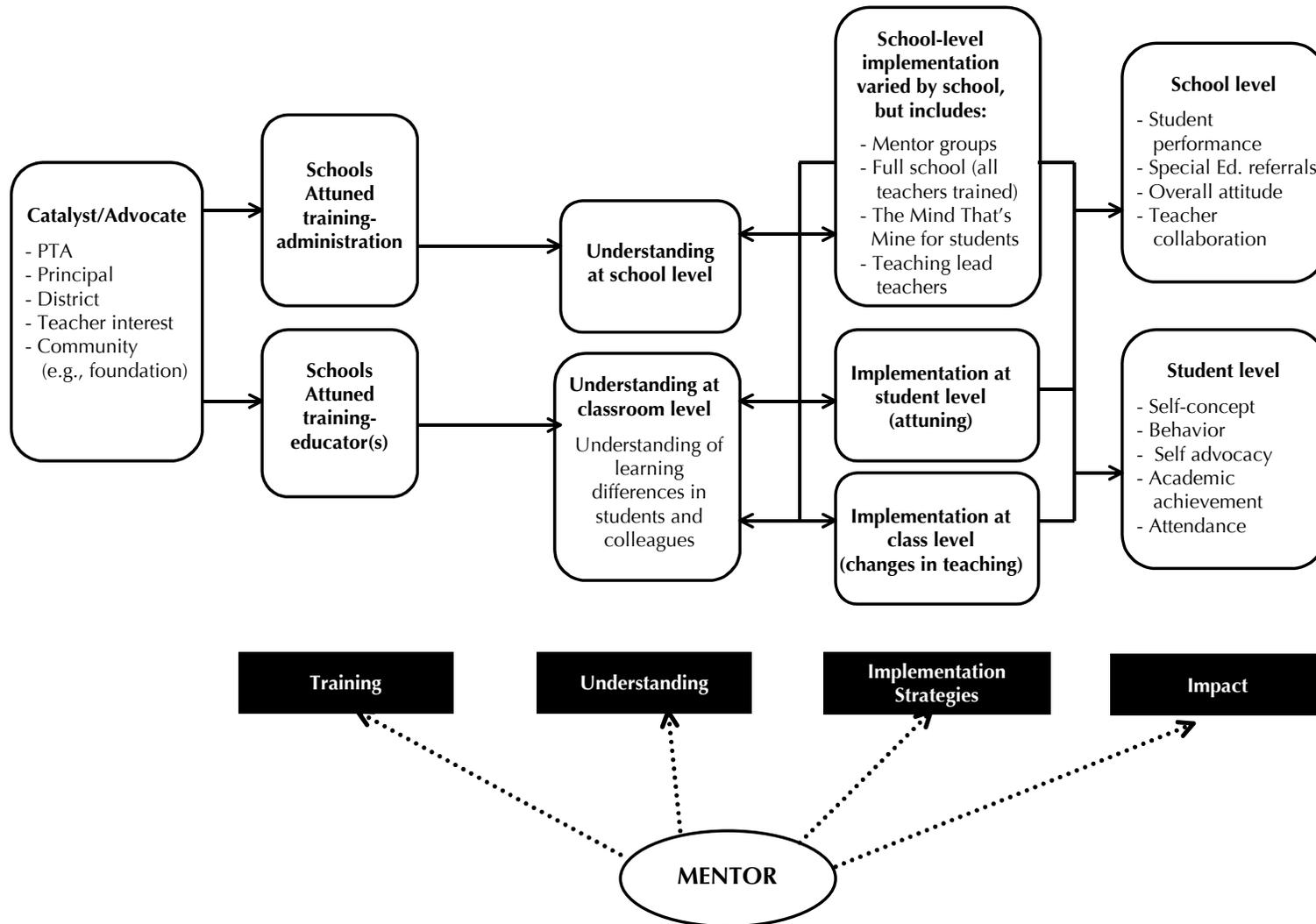
As we began data collection in the schools, it became clear that Schools Attuned implementation within schools and defining an *attuned* student were key to our understanding of how to best analyze data and interpret findings. As a result of findings from the first year of the study, the research questions were modified and some data sources removed from the original scope of work to best respond to the research questions.

In addition to revising the research questions, WestEd also revised the conceptual framework to better reflect how Schools Attuned was implemented in the schools. The original conceptual framework showed a series of direct links between program components, activities, and student outcomes. However, it became apparent other important factors influenced the

implementation of Schools Attuned. For example, a catalyst generates initial interest in Schools Attuned, and teachers are not the only school personnel attending the training. Administrators, resource specialists, counselors, school psychologists, and other staff are also trained. Further, there are multiple implementation strategies being used at the school, classroom, and student levels depending on which staff members at the school are trained and how they are using Schools Attuned. The expanded conceptual model is presented in Figure 2.

**Figure 2**

*Expanded Schools Attuned Conceptual Model*



As shown in the conceptual framework, the implementation of Schools Attuned begins with a catalyst and/or advocate who introduced the program to the school. Catalysts included school principals and other administrators, individual or groups of teachers, the school district, parents, community members, and other educators. Schools principals and teachers mentioned that reading a book by Mel Levine or attending one of his presentations created excitement about Schools Attuned and a desire to implement it in their schools. In one county, a local foundation learned about Schools Attuned and saw it as a great benefit to their community; they offered to pay for any teacher in the county to attend the Schools Attuned training. In two of our study schools, the parents were advocates for Schools Attuned and the Parent Teacher Associations raised funds to send teachers to the training.

Although the Schools Attuned training is designed for classroom teachers, many other school staff attended the training, including school principals, vice principals, curriculum coordinators, school psychologists, intervention specialists, and resource teachers. Depending on who was trained and their role at the school, they brought varying understandings of Schools Attuned and learning differences to the school. Administrators gained a school-level understanding of Schools Attuned and the need for teachers to address student learning differences. Several trained principals also reported the training enhanced their understanding of their staff and the different learning styles of their teachers. Teachers gained a classroom-level understanding of student learning differences and how they could use various strategies and accommodations to help students learn.

Training and understanding led to implementation of Schools Attuned, both at the school and classroom levels. Some schools with trained administrators adopted whole-school implementations strategies, such as integrating Schools Attuned with other programs. At the teacher level, some implemented Schools Attuned at a classroom-level by adjusting their teaching and others implemented Schools Attuned at the student-level by attuning and demystifying individual students.

The level of implementation of Schools Attuned directly affects the intended outcomes at the school, teacher, and student level. Understanding how Schools Attuned is implemented is necessary to correctly interpret data. With our expanded conceptual model and enhanced understanding of Schools Attuned, the research questions and data sources were modified to further examine implementation of Schools Attuned. The following section details the methodology used for the study.

## STUDY METHODOLOGY

WestEd designed a quasi-experimental study to compare the affects of Schools Attuned at the school, teacher, and student levels. The study was divided into two main components: 1) a broad study to examine teacher-level effects in multiple settings; and 2) an in-depth study involving case studies to explore how Schools Attuned was implemented in different schools, and the effect of Schools Attuned on the school, teacher, and student. In addition to these two components, an exploratory study was conducted to identify the aspects and potential added benefits of mentoring programs.

The original study design included a cohort of schools implementing Schools Attuned and a matched comparison group of similar, non-Schools Attuned schools. After selecting our study schools (described below), we looked for similar schools based on school type (e.g., public, private, charter), standardized test scores, ethnic composition, Academic Performance Index (API) scores (which are used to determine adequate yearly progress in California), and percentage of students receiving free or reduced price lunches. After a comprehensive search, we determined that a similar group of non-Schools Attuned sites did not exist. As an example, 6 out of the 13 (46.2%) public schools selected for our study had API scores in the 900s (on a scale from 200 to 1000). As a frame of reference, in 2005 only 4.4 percent of public schools in California had API scores in the 900s. As another part of our search for a comparison group, we asked principals at our study schools which schools might make a good comparison site. They often named other schools that were already participating in our study (as a Schools Attuned school), or the schools had at least some Schools Attuned-trained teachers. Because an appropriate comparison group did not exist, we modified our study to a within-schools design and developed an additional scale on our teacher survey to discern the treatment group (Schools Attuned-trained<sup>1</sup> and implementing) from the comparison group (not trained and not implementing).

Although the design was modified to within-school comparison, the components of the study (broad, in-depth, and exploratory) remained the same. Each component of the study was carried out using multiple methods. For the broad study, we administered a teacher survey and conducted phone interviews with school administrators. For the in-depth study, we conducted intensive site visits involving observations, interviews, focus groups, and surveys of teachers and students. The exploratory component included survey questions and interviews with administrators and mentors. The following sections provide detailed descriptions how study sites were selected and data were collected.

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<sup>1</sup> For the purposes of this study, Schools Attuned-trained refers to teachers who completed the week-long *Core Course*. They may or may not have completed the year-long practicum.

## Site Selection and Participation

Our goal was to reach between 20 and 30 schools that agreed to participate in the broad study, and then select eight of those schools to also participate in the in-depth study component. We began by collecting lists of participating Schools Attuned sites from the Directors of the northern and southern California Professional Development Provider Sites, Karen Grites and Richard Goldman. From these lists we identified schools that would be good candidates for the study. In Spring 2004, All Kinds of Minds, WestEd, and the Directors of the Schools Attuned Professional Development Provider Sites identified the schools with sufficient Schools Attuned participation to have a potentially measurable impact on the school. Selection criteria included:

- a minimum of 25 percent of teachers in the school participated in the week long Schools Attuned *Core Course*; and/or
- the administrative staff and resource teachers participated in the Schools Attuned *Core Course* along with classroom teachers.

Once a pool of potential sites was identified, we contacted school administrators to gain their school's participation in the study. Slightly different processes were used to recruit sites based on whether a particular school worked with a Schools Attuned mentor.<sup>2</sup> In northern California, about one-third of the sites had mentors who worked directly with the schools. In Southern California, almost all of the sites worked with mentors. In the south we first attended a mentor meeting held by the Director of the Schools Attuned Professional Development Provider Site to inform mentors about the study and request their help. Richard Goldman already shared much information about the study with the mentors, and they were receptive to helping us obtain study participation from their schools.

For schools working with mentors, we first contacted the mentors to learn more about the school and determine the best way to contact the school administrator to gain participation in the study. Often mentors said it was best for them to talk to school administrators on our behalf prior to us approaching school. After the initial contact by the mentors, WestEd staff members contacted the school sites and further explained the study. This approach to recruitment worked, and only two schools with mentors declined to participate.

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<sup>2</sup> The term mentor refers to a person (internal or external to the school) whose role is to provide support to schools and teachers implementing Schools Attuned. The function of the mentors and type of support provided varied by region and school, and is discussed later in the report. For the purposes of this report, everyone in these support positions are referred to as mentors.

When northern California schools did not have a mentor, they first received a letter from All Kinds of Minds requesting their participation and informing principals that a WestEd representative would be contacting them. For the southern California schools without mentors, the Director of the Professional Development Provider Site first contacted the schools and informed principals about the study. A WestEd representative then contacted the principals to further describe the study, answer questions, and gain their participation.

We contacted the schools in spring 2004 for participation in the 2004-05 school year. Thirty-two schools were contacted to participate in the study, of which 24 (75%) agreed to participate. When we contacted the schools again the following fall, three additional schools opted out of the study; two had changes in the school administration and the new administrators were not interested in participating, and the third school's priorities changed and staff no longer had time to participate. Thus, data were collected from 21 schools during the 2004-05 school year. The second round of data collection occurred during the 2005-06 school year, and 13 schools continued to participate in the study. Of the eight schools lost between the two years of data collection, four chose not to continue in the study (including two with new administrators), two were removed because they were involved in another study related to Schools Attuned, and the remaining two schools were no longer implementing Schools Attuned. Table 1 below presents a summary of school attrition.

**Table 1**

*Attrition of Schools over the Course of the Study*

Number of Schools...	#
asked to participate in the study	32
that agreed to participate in spring 2004	24
that participated in the 2004-2005 school year	21
that participated in the 2005-2006 school year	13

Attrition is a common occurrence in studies collecting data over time (Barry, 2005; Ellickson, 1994). For our study, attrition was not an issue because the second year of data collection was to follow-up with non-responders rather than collect pre-post assessments, and we began with a larger sample than needed to account for anticipated attrition.

The following section of the report provides an overview of information related to school settings, demographics, and other contextual information about the study schools. Data presented represent the 21 schools from the first year of data collection.

### ***Overview of School Context***

The 21 schools in the study represented a variety of school types and settings. Eleven schools (52.4%) were located in southern California and ten (47.6%) in northern California. Seven of the schools (33.3%) were public, seven (33.3%) were private secular schools, five (23.8%) were private religious schools, and two (9.5%) were charter schools. The schools varied in the grade levels served, with seven (33.3%) schools serving kindergarten through eighth grade, six (28.6%) elementary schools (grades K-6), three (14.3%) middle schools (grade 5-8), and five schools (23.8%) that served all grade levels (K-12).

The schools also varied greatly in size, with the number of classroom teachers ranging from 13 to 171. On average, 87 percent of teachers were fully credentialed, ranging from 44 to 100 percent. Approximately one-third (33.1%) of teachers at the schools were trained in Schools Attuned, although individual school percentages ranged from 15 to 100 percent. Additionally, 71 percent of the schools also had at least one administrator trained in Schools Attuned.

Additional data related to academic performance and student demographics were collected from the public and charter schools.<sup>3</sup> The average Academic Performance Index (API) score for these schools was 788 and ranged from 638 to 937.

The population of students attending the public and charter schools also varied greatly. The schools served between 36 and 1,329 students, with an average of 608 students. In one school, student ethnicity was diverse, with 39 percent African American, 28 percent Hispanic, 25 Caucasian, 7 percent other, and 1 percent Asian. In contrast, at one school 98 percent of the students were Caucasian, while at another school 98 percent were Hispanic. The percentage of English language learners ranged from less than one percent to as high as 72 percent, and the percentage of students participating in the free and/or reduced price lunch program ranged from less than 1 percent to 99 percent. Additionally, the percentage of students qualifying for special education services ranged from less than 1 percent to 27 percent.

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<sup>3</sup> Private schools within California are not required to take the same tests or document the same demographic data as public schools. Therefore, data related to school API scores, student ethnicities, English language learners, free and/or reduced price lunch, special education, and teacher credentials were calculated for public and charter schools. Data related to the number of teachers at the school and the number of teachers trained in Schools Attuned represent both the public and private schools.

Our study included a wide variety of schools. Public, private, and charter schools were represented, as well as large and smaller schools, ethnically diverse and ethnically similar schools, and secular and religious schools. Incorporating such a variety of schools allowed us to examine implementation of Schools Attuned in multiple settings with various types of school demographics.

## **Instrumentation and Data Collection for the Broad Study**

The broad study included all participating schools, including those also participating in the in-depth study. Data collection for the broad study included two components, an administrator interview and a teacher survey. (WestEd staff also conducted site visits to in-depth study schools, which included classroom observations, additional interviews, and focus groups). The following sections provide detailed descriptions of each of our data collection methods for the broad study.

### *Administrator Interviews*

Between March and May 2005, WestEd staff members conducted interviews with schools administrators. Interviews were conducted in-person during our site visits to schools participating in the in-depth study, and over the phone for schools only participating in the broad study. We interviewed school principals or other school administrators as appropriate, such as vice principals or curriculum coordinators, if they were more familiar with implementation of Schools Attuned. The administrator interviews asked about the school's approach to working with student learning challenges, familiarity and experiences with Schools Attuned, school-level implementation of Schools Attuned, professional development opportunities available to teachers, the overall effect of Schools Attuned on teaching and student learning, and mentor support provided if the school worked with a Schools Attuned mentor. Interviews were completed with 17 out of 20 administrators for a response rate of 85.0 percent.<sup>4</sup>

In spring 2006, we conducted follow-up interviews with school administrators. These interviews asked about changes in implementation from the previous year and why those changes occurred. Follow-up interviews were conducted with administrators from 10 of the 13 participating year two schools for a response rate of 76.9 percent.

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<sup>4</sup> One school agreed to administer the teacher survey, but elected not to participate in other aspects of the study.

## *Teacher Survey*

The teacher survey was designed to serve two main purposes: 1) collect data to address the research questions, and 2) collect data to differentiate the treatment group (trained and implementing Schools Attuned) from the comparison group (not trained and not implementing Schools Attuned) because of the within-school design. The following sections provide information for both these purposes, followed by survey response rates and assignment to the treatment and comparison groups.

### *Teacher Survey Scales to Address Research Questions*

Two versions of the teacher survey were developed, one for non-trained teachers to complete and an expanded version for trained teachers to complete. Both versions included subscales for school culture, parent and community involvement, instruction and lesson planning, and student learning. The trained-teacher version included additional subscales related to the Schools Attuned training, implementation of Schools Attuned in the classroom, the impact of the training on the teachers, and student-level outcomes.

To measure the reliability of the subscales, WestEd calculated Cronbach (1951) alpha coefficients for each of the subscales. Alpha coefficients range in value from 0 to 1 with .7 considered an acceptable reliability coefficient (Nunnally, 1978). As can be seen in Table 2, the subscale alphas were all above the .7 threshold, indicating they consistently measured what they intended to measure.

**Table 2***Reliabilities for Treatment and Comparison Group Subscales*

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	Cronbach's Alpha
School Culture	.84
Parent and Community Involvement	.74
Instruction and Lesson Planning	.75
Student Learning	.77
Schools Attuned Training	.87
Schools Attuned Implementation	.77
Teacher Impact	.80
Student Learning	.83

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In addition to the subscales, the teacher survey included questions related to student learning challenges, professional development received, instructional strategies, successes and challenges implementing Schools Attuned, and use of Schools Attuned strategies in the classroom.

*Teacher Survey Questions to Differentiate Treatment and Comparison Groups*

The second purpose of the survey was to gauge teachers' experiences and familiarity with Schools Attuned. The within-schools design required us to accurately assign teachers to treatment (trained and implementing) and comparison (not-trained and not-implementing) groups. Teachers often collaborate and share ideas, which provides opportunities for non-trained teachers to implement aspects of the training (Zill, Sorongon, Resnick, Kim, McKey, & Clark; 2004). The need to accurately differentiate groups was affirmed during the pilot site visit when it was apparent that some trained teachers had not adopted the Schools Attuned philosophies and strategies, and some non-trained teachers were implementing portions of Schools Attuned learned from colleagues. For example, the child of a non-trained teacher underwent the Attuning a Student process by a trained teacher at another school, and this experience resulted in changes to her own teaching even though she was not trained.

Twenty-seven questions were added to the survey to measure teacher exposure to Schools Attuned (referred to as the familiarity subscale) and enable us to assign teachers to the

appropriate group, with treatment or comparison. Due to the importance of the familiarity subscale, WestEd asked multiple people to review it, including staff at All Kinds of Minds, the directors of the California-based professional development centers, mentors, and school administrators. Input from all of these sources helped ensure the survey questions accurately assessed teachers' level of exposure to and experiences with Schools Attuned.

### *Teacher Survey Response Rates*

The teacher survey was first administered to 479 teachers between April and June 2005. Completed surveys were returned by 297 teachers for a response rate of 62.0 percent. A second round of data collection occurred during the 2005-06 school year. Surveys were sent to a targeted group of schools with a first year response rate of less than 85 percent. Within those schools and the site visit schools, surveys were sent to:

- teachers who were new to the school;
- teachers who did not complete the survey the previous year; and
- teachers who were trained in Schools Attuned during the summer.

The survey was sent to 188 teachers and returned by 120 teachers for a response rate of 63.8 percent. The overall response rate across both years of data collection was 70.6 percent.<sup>5</sup> An overview of teacher demographics is presented in Appendix B, including number of years teaching, school type, grade level, and years since Schools Attuned training (if applicable).

### *Assignment of Teachers to Treatment and Comparison Groups*

WestEd reviewed records from the California Professional Development Provider Sites, school training records, and teacher responses to training questions on the survey to determine which teachers attended the Schools Attuned *Core Course* training. When the training data were inconsistent (e.g., teachers said they were trained, but were not listed as trained by the school or Professional Development Provider Site), the teacher survey was removed from the analyses.

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<sup>5</sup> The overall response rate (70.6%) is higher than the response rate for each individual year because the overall was calculated by dividing the number of teachers who responded either year by the total number of teachers who were sent the survey (counting each teacher only once). A teacher who did not respond in year one but responded in year two was counted as a non-responder in year one, a responder in year two, and a responder for the overall.

We were accurately able to assign 371 teachers to either the trained or non-trained group. Slightly more teachers were identified as not trained (53.6%) than trained (46.4%) in Schools Attuned (Table 3).

**Table 3**

*Number of Teachers Trained and Not Trained in Schools Attuned*

	N	%
Not trained in Schools Attuned	199	53.6
Trained in Schools Attuned	172	46.4
<b>TOTAL</b>	<b>371</b>	<b>100.0</b>

In addition to identifying training status, a cluster analysis was conducted on the familiarity and exposure questions to identify teachers who were implementing aspects of Schools Attuned. The cluster analysis placed teachers into two groups, those implementing Schools Attuned and those not implementing Schools Attuned. Training records were cross-referenced with results from the cluster analysis identifying four distinct groups:

1. Teachers trained and implementing Schools Attuned (treatment group)
2. Teachers trained but not implementing Schools Attuned
3. Teachers not trained and not implementing Schools Attuned (comparison group)
4. Teachers not trained but implementing Schools Attuned

Out of the teachers trained in Schools Attuned, 159 were categorized as implementing and only 5 as not implementing. Of those who had not been trained, 166 were categorized as not implementing and 36 as implementing Schools Attuned. Table 4 presents the number of teachers in each group and the percentage of the sample.

**Table 4***Number of Teachers Assigned to Treatment and Comparison Groups*

	Group	N	%
1) Trained and implementing Schools Attuned	Treatment	159	43.4
2) Trained but not implementing Schools Attuned	Removed	5	1.4
3) Not trained and not implementing Schools Attuned	Comparison	166	45.4
4) Not trained but implementing Schools Attuned	Removed	36	9.8
<b>TOTAL</b>		<b>366</b>	<b>100</b>

- 5 teachers were not classified because of incomplete implementation data
- Teachers in the second and fourth groups were removed from analyses because their experiences confounded the groups.

Statistical comparisons between the treatment and comparison groups on the familiarity scale found statistically significant differences on 25 of the 27 questions, indicating teachers were placed into the appropriate group. (See Appendix C for the percentages and significance tests between the implementing and non-implementing clusters on the individual questions).

The administrator interviews and teacher survey were administered at all schools participating in the study as part of the broad study component. Additional instruments were developed and data collected for the in-depth study component. The following sections describe the in-depth study methods, including instruments developed, data collected, and response rates.

## **Additional Instruments and Data Collection for the In-depth Study**

The seven schools participating in the in-depth study component completed the administrator interviews and teacher surveys described above and were also visited by WestEd staff for additional data collection. Site visits were conducted between December 2004 and March 2005 and again between January and March 2006. During the two-day site visits, WestEd staff:

- conducted interviews with school administrators (described above), intervention specialists, mentors (if applicable), and students with whom the Attuning a Student process was complete;
- conducted focus groups with Schools Attuned-trained teachers, non-trained teachers, and parents;
- observed classrooms of trained and non-trained teachers; and
- collected student surveys.

The following sections describe the additional data collection methods used for the in-depth study component.

### ***Interviews***

#### ***Intervention Specialist Interviews***

Intervention specialists are staff members who provide additional educational services to students outside of the classroom, such as resource teachers, counselors, school psychologists, or speech therapists. We interviewed Schools Attuned-trained intervention specialists to collect data on Schools Attuned implementation and impact. We asked about the role of Schools Attuned, how Schools Attuned and its components were implemented at the school and classroom levels, and the impact of Schools Attuned on teachers and students. Intervention specialists provided an additional perspective on Schools Attuned, allowing us to triangulate<sup>6</sup> data among teachers, administrators, and intervention specialists. This perspective also allowed

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<sup>6</sup> Triangulation, in this case, refers to asking similar or the same questions of different people in order to determine whether or not there is agreement. Triangulation improves the reliability and validity of findings.

us to examine how Schools Attuned was integrated into Student Study Teams or special education referral processes. Additionally, these interviews provided insight into the teacher support system for working with student learning challenges.

Intervention specialist interviews were conducted during site visits and over the telephone. During the first year of the study we interviewed intervention specialists at all seven schools, and during the second year we interviewed specialists at six site visit schools. The intervention specialist was not interviewed at one school because the specialist was not involved with Schools Attuned.

### *Mentor Interviews*

Mentor interviews were conducted as a part of the exploratory study of the added benefits of a mentoring program. Originally, the study called for interviews with mentors from two different mentor programs, one in northern California and one in southern California. However, shortly after we began our study, the mentoring program associated with northern California sites ceased operating in the study schools. Therefore, we only interviewed mentors from southern California sites.

Mentors were asked about their experience with Schools Attuned training, their general role with the Schools Attuned program, their specific role with schools and teachers, and how their role aligned with other school programs and initiatives. We also asked about school processes aimed at facilitating a mentor program, and any obstacles to and perceived benefits of mentoring. Additionally, we asked about any changes the mentors observed as a result of Schools Attuned, including changes in teacher understanding and practice, classroom level changes, and school wide changes.

Mentor interviews were conducted during site visits and over the telephone. During the first year of the study, we only interviewed mentors at two of the in-depth study sites. However, because mentoring was different across the schools, we interviewed mentors from additional schools during the second year of the study, including mentors working with schools in the broad study component and schools not participating in our study, for a total of 12 mentor interviews.

### *Student Interviews*

In order to examine the impact of the *Attuning a Student* process on students, we interviewed *attuned* students when possible. For the interviews, we defined *attuned* students as those who were formally *attuned* by their teacher or another educator at the school, including completion the Schools Attuned *Views*, building a student profile and the demystification process

(See Appendix A). We were interested in the impact of the attuning process and demystification on students' self-concept, sense of efficacy, self-advocacy, and academic performance. The initial design called for focus groups with *attuned* students. However, based on our experience with elementary and middle school-aged students and the nature of Schools Attuned, we modified the data collection method to individual interviews and planned to begin the interview with a familiar school staff member nearby to make the student more comfortable. Because of the personal nature of the interviews, active parental consent was gained prior to speaking with any students. As we began to schedule the interviews, we learned there were few fully *attuned* students and in some schools there were no *attuned* students.

Student interviews were guided by an interview protocol, but conducted as conversations. They typically began by engaging students on what they liked and disliked about school. Related to Schools Attuned, we asked students to describe themselves as learners and how they came to know about their learning styles and strengths. Additionally, we asked if/how things have changed after learning about their learning styles.

We conducted interviews with 11 students from 4 schools during the first year of the study. All interviews were held on school grounds during the normal school day. Student interviews yielded little usable data and were discontinued after the first year of data collection. Students lacked the vocabulary to share information about the Attuning a Student process and demystification.

## ***Focus Groups***

### *Teacher Focus Groups*

Separate focus groups were conducted with Schools Attuned trained and non-trained teachers. Data from teacher focus groups were used to better understand the school context related to addressing learning challenges, their experiences with and use of Schools Attuned, implementation of Schools Attuned, and the effects of Schools Attuned. Focus groups with trained teachers also allowed us to examine program impact on teachers, individual students, and the classroom as a whole.

During teacher focus groups, both trained and non-trained teachers were asked about the school's approach to and process for working with students with learning challenges, the support and resources available, and how teachers work together when addressing students with learning challenges. Non-trained teachers were asked about their familiarity with and exposure to Schools Attuned, and their interactions with *attuned* students. Trained teachers were asked a series of additional questions related to program implementation and impact. Implementation

questions included what they considered an *attuned* student, details about how they used Schools Attuned and its strategies, and questions about their interactions with other teachers. Impact questions included program impact on teachers (e.g., understanding of students, classroom practices, approach to learning challenges, involvement with parents) and students (e.g., self-concept, self-esteem, advocacy, behavior, academic performance).

We held teacher focus groups each year of the study at all seven site-visit schools. Both trained and non-trained teacher focus groups included between three and seven teachers, and were conducted during lunch or after school.

### *Parent Focus Groups*

We conducted focus groups, and in some cases interviews, with parents of *attuned* students the first year of the study. Parents provided additional data and perspective regarding program impact on *attuned* students. Parents were asked about any assistance their child received for learning challenges, their familiarity with Schools Attuned, their experience with the attuning and demystification process, how attuning has affected their child, and how attuning has affected them as parents.

We collected data from parents at four schools. For two schools, parent focus groups were held on school grounds and for another school the focus group was held off-site during an Every Kind of Mind parent meeting. At the fourth school, rather than through a focus groups, we conducted phone interviews in Spanish to meet the needs of the respondents.

### ***Classroom Observations***

A classroom observation protocol was developed around the neurodevelopmental constructs, strategies, and accommodations of Schools Attuned to examine teachers' use of Schools Attuned and general teaching methods. The protocol included sections related to the classroom environment, modifications and accommodations related to the neurodevelopmental constructs, classroom instruction, resources, and student learning. Classroom observations provided valuable insight into teacher implementation methods and strategies.

Classroom observations were conducted in math, language arts, social studies, foreign language, science, and art classes. Observations lasted between 30 and 60 minutes. We observed a total of 59 classrooms, 33 with Schools Attuned trained teachers and 26 with non-trained teachers.

## *Student Surveys*

At the onset of our study, our definition of an *attuned* student was a student who was formally *attuned* and demystified. Our goal was to make comparisons from before and after the attuning process in areas such as self-esteem, self-concept, self-advocacy, and peer relations. Therefore, during the first year of data collection we elected to survey all students in grades 4 through 7 at the site-visit schools to collect pretest data from students who would be *attuned* over the next school year. Two site visit schools were excluded from the student survey; one school was not attuning students so no comparisons could be made, and the second school was undergoing accreditation and data collection activities were limited as to not overburden the teachers. Data collection at the other five schools resulted in 1,314 completed student surveys.

During the second year of the study, our student survey data collection efforts were focused on the three schools that served grades K-8 because with the other two schools grade level issues and student movement into new schools that were not participating in our study made it difficult to track students and nearly impossible to match pre and post data. Of the three K-8 schools, one school had issues related to parental consent and elected to not participate in the student survey a second year. Therefore, we sent surveys to all students in grades 5 through 8 at the two remaining study schools, which resulted in completed surveys from 388 students.

We attempted to match students' pre and post surveys using the school name, grade level, student name, student date of birth, and teacher names. Pre and post surveys were matched for 218 of the 388 possible students, for a matching rate of 56.2 percent.

In addition to difficulties matching the data, another issue arose related to our definition of an *attuned* student. As we collected data in year one, we learned some schools had few, if any, formally *attuned* students. Therefore, we revisited our definition of an *attuned* student. Defining an *attuned* student was, and continues to be, challenging for all parties, including Schools Attuned Professional Development Provider Site staff, All Kinds of Minds staff, school and district personnel, and WestEd researchers. Some of the factors we considered included:

- What criteria were needed to determine whether a student was considered an *attuned* student?
- Did the student need to be fully *attuned* and demystified, or did the student need to just be exposed to a Schools Attuned-trained teacher to be considered an *attuned* student?
- When a teacher uses a mini or modified attuning process, is that student *attuned*?

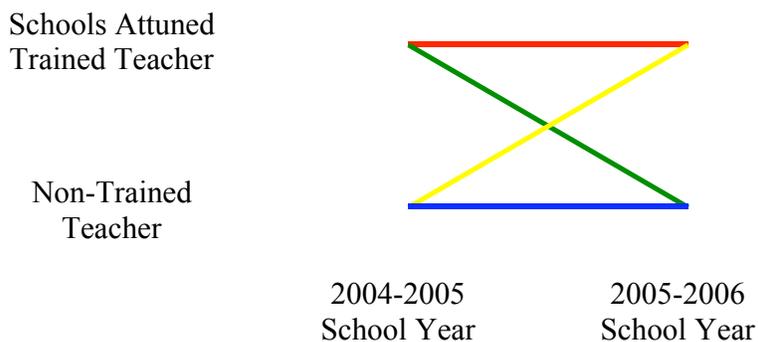
- In cases where students change classes and have multiple teachers each day, how many of their teachers need to be trained in Schools Attuned for the student to be considered *attuned*? Is exposure to one Schools Attuned teacher who had modified his/her teaching based on participating in the training an *attuned* student?
- What about the student who's non-trained teacher gets help from a trained colleague to implement new teaching strategies?
- If a student was in a class with a trained teacher, but not formally *attuned*, then moves into a class with a non-trained teacher, is that student considered *attuned*?

Very few students were being *attuned*, and to protect students' rights, the names of students who were formally *attuned* were kept confidential at the schools. We were therefore unable to examine data at the formally *attuned* student level. Thus, we decided to examine the student data at the classroom level. We used teacher training data to group students based on whether their 2004-2005 and/or 2005-2006 teachers were trained in Schools Attuned. As can be seen in Figure 3, four groups of students emerged:

1. students with trained teachers both years (red);
2. students with non-trained teachers both years (blue);
3. students who moved from a trained teacher to a non-trained teacher (green); and
4. students who moved from a non-trained teacher to a trained teacher (yellow).

**Figure 3**

*Student Movement across School Years*



Further complications occurred as we examined implementation of Schools Attuned at the schools. One of our two schools used a school-level implementation method in which all students were exposed to Schools Attuned, but their teachers were not. In the second school, Schools Attuned was integrated into their special education referral process, and non-trained teachers were implementing Schools Attuned strategies.

Due to all of these factors, we elected to remove the student level data from our overall analyses. Interpretation of any findings from the data would be flawed, and are therefore not presented in this report. WestEd will work with All Kinds of Minds to overcome challenges related to student level data collection in future studies.

## **CLASSROOM IMPLEMENTATION AND OUTCOMES**

This section of the report presents findings related to implementation and outcomes at the classroom, or teacher, level. We begin with descriptions of how teachers were implementing Schools Attuned in their classrooms, including challenges related to implementing Schools Attuned. This section concludes with teacher level outcomes, including changes in understanding and perceptions, as well as changes in instructional practices.

The research questions addressed in this section included:

- How are teachers using Schools Attuned in their classrooms and what modifications are they making to the process?
- Does Schools Attuned increase teacher knowledge of how students learn?
- Do teachers who complete the Schools Attuned *Core Course* demonstrate more effective instructional practices?
- Does Schools Attuned enhance teachers' professional judgment regarding student learning challenges?
- Do teacher-parent relationships improve due to the Schools Attuned process, and with what impact?
- Do teachers exhibit more positive thoughts about difficult students?

### **Classroom-Level Implementation**

Schools Attuned was originally designed as a training program for classroom teachers to give them the knowledge, understanding, and strategies to reach students with learning differences. As designed, implementation occurred at the classroom level with teachers attuning and demystifying individual students. However, teachers adapted their classroom implementation to fit their needs and available time. As a result, three types of classroom-level implementation emerged:

- Full Attuning Process
- Modified Attuning Process
- Whole-Class Implementation

### ***Full Attuning Process***

The original Schools Attuned training was designed around the full-attuning process, which includes 1) collecting information from the teacher(s), parents and the student; 2) analyzing the information to determine the student's strengths and challenges; 3) identifying strategies and accommodations to overcome the challenges; and 4) demystification by sharing the analyses with the student (and parents) so he or she (and they) can be an advocate for meeting the student's learning needs (see Appendix A).

Few teachers reported using the full attuning process. Of the 159 teachers in the treatment group, comments from only four (2.5%) indicated their classroom implementation included the full attuning process. Other teachers reported that the process was too time-consuming, cumbersome, and too difficult to complete as intended. Teachers reported they did not have time to collect *Views* from parents and students, identify appropriate strategies and accommodations, or demystify students. Comments from teachers included:

When I attune a child, I send the *Parent's View* home, have the child fill out the *Student's View*, and I complete the *Teacher's View*. I plug in all the *Views*, analyze the results, have conversations with the child and parents, and monitor the child and strategies I try.

An added benefit of the formal, full attuning process is the paper trail. It gives something to look at to remind them of what type of learner a student is.

I try to apply the Schools Attuned concepts to my class as a whole. It is too difficult to attune an individual student given the large number of students that I work with.

I have taken many of the ideas and strategies to use in my classroom. However, I don't feel I have *attuned* enough students. It is a long process and I am intimidated by all of the steps.

### ***Modified Attuning***

The difficulties teachers encountered implementing the full attuning process led many teachers to use a modified attuning process. One modification of Schools Attuned implementation was referred to as “mini-attuning,” in which teachers reduced the number of steps in the attuning process. Teachers reported mini-attuning allowed them to implement Schools Attuned in their classrooms with individual students. One example of modified attuning used only the *Teacher’s View* to inform the process and not the *Parent* or *Student Views*. Another modification teachers used was skipping the analysis process and going straight to strategies and accommodations. Other teachers reported they use their professional judgment to determine where the child was struggling and began the attuning process by trying various strategies and accommodations in the classroom. For example, one teacher commented:

It is a long process to [formally] attune a student. I have learned that I can use the tools more effectively and with more students by eliminating some of the steps.

Another form of modification occurred in schools using a lead-teacher/team approach to school-level implementation. In these schools it was common to see someone other than the classroom teacher complete a full or mini-attuning process. For example, any classroom teacher, trained or not, could present a student profile to the student study team and the team would offer strategies and accommodations for the teacher to try in class. In other cases, the lead teacher or team would attune, or assist the classroom teacher to attune, the student. This model of implementation resulted in non-trained teachers implementing some aspects of Schools Attuned, including the attuning process.

The flexibility of Schools Attuned provided teachers with options for modifying their use of Schools Attuned to best meet their needs and their students’ needs. Such modification allowed more teachers to attune students, although it was a more limited version of attuning. One drawback of modified attuning was that often teachers would not complete the demystification process with the student and simply try strategies in the classroom until they found one that worked. Regardless, teachers found success using modified attuning with students and often turned to full attuning only if the modified process was unsuccessful.

### *Whole-Class Implementation*

Whole-class implementation refers to the integration of School Attuned strategies into daily instruction and lesson planning. Whole-class implementation was the most common use of Schools Attuned at the classroom level, especially among middle school teachers. Teachers mentioned they may not have time to attune students, but could easily modify their instruction to better meet the needs for all students.

One middle school in our study no longer *attuned* individual students, but focused on improved instruction through whole-class implementation. The teacher commented:

It is hard to attune an individual student when there are multiple teachers involved. It was difficult to collect all the *Teacher Views*, especially from non-trained teachers. We would try to get them to fill out the form during the student study team meetings. It was also a challenge getting them to use strategies for that student. We also found that students acted very differently depending on the teacher, so one teacher would describe challenges in one area and another teacher would see something different. It has really come together this year now that we are looking at the whole class and not individual students.

We also heard, “if it is good for one student, it is probably good for all the students,” and teachers adopted Schools Attuned strategies with the whole class. In one school we learned about a strategy that was started with one student and quickly became a classroom strategy. After attuning one student, the teacher found the child had challenges with attention. The teacher taped an “attention-level chart” to the student’s desk and would point to the level of focus needed at that moment. Other students were curious about what it was, and when the teacher explained it to the class, all the students wanted, and got, attention-level charts taped to their desks. The teacher also made a large chart for her to use in the front of the class. This strategy helped all students stay focused even though it was initiated for one student.

### *Summary of Classroom-level Implementation*

The previous sections described three forms of classroom-level implementation, full attuning, modified attuning, and whole-class. Individual teacher implementation often included one or more of these. For example, teachers reported attuning students as well as implementing whole-class strategies. Other teachers reported trying modified attuning, such as mini-attuning, and if that was unsuccessful they would use the full attuning process. Teacher implementation of Schools Attuned varied greatly depending on factors such as time, administrator support, collaboration, support for the attuning process, and school-level implementation. How the teacher used Schools Attuned and the level of implementation affected the potential outcome in the classroom. The following sections describe more specific uses of Schools Attuned in the classroom, including challenges experienced implementing Schools Attuned.

### *Teacher Use of Schools Attuned Components*

Our study found the most common use of Schools Attuned in the classroom was the adoption of new instructional strategies aimed at helping all students in the class learn. Teachers found it easy to make minor adjustments to their instruction and lesson planning based on Schools Attuned philosophies. Nearly half (46.3%) the trained teachers reported adopting some concepts and classroom strategies, such as teachers who noted:

I mostly [use Schools Attuned] as a tool to plan better, more engaging lessons, as well as a model for providing fidgety students with alternative behaviors.

I try to apply the Schools Attuned concepts to my class as a whole. It is too difficult to attune an individual student given the large number of students that I work with.

[Schools Attuned] has become part of a variety of teaching strategies I use.

Nearly one-third (30.5%) of trained teachers reported their use of Schools Attuned was limited or inconsistent. These teachers commented they often lacked the time to incorporate Schools Attuned into their teaching. Several teachers (12.6%) indicated they were just beginning to use Schools Attuned and hoped to improve their integration of Schools Attuned strategies in their teaching. Most of these teachers were trained in the past year and were still building their

understanding of the constructs and strategies. Table 5 provides a summary of how teachers described their use of Schools Attuned.

**Table 5**  
*Teachers Overall Use of Schools Attuned in the Classroom*

	Number	%
Some use of concepts or class wide strategies	44	46.3
Minimal or inconsistent use	29	30.5
Just beginning or would like to use more	12	12.6
Use philosophies in lesson planning, but not implementing strategies	6	6.3
Fully implemented and integrated with teaching	4	4.2

Note: n=95

In addition to asking teachers to describe their use of Schools Attuned, the survey also asked teachers about various ways they have used Schools Attuned or its components. The majority of teachers (83.0%) reported using Schools Attuned strategies with an individual student at least once. Approximately two-thirds reported trying Schools Attuned strategies with the whole class (66.7%) and with small groups of students (65.4%). Nearly seven out of ten teachers (69.2%) indicated they have formally *attuned* at least one student, and the average number of students *attuned* per teacher was 1.88 ranging between 0 and 23 students. However, less than 20 percent (18.8%) of teachers were in the process of attuning a student at the time of the survey, possibly because the survey was administered during the last few months of the school year. Table 6 presents the number and percentage of trained teachers who reported using various aspects of Schools Attuned.

**Table 6***Teachers Reporting use of Various Components of Schools Attuned*

	n	%
I have used Schools Attuned with individual students	132	83.0
I have completed a <i>Teacher's View</i>	124	78.0
I have <i>attuned</i> one or more students	110	69.2
I have helped with demystification of a student	110	69.2
I have used Schools Attuned with my whole class as needed	106	66.7
I have used Schools Attuned with groups of students	104	65.4
I am currently attuning a student	29	18.2

n=159

Nearly all teachers reported some use of Schools Attuned in the classroom or lesson planning. Only one (0.6%) trained teacher marked having not thought about Schools Attuned since the training, and only 9 teachers (5.7%) reported they did not change their teaching as a result of the training. The following section discusses challenges teachers experienced that limited their use and implementation of Schools Attuned.

### ***Challenges Implementing Schools Attuned in the Classroom***

The teacher survey included a question related to challenges and limitations in implementing Schools Attuned in the classroom. One hundred ten teachers responded to the question citing challenges related to time, the attuning process, the grade level taught, and lack of support. This section describes some of the challenges encountered by teachers.

When asked about challenges and limitations to using Schools Attuned in the classroom, more than half the teachers (55.5%) reported time was their biggest obstacle. Teachers did not have the time necessary to complete the paperwork, identify appropriate accommodations, or use strategies in the classroom. Comments from teachers included:

It takes too long to attune a student. It is too difficult to follow through with plans for leveraging student strengths. As a result I have drifted away from Schools Attuned.

It is very time consuming and I have so many students it is hard to remember what accommodations to use for whom.

The amount of time for the whole process [is the biggest challenge]: getting feedback from parents and students, and even the *Teacher's View*.

In addition to lacking time to fully implement Schools Attuned, 20.9 percent of teachers reported the process was overwhelming. Teachers struggled to collect all the paperwork and found the process cumbersome. Teachers stated:

It is a lot of paperwork. Sometimes I include too many strategies in the plan and I drop the ball on implementation of strategies.

The attunement process is too long and tedious! It needs to be streamlined.

Another challenge reported by 10.9 percent of teachers was that Schools Attuned was not appropriate for their grade level. This was especially true for middle school teachers (grades 5-8) and primary level teachers (grades K-1). Middle school teachers reported difficulty collecting *Teacher Views* from multiple teachers and struggling to accurately identify student needs when they worked with many students for shorter amounts of time. For primary grade teachers, the issues were related to students not being able to complete the *Student's View* and parents who were apprehensive or fearful of the attuning process. Comments included:

To attune a middle school student is difficult because the number of teachers that need to be consulted. Even when attuning an elementary school student, there are a number of people that also work with the student that need to be consulted. Some return forms -- others may not.

It is very difficult to attune and demystify one student in the secondary education level. Whole class strategies and interventions are much more doable.

It takes a lot of time and my kindergartners are too young for the *Student's View*.

Kindergarten children are too young to attune. However, I use the techniques with the students and parents.

Other challenges related to implementing Schools Attuned reported by teachers included a lack of school and/or teacher support, parents not interested or not wanting their child to be *attuned*, and technical difficulties with the All Kinds of Minds and Schools Attuned websites. Table 7 presents the percentage of teachers who reported experiencing each challenge.

**Table 7**  
*Challenges Implementing Schools Attuned in the Classroom*

	Number	%
Time	61	55.5
Paperwork/process overwhelming	23	20.9
Not grade appropriate	12	10.9
Lack of school/teacher support	11	10.0
No challenges experiences	8	7.3
Parents not interested/do not want attuning	7	6.4
Technology issues	3	2.7

Note: n=110, but some teachers report two or more challenges

Despite the challenges, the majority of trained teachers were implementing some aspects of Schools Attuned. Training and use of Schools Attuned in the classrooms resulted in changes in teacher understanding and instructional practices. Teacher-related outcomes are presented in the following section.

## **Teacher-related Outcomes**

The Schools Attuned training was intended to increase teacher understanding of learning differences and create changes in teachers' instructional practices. Our study investigated teacher-related outcomes at both levels. The following sections present findings related to changes in understanding and perceptions, and changes in instructional practices.

### ***Changes in Teacher Understanding and Perceptions***

Teachers reported that attending the training increased their understanding and awareness of student learning differences. They reported having more empathy and sympathy for students who were struggling. They also reported that the training gave them more tools to work with struggling students.

Changes in teacher understanding and perceptions were dependent on how recently the teacher attended the training and how the teacher was implementing Schools Attuned. Some teachers reported the training was “validating” because it reinforced their understanding and what they were already doing in the classroom. Others indicated the training helped teachers focus on strengths in addition to weaknesses. Comments included:

Teachers are more sensitive to student strengths and weaknesses as they use the program more. There is greater awareness and sensitivity to differentiated learning.

Schools Attuned broadens their perspectives, insights, and strategies. Trained teachers look at the whole learning profile. They look at the child's strengths, not just their weaknesses.

Findings also indicated the training provided teachers a different way of looking at individual students and their specific learning needs. Comments from teachers and administrators included:

Teachers have a more individualized approach to students. There is greater understanding of what individual kids need. Trained teachers also differ in how they talk about kids. They can articulate areas of weakness and have strategies ready to put in place.

Trained teachers have a better understanding of multiple modalities, so they now offer students options for demonstrating mastery. Teachers are more flexible, they allow movement by students, are more open to how things can be done, take more breaks, and allow dictating to a friend...they are using the Schools Attuned strategies.

The most profound change is teachers understanding and the way they look at children learning. Schools Attuned somehow gives a vocabulary and understanding teachers did not have before. As a result, teachers look at kids in different ways and they feel more empowered.

Administrators and trained teachers indicated the Schools Attuned training had a positive effect on teacher understanding and perceptions of student learning challenges. Teachers were more empathetic and less likely to label students, and 93.3 percent of teachers reported they learned new information about how students learn as a result of the training. Data from the survey also showed increases in teachers’ understanding of learning challenges, overall understanding of how students learn, confidence in working with student learning challenges, and seeking resources to work with students with learning challenges (Table 8).

**Table 8**

*Impact of Schools Attuned on Teacher Understanding/Perceptions*

	n	Mean	Standard Deviation
Understanding of student learning challenges	154	4.44	.56
Overall understanding of how students learn	153	4.32	.61
Confidence in working with students with learning challenges	154	4.18	.65
Seeking out resources to work with students with learning challenges	153	3.98	.69

Ratings were on a 5-point scale: 1 = Great Decrease; 2 = Slight Decrease; 3 = No Change; 4 = Slight Increase; and 5 = Great Increase.

Once teachers’ understanding and perceptions about students have changed, the next step is to change teaching practices. The next section discusses findings related to changes in teaching practices.

### *Changes in Teaching Practices*

Schools Attuned training also affected teachers' instructional practices. Teachers were more willing to try new strategies in their classroom, more strategic about their teaching, and more purposeful in their lesson planning and instruction than prior to the training. Teachers gained additional tools and resources to help them better meet the needs of all their students.

School administrators reported observable differences in instructional practices after a teacher returned from the Schools Attuned training, and between trained and non-trained teachers. Administrators commented:

Teachers not trained in Schools Attuned are very traditional. They take the "Sage on the Stage" approach, with lecture and textbook instruction. Trained teachers will shift gears if something is not working, while non-trained teachers will plow through it regardless. They don't see that it is not working.

It is obvious at the Student Study Team (SST) meetings whether or not the presenting teacher has been trained. Teachers who have not been trained do not have the same perspective or the repertoire of strategies that trained teachers have. Non-trained teachers have not tried as many strategies. Teachers who are trained refer fewer students for SST. They will try more strategies. They have a larger toolbox of ideas to try. They will try more things before referring students for SST meetings.

Differences in trained and non-trained teachers' instructional practices were also evident during our classroom observations. Trained teachers were significantly more likely to initiate help, provide clear expectations to students, monitor students' organization of tasks, and control the class during disruptions. Table 9 presents the mean ratings and statistical differences between trained and non-trained teachers on various instructional practices.

**Table 9***Observations of Trained and Non-trained Teachers Instructional Practices*

Extent to which the teacher...	Trained teacher mean	Non-trained teacher mean	t-value
Initiates assistance or help	3.55	2.48	4.22**
Provides clear expectations to students	4.28	3.24	4.13**
Monitors students' organization of tasks	3.63	2.54	3.64**
Controls/disciplines when there are disruptions	4.08	2.62	3.45**
Teaches students to review their progress	3.25	2.28	2.99**
Models or demonstrates the expectations for the work	3.68	2.74	2.96**
Encourages and values active participation from all	3.87	3.04	2.93**
Gives feedback before moving on	3.27	2.43	2.77**
Explains, clarifies, and provides information	3.72	3.04	2.68**
Asks known answer questions	3.87	3.17	2.51*
Explains the significance or importance of the lesson	2.38	1.61	2.47*
Asks open-ended questions	2.77	1.96	2.45*
Provides adequate time and structure for wrap-up and closure	3.50	2.89	1.94
Discusses work-in-progress in terms of its quality	3.05	2.36	1.91
Revisits key ideas in a variety of ways	3.45	2.87	1.64
Provides adequate "wait time" to encourage students to process their ideas and express their thoughts	3.45	3.09	1.31
Uses brief student conferences to monitor progress	2.96	2.50	1.23
Encourages risk-taking and honest expression	3.74	3.54	.68

\*  $p < .05$ ; \*\*  $p < .01$

n = 59

The teachers reported they were trying new instructional strategies both with individual students and with the class as a whole as a result of the Schools Attuned training. Teachers indicated the training provided them with a larger repertoire of resources, strategies, accommodations, and modifications to try before referring students for special education testing

or other educational services (e.g., student study teams, speech therapy). Teacher comments included:

In our 6th grade classes, we can see a terrific application of the program in terms of flexibility and respect for different learning styles. The teachers are more willing to modify or adapt the class to their students' needs. For example, our teachers have given oral exams for those students who test better orally.

The training has helped me identify students' challenges and I am using the resources to tackle those challenges.

I have greatly increased in the noted areas because the confidence and communication with new strategies and ideas made me more determined than ever to really be “in tune” to what my students needed to succeed.

Because of the Schools Attuned training, I have experienced increases in my skills in being able to expand exercises and provide more challenging work for the children.

Teacher responses on the survey also indicated changes in teaching practices. Teachers reported the training provided them with new strategies to try in their classroom, they tried something new in their classroom as a result of the training, and believed they were a better teacher because of the training (Table 10).

**Table 10**  
*Impact of Schools Attuned on Teacher Practices*

	n	Mean	Standard Deviation
Schools Attuned provided me with new strategies	156	4.33	.65
I would recommend the training to other teachers	156	4.30	.83
I tried something new in my class as a result of the training	156	4.27	.77
I am a better teacher because of Schools Attuned training	156	4.06	.90
I am comfortable implementing Schools Attuned in my classroom	152	3.88	.98

Ratings were on a 5-point scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Uncertain; 4 = Agree; and 5 = Strongly Agree.

Trained teachers and non-trained teachers also differed on the subscales of instruction and lesson planning, and perceptions of student learning. Schools Attuned-trained teachers averaged significantly higher than non-trained teachers on both subscales (Table 11).

**Table 11**

*Instruction and Lesson Planning and Student Learning Scales*

	Treatment Mean	Comparison Mean	Difference	t-value
Instruction and Lesson Planning	3.31	3.22	.09	2.27**
Student Learning	3.13	3.03	.10	3.37**

\*  $p < .05$ ; \*\*  $p < .01$

The Schools Attuned training resulted in changes to teachers' instructional practices. The training provided teachers with new strategies they used in their classrooms, and increased their confidence and willingness to work with students before referring them for special education services. Overall, Schools Attuned had a positive affect on teachers' instructional practices.

## **SCHOOL-LEVEL IMPLEMENTATION AND OUTCOMES**

This section of the report presents findings at the school level. We begin with how Schools Attuned was implemented by our study schools, followed by successful practices for implementing and sustaining Schools Attuned. This section concludes with school-level outcomes.

The research questions addressed in this section included:

- What strategies were sites using to implement Schools Attuned at the school level and what school structures supported implementation school wide?
- What impact has Schools Attuned had at the school level?

### **School-Level Implementation**

Schools Attuned was originally designed as a program for individual teachers to implement at the classroom level. Teachers having success using Schools Attuned often shared their experiences with their peers and administrators. At some sites, Schools Attuned grew from this bottom-up approach and was quickly adopted as a school-wide model.

As described in the expanded conceptual model (Figure 2, page 7), schools used a variety of implementation strategies. School-level approaches to implementation identified in our study schools included:

- Classroom-Level Implementation
- Full-School Implementation
- Lead Teacher/Team Implementation
- Student Curriculum Implementation

The following sections describe each of these implementation strategies, including examples from individual schools.

### ***Classroom-Level Implementation***

Implementation and use of Schools Attuned at the classroom level was the most common form of implementation, found in 11 of the 21 (52.4%) study schools. At these schools, the use of Schools Attuned was optional. Teachers could incorporate aspects of the training in their classroom, attune individual students, or just add the strategies learned into their toolkit of resources. Administrators may or may not be trained, and may or may not support Schools Attuned. At all but one of the schools, attending the training was voluntary. In the one school where training was mandatory, Schools Attuned was supported and paid for by the parents and was not supported by the administration. Very few teachers adopted Schools Attuned philosophies or strategies, and no students were fully *attuned* and demystified. At another school, the principal was the catalyst who brought Schools Attuned to the school and fully supported it. Attending the training was voluntary, and the principal relied on the teachers to build excitement among each other rather than mandating the training. The principal commented:

Knowing the culture of the school, I asked some of my most skeptical and vocal teachers if they would attend the training. I knew if they bought into Schools Attuned that they would promote it and sell it to the other teachers.

In this school, implementation of Schools Attuned was at the classroom level, but it was strongly supported by the administration.

### ***Full-School Implementation***

Full school adoption and integration of Schools Attuned was found at five (23.8%) study schools. However, two of these schools already had all of their teachers trained and the remaining three were in the process of training teachers and integrating Schools Attuned. At the five schools, the administration fully supported Schools Attuned and expected trained teachers to implement it. Four of the five schools mandated that teachers attend the training. For example, one school required teachers to go after their first year at the school, and another required grade-level teams to attend the training together. In addition to mandating the training, one school also required that trained teachers fully attune and demystify at least one student each year. Four of the five schools were private or charter schools, and the one public school was offered funding from a local foundation to train all their teachers.

At these full implementation schools, Schools Attuned was more than a classroom program. Schools Attuned was integrated into the school culture. Comments from principals included:

Schools Attuned is incorporated into our approach to working with all students. Teachers do both full and mini-attuning of students, and because it is incorporated into the school, teachers try strategies in the classroom without full attuning...they go straight to the strategies and accommodations.

Our staff had three professional development days to talk about the constructs before anyone went to the Schools Attuned training. The constructs are posted in each classroom, we have a construct of the month, and connections to the constructs are made daily.

This program is a nice match with the school charter. We use a similar language. Schools Attuned is built into the school charter in that it talks about meeting the needs of individual students and finding the gifts that all students possess.

### ***Lead Teacher/Team Implementation***

Three (15.8%) of the study schools used a lead teacher or team approach to implementation. These schools relied on one or two key people to take full responsibility for Schools Attuned, such as a lead teacher, coach, or intervention specialist. Struggling students were referred to the lead teacher who would be responsible for collecting the paperwork, completing the attuning process, and providing the classroom teacher with accommodations and strategies to try with the student. The following are examples from two schools:

All the teachers in the school, except two new to the school, were trained in Schools Attuned. However, the intervention specialist completes the attuning process for all struggling students in the school, except for those in third grade. For students in third grade, the intervention specialist works with the teacher to attune the student.

Schools Attuned is integrated into the school referral process and all teachers on the student study team (SST) are trained in Schools Attuned. A classroom teacher presents a student profile to the SST and the SST provides the teacher with strategies and interventions to try in the classroom. If the strategies are not successful, the SST fully attunes the student and the teacher is provided with additional strategies. If the student continues to struggle, only then can he or she be tested for special education services.

Lead teacher and team implementation of Schools Attuned resulted in non-trained teachers implementing aspects of Schools Attuned in their classrooms, which helps account for the 36 teachers who were grouped as not trained but implementing Schools Attuned.

### ***Student Curriculum Implementation***

Schools Attuned was used as a student curriculum at two schools (9.5%). At one school, all students in a certain grade level read *The Mind That's Mine* as part of the science curriculum, and the teacher presented a lesson on social cognition. At the other school, only one teacher was trained in Schools Attuned. The school did not formally attune students or make accommodations in the classroom. Rather, the trained teacher had all students complete the *Student's View* to rate themselves on their own learning strengths, weaknesses, and affinities. Afterward the class discussed the neurodevelopmental constructs and learning in general in small groups. Students discovered what type of learner they are, identified their strengths and weaknesses, and discussed changes they can make to overcome those challenges. At this school, all the students were exposed to Schools Attuned, but the teachers were not.

Schools Attuned was originally designed as a program for individual teachers, but schools have adapted Schools Attuned into a school wide reform effort, a resource for helping teachers and students in the classroom, and a curriculum. Despite the different types of implementation used by schools, some common approaches and best practices emerged. The following section describes some of the common factors leading to successful implementation and potential sustainability of Schools Attuned.

## **Common Factors and Best Practices for School Level Implementation**

Although specific details of implementation varied, some common themes related to successful school-level implementation emerged from our site visits and administrator interviews. These successful strategies fell into two basic categories: 1) successful practices for implementing Schools Attuned; and 2) and key components for sustaining Schools Attuned. The following sections describe strategies used by schools for implementing and sustaining Schools Attuned.

### ***Successful Practices for Implementing Schools Attuned***

Schools that successfully implemented Schools Attuned identified several strategies helpful for school-level implementation. These included developing a strategic implementation plan, starting small, building the infrastructure, and customizing Schools Attuned to meet the needs of the school, teachers, and students.

School administrators often recommended developing an implementation plan that clearly stated their goals and intended outcomes for Schools Attuned. A strategic plan guided the implementation process, often with a timeline including how many teachers would be trained each year and at which grade levels. For example, one school was applying a bottom-up implementation plan in which all first grade teachers were trained in the first year and all second grade teachers the following year. This model allowed the teachers within a grade level to support one another and *attuned* students to transition into a classroom with another trained teacher as they progressed through school. By developing a strategic implementation plan, staff members aware of what components would be implemented and when so they were prepared and ready to implement Schools Attuned.

Starting small and focusing in one area of Schools Attuned at a time was another successful practice identified by schools. One administrator advised:

Don't try to implement everything at once. There is too much and it is too overwhelming. Focus on one or two areas a year and build on that.

For example, one school was creating brochures on each of the neurodevelopmental constructs. The brochures defined a construct, offered a few example profiles of students struggling with that construct, and presented some strategies the teacher could try in class. The school started with one construct during the first semester and added another construct in the second semester. It will take several years to develop brochures for each of the constructs, but it

gives the staff a place to focus their attention rather than trying everything at once. The brochures both support trained teachers and motivate non-trained teachers to attend the training.

Building the infrastructure to support Schools Attuned was also key to implementation at the school level, and should be included in the strategic implementation plan. For example, schools with a system in place to support teachers once they were trained were more successful implementing Schools Attuned than those without such structures. In some schools, this was a trained administrator, mentor, resource teacher, or colleague, as well as a time and place to meet. Several schools held monthly meetings facilitated by a mentor, and others provided time for one-on-one assistance. Some schools also worked to align Schools Attuned strategies with the curriculum and other school initiatives. The infrastructure to support teachers helped them successfully implement Schools Attuned in their classrooms.

### ***Key Components for Sustaining Schools Attuned***

In addition to important factors related to implementing Schools Attuned, our study identified key components for sustaining Schools Attuned. These included having a supportive administration, having an advocate/support person, training a core group of teachers, and integrating Schools Attuned with school policies and initiatives.

A supportive and knowledgeable administrative staff was essential for successful and sustainable school-level implementation of Schools Attuned. The majority of schools (66.6%) had administrators who attended the week-long training with a group of teachers. The principal, as well as other school administrators and faculty members, often encouraged teachers to attend the training, and in many cases school funds were used to cover the cost of the training. In one school, 20 percent of one of the assistant principal's time was dedicated to Schools Attuned for supporting teachers, helping out in the classroom, or collecting *Parent's View* (a tool linked to the neurodevelopmental constructs for parents/caregivers to share their observations about their child's learning). Another school created a case-manager position to serve as a liaison among the school, teachers, and parents. Multiple trained administrators and dedicated time can help ensure continued support for Schools Attuned even if the principal or another administrator leaves the school. In contrast, another school had all their teachers trained but very few of them were using Schools Attuned because there was no administrative support to do so. Additionally, several schools dropped from our study because of principal turnover resulting in schools no longer implementing Schools Attuned. Schools successfully implementing and sustaining Schools Attuned often had the principal and other administrators trained in Schools Attuned. Having multiple administrators trained provided ongoing support for Schools Attuned when administrative changes occurred.

A strong advocate for Schools Attuned, often the catalyst that brought Schools Attuned to the school, was also common across the schools. In some cases it was a staff member who attended the training and shared his or her experiences with colleagues. At other schools, the parents were strong advocates asking teachers to be trained, and the Parent-Teacher Association (PTA) at two schools raised funds to send teachers to the training. Whether from a principal, a teacher, or parents, successful sites had a strong advocate who supported Schools Attuned and was a driving force behind its sustainability. Further, strong advocates beyond the school principal were important in continuing implementation of Schools Attuned after an administrator left the school. Many of the schools that dropped from our study cited changes in administrators as the reason, including two that indicated Schools Attuned was no longer visible at the school.

Having every teacher in the school trained was not sufficient to sustain Schools Attuned. At one school the PTA paid for all teachers to be trained, but there was no school-level support and therefore very few teachers were actually using Schools Attuned. Having fewer, but well chosen, teachers trained worked better for keeping Schools Attuned alive in the school, and it also helped build excitement and encouraged other teachers to be trained. One administrator recommended:

...assemble a team of interested teachers and go to the training with them. Let them talk up the program and build support from within the faculty. It needs to come from within the staff and not the administration.

Schools that integrated Schools Attuned into other programs or initiatives were also more likely to sustain it. Schools Attuned was viewed as part of a process rather than as “another thing they had to do.” For example, two schools integrated Schools Attuned into the existing special education referral process. At these schools, a struggling student must be fully *attuned* prior to being referred for special education testing and services. At one school, a flow chart was developed outlining the process. It begins with a *pre-referral* process that includes a meeting of the Intervention Committee, recommended modifications and services, and a six-week trial period. After the six weeks, the committee reviews the case and if the student is still struggling he or she is fully *attuned* with another six-week trial period for the new modifications and services. If the student continues to struggle, the *formal referral* process begins, which includes developing an action plan through the Student Study Team (SST), testing for special education, and potentially the development of an Individualized Education Plan (IEP). Schools Attuned was more likely to be sustained at the school when it was integrated into the special education or other school processes.

Overall, factors increasing the sustainability of Schools Attuned included: strong administrative support, advocates for Schools Attuned, a core group of trained teachers, and integration into other school programs and initiatives.

### **School-Level Outcomes**

School-level findings were related to four areas: 1) building a common vocabulary; 2) increasing parent and community involvement; 3) improving communication and collaboration among teachers; and 4) strengthening the school culture.

A benefit of Schools Attuned reported by administrators, intervention specialists, and teachers was the development of a common vocabulary among teachers throughout the school. The Schools Attuned training provided staff with a common language and a way to describe children that all staff members understood, and in some schools non-trained teachers also learned the Schools Attuned language. Comments included:

Teachers can now talk about students and learning issues with a common vocabulary. They have a common language now.

It helped our teachers talk the same talk. Using the same language helped, and even our teachers who have not been trained know the language.

Schools Attuned gave teachers a common language to use and a common vocabulary. It put names and labels on things that teachers already knew.

In addition, Schools Attuned also helped teachers communicate with parents and resulted in greater parent and community involvement. Schools Attuned gave teachers and parents a more optimistic view of students by identifying strengths rather than just weaknesses, and by providing strategies for the classroom and at home. At some schools the parents began learning the Schools Attuned vocabulary and were better able to advocate for their children. Comments included:

Schools Attuned gives us more options for communicating with parents and helps parents understand their child as a learner. We use parent-friendly vocabulary to discuss strengths and weaknesses, and we help parents see the issues.

Schools Attuned has provided us with a vocabulary to use with parents. This prevents our staff from using words that are inappropriate or judgmental. We are able to present a balanced and optimistic view.

Parents know about the program, and the community is very involved and active. Parents initially helped put the teachers through the training. It has broken down barriers teachers used to have when talking to parents about their children's learning problems. Now it is easier to talk to parents, easier for parents to accept talking about the child's problem. Somehow parents are more comfortable when teachers use the Schools Attuned vocabulary. Overall, parents are more open, trusting, and less apprehensive. It's easier for teachers to work with parents.

Increased parent involvement was often associated directly with the attuning process. The formal attuning process required parents to complete the paperwork, and the demystification process allowed teachers to communicate more directly with the parents. However, some schools also used additional tools developed by All Kinds of Minds (i.e., Learning about Learning Workshop, All Kinds of Minds Fair) to involve and communicate with parents whose children were not *attuned*. Schools were planning special events for parents to learn about the constructs, and one school had groups of students present the constructs to parents. One administrator commented:

We began presenting workshops to parents last year and feedback from parents has been very positive...It changed parents' perspectives and now they understand their children better and develop plans for school and home. It has increased parent understanding.

Another school found that the full attuning process increased parent involvement for parents whose child was being *attuned*, but did not affect parent or community involvement otherwise. The administrator went on to say:

When the school was attuning students, it improved relationships with those parents. But with our new focus on classroom teaching techniques [and not formal attuning], it does not involve parents as greatly.

Data also indicated that Schools Attuned improved communication and collaboration among teachers. More than three-quarters (77.4%) of teachers reported discussing Schools Attuned with other faculty members, and 75.5 percent reported communicating students'

strengths and challenges to a student’s teacher the next school year. Further, just under half (45.3%) of respondents indicated that teachers communicate students’ strengths and challenges with them when they get new students (Table 12).

**Table 12**  
*Communication and Collaboration*

	n	%
I discuss Schools Attuned with other faculty	123	77.4
When students go to a new class, I communicate with their new teacher about success and challenges	120	75.5
When I get a student from an Schools Attuned-trained teacher, that teacher communicates with me success and challenges	72	45.3
I have helped other faculty attune or demystify a student	68	42.8
Other teachers see me as a resource in working with students with learning challenges	43	27.0

n=159

Schools Attuned resulted in increased communication among teachers and between teachers and parents. Overall, trained teachers reported the greatest increase in communication was with other Schools Attuned-trained teachers (mean = 4.07). Trained teachers also reported slight increases in communication with parents and non-trained teachers (Table 13).

**Table 13**  
*Impact of Schools Attuned on Teacher Communication*

	n	Mean	Standard Deviation
Communication with other Schools Attuned trained teachers	150	4.07	.72
Communication with parents	154	3.93	.68
Communication with non-trained teachers	145	3.52	.74

Ratings were on a 5-point scale: 1 = Great Decrease; 2 = Slight Decrease; 3 = No Change; 4 = Slight Increase; and 5 = Great Increase.

In some schools, teachers reported no changes in teacher communication because their levels of communication were already high prior to the training. This was especially true in schools where instructional or grade-level teams attended the training together. Comments from teachers included:

There was no change because I always communicated with other teachers (co-teachers) and with parents anyway.

No changes to report with regard to parent communication because it was already in place. We all communicate very well with one another across grade levels with regard to students, especially those with special needs.

Communication with other Schools Attuned-trained teachers increased greatly, mainly because I am familiar with the language now and I understand better what they are talking about.

Schools Attuned also became integrated into the school culture at several participating schools. At one charter school, Schools Attuned philosophies were written into the school's mission and charter. Several administrators commented that Schools Attuned was well matched with their school's goal of meeting the needs of all students. Comments included:

Schools Attuned is part of the school culture and allows the school to better meet the needs of all its students. It developed an expectation and school culture that we aren't going to label a child and walk away or send them to another school because we do not offer special education.

Schools Attuned is embedded in the school culture. Since 1999 we have been sending teachers to the training. Our school climate encourages teachers to address the range of student needs in their class with support. Our expectation is that teachers have the ability to meet all our students' needs.

The teacher survey also showed that the treatment group (trained and implementing) had significantly higher ratings for both parent and community involvement ( $t [380] = 1.97, p < .05$ ) and school culture ( $t [381] = 2.68, p < .01$ ) than the comparison group (not trained and not implementing). With the teachers coming from the same schools, the findings indicate Schools Attuned is affecting teacher perceptions of parent and community involvement and school culture (Table 14).

**Table 14***Parent and Community Involvement and School Culture Scales*

	Treatment Mean	Comparison Mean	Difference	t-value
Parent and Community Involvement Scale	3.25	3.17	.08	1.97*
School Culture Scale	3.24	3.12	.12	2.68**

\*  $p < .05$ ; \*\*  $p < .01$

School-level outcomes are dependent on how the school is implementing Schools Attuned. The purpose of our study was to examine the overall outcomes across selected schools in California. Additional research should be conducted further exploring how schools implement Schools Attuned and the links between the type of implementation and school-level outcomes.

## STUDENT-RELATED OUTCOMES

Student-related outcomes depended on the classroom implementation of Schools Attuned and teacher definitions of an *attuned* student. During interviews and focus groups we asked teachers about the impact of Schools Attuned on students formally *attuned* as well as on other students in the class. Teacher survey questions asked teachers to rate their perception of changes in students on various characteristics. The following sections describe outcomes at the individual student level and at the classroom level.

The research questions addressed in this section include:

- What are the gains made by students for whom the formal Attuning a Student process was completed?
- What are the whole class effects when teachers implement Schools Attuned strategies?
- What, if any, changes occurred in relation to student behavior, attendance, academic outcomes, self-concept, and self-advocacy?

### Individual Student Outcomes

When discussing *attuned* students, teachers observed changes in the student's performance and behavior. Teachers reported *attuned* students demonstrated improved self-esteem, were more knowledgeable about their strengths and weaknesses, and had a better understanding of their personal learning styles and needs. One teacher stated, "Students are relieved when they go through demystification." The teacher went on to say the "relief" was a result of seeing their strengths, understanding their personal challenges, and learning strategies to help them overcome those challenges. Comments from other teachers included:

[Attuning] has benefited the student. They begin to identify their strengths and weaknesses. They understand themselves better and are more confident. They see they have strengths and are not a horrible person. As the students gain confidence and see that the teacher knows them, they are less likely to act out in class.

Students who have been *attuned* have loved the process. They have loved the attention and the opportunity to talk about themselves and explain how they learn. The attuning process probably gives students a level of self-respect that is extremely valuable but difficult to measure.

The biggest changes come from students who feel like there is finally a teacher, and adult, who “gets” them. Once a child feels that I understand their strengths and challenges – and I don't make judgments about them – they relax, enjoy school a bit more, and improve.

Schools Attuned is empowering for the students. It helps students see the difference between “I’m horrible at math” and “I’m horrible at fractions,” or “I have a hard time processing information verbally” compared to “I’m dumb.”

Administrators and teachers also reported observing differences in impact based on the teacher’s use of the full attuning or mini-attuning process, and the level of involvement and support from the parents. Findings indicated the full attuning process and greater parent involvement resulted in more positive outcomes. Comments included:

Fully *attuned* students know themselves better and learn to focus on their strengths. They have a better understanding of learning differences and are better at accepting their own limitations... They see that they have strengths in addition to their weaknesses. It gives them hope and helps them be more optimistic about their future. They do better because they can see their strengths and have a better perspective about themselves. They feel better about what they are doing. There have been smaller changes in students as a result of the mini-attuning.

Fully *attuned* students’ success depends on follow through by the teacher and parents. When the parents really understood it and followed through, it made a bigger difference. When this happens, it helps the student internalize.

Findings indicate that Schools Attuned has a positive affect on students who are *attuned*, especially when the full attuning process is used. However, few teachers are using the full attuning process. Mini-attuning and whole-class implementation strategies are more common practices in the classroom. The following section discusses student-level outcomes at the classroom level.

## **Classroom-Level Student Outcomes**

Student outcomes at the classroom level were dependent on school and classroom implementation strategies. Thus, overall findings were mixed. Some schools and data sources reported positive affects on students in the whole class, while others reported little or no changes.

In schools implementing Schools Attuned as a curriculum and teaching students about the constructs, teachers reported students had a better neurodevelopmental understanding and greater appreciation for differences in learning. Students were able to identify their own learning styles and the learning styles of their peers. Students were more tolerant and understanding of their peers. Teachers reported improved classroom environments and more respectful attitudes when other students were struggling. Examples reported by administrators and teachers included:

Schools Attuned is creating a culture in every classroom that kids learn differently. It is simply expected that different kids will be approaching a task differently. Teachers and students are doing this.

There is a ripple affect in the classroom culture. There is a deeper tolerance and understanding, and knowledge that we all learn differently.

Schools with full integration of Schools Attuned also reported observing changes among students and in the classroom. Comments from administrators included:

Students know about how they learn. Schools Attuned is embedded in their work. They understand their brains, and the constructs. They know their strengths. There has been a tremendous impact on their self-image, self-esteem, etc...

Students use the Schools Attuned language. They know the terminology. I had a parent call me because her second grader used the word neurodevelopmental.

All students are celebrated for their skills and strengths. Schools Attuned has also had a great impact on the social structure of the classroom, and students have greater consideration for each other. It helps to move curriculum along and state standards are more effective.

The school has taken a strong stand on teaching children that everyone is different and learns differently and this is normal. There is greater understanding among students (challenged and not) for each other. Lots more support among students for each other.

Another school reported an increase in the number of students taking advanced mathematics classes. The math department at the middle school adopted Schools Attuned and “are using it to help more students succeed. As a result there are more students taking algebra and pre-algebra than in all other middle schools in the district combined.”

Individual schools reported positive classroom outcomes, such as an improved classroom culture, fewer interruptions and disruptive behaviors, and increased participation in class. However, ratings from the teacher survey reflected minimal change related to student outcomes. Teachers were asked to rate changes they observed among students in their class. The highest rating (4.01, indicating a slight increase) was for student ability to cope with learning difficulties, followed by increased self-concept, and active engagement during class (Table 15).

**Table 15**  
*Teacher Ratings of Student Outcomes*

	n	Mean	Standard Deviation
Coping with learning difficulties	136	4.01	.68
Self-concept	125	3.84	.76
Actively engaged during class time	119	3.80	.66
Attention during lessons	134	3.71	.72
Time on task	119	3.67	.68
Interactions with other students	130	3.62	.73
Class grades	126	3.49	.60
Test scores	122	3.36	.66
Attendance	127	3.16	.53
Negative behavior at home*	104	2.93	.58
Disruptive behaviors*	124	2.70	.79
Negative classroom behavior*	135	2.61	.78

\*A lower number indicates a positive change  
Ratings were on a 5-point scale: 1 = Great Decrease; 2 = Slight Decrease;  
3 = No Change; 4 = Slight Increase; and 5 = Great Increase.

Three main themes emerged from teachers comments related to reasons for not observing changes:

1. teachers were new to the profession and had no prior experiences in the classroom to compare;
2. students were already strong in the area (such as attendance) and no change was needed; and
3. teachers were not implementing Schools Attuned in their classroom at a level to observe changes. For example, one teacher noted she was “not implementing [Schools Attuned] to a degree that would explain a change.”

The original intent of the current study was to examine overall outcomes for students across schools. Additional research is needed to further link student outcomes with the type and level of implementation both at the school and in the classroom.

## ADDED MENTORING PROGRAMS

When this study was proposed, two distinct mentoring programs were available to teachers at selected schools, one in northern California and one in southern California. The mentoring services provided were locally developed and external to All Kinds of Minds. In southern California, the Professional Development Provider established the mentoring program and in northern California a separate outside agency provided mentoring. In both cases, all the mentors had completed the Schools Attuned program, but the local sites assumed the responsibility of the selection, support, and training of the professionals performing the services.

The exploratory component of the study was designed to examine aspects of both the northern and southern California types of mentoring, and the potential added benefit of mentoring to the implementation of Schools Attuned. However, during the first year of our study the mentoring services provided in northern California ended limiting our data collection. In northern California we were only able to collect data from the teacher survey and administrator interviews, while in southern California we also were able to interview mentors, observe mentor meetings at the schools, and observe the meetings mentors attended with the Professional Development Provider Site. This section of the report describes the basic characteristics of both types of mentoring, as well as findings related to the added benefits of mentoring.

In northern California, an external organization with staff trained in Schools Attuned offered mentoring services to selected schools. All the mentors were Schools Attuned-trained external support providers who were on the school campus at least once a week. They provided intensive mentoring services that included reviewing the neurodevelopmental constructs with teachers, collecting *Teacher Views* and completing the attuning paperwork, assisting with the demystification of students, and helping out in the classroom. Some mentors co-taught lessons to model the use of specific accommodations and strategies in the classroom. Mentors in northern California were available to assist trained teachers with whatever help was needed.

In southern California, the Director of the Schools Attuned Professional Development Provider Site brought together members of his staff and Schools Attuned facilitators (trainers) to serve as mentors. Through this model of mentoring, the initial cohort of mentors began providing services to selected schools for three (or more) years. During that time, the mentor developed the skills of one or more lead teachers to become a mentor and move the role of mentor from an external to an internal position within the school. During the 2005-06 school year, 17 mentors worked with 36 schools. The cohort of mentors included Schools Attuned facilitators, school administrators, resource teachers, district staff, school psychologists, and classroom teachers who provide mentoring services to their own and/or other schools.

The type of services provided varied somewhat between external and internal mentors. External mentors were on the school campus an average of once a month, and were available through phone and email between visits. During the monthly visit, they often reviewed the neurodevelopmental constructs with the teachers, provided strategies, discussed options for struggling students, and served as a sounding board for the teachers. They kept the teachers informed and provided additional assistance as needed. Internal mentors performed the same duties as external mentors, but often provided additional, informal mentoring as well. They often answered questions between classes, during breaks, and in the faculty lounge. They also assisted newly trained teachers through the attuning process by collecting the paperwork, assisting with the data compilation, and helping demystify a student.

Mentoring also varied based on the school and teacher needs. At one school, the mentor began working with teachers prior to their attending the training so they would be familiar with the vocabulary and less likely to be overwhelmed. At another school, mentoring focused on reviewing and understanding the neurodevelopmental constructs. The mentor showed Schools Attuned training videos and held open discussion about the constructs. Whenever possible, the same mentor remained with a school for the three-year period, if not longer. The mentors developed a connection with the schools and teachers, understood their needs, and tailored their services to the school. One external mentor who works with multiple schools stated:

My work is tailored to the school. I'm working with schools to help them use Schools Attuned how they want to use it. They know about attuning and think that it is the emphasis, but it is only aspect. We want teachers to teach more effectively, build in interventions, and have greater insights into constructs and their relation to teaching. I help with student study teams and help with parent issues. I help the schools decide what they want to do and make it realistic.

An additional role for mentors was keeping Schools Attuned alive and active in the schools. Having a mentor either on campus or visiting every few weeks served to remind teachers about the Schools Attuned strategies, constructs, philosophies, and accommodations. The mentors also provided teachers with the support they needed to implement the various aspects of Schools Attuned and locate additional resources to better meet the needs of students. One administrator commented:

Without a mentor the teachers would not be practicing Schools Attuned at the same level. They would be doing some things, but it takes a lot of help to attune a student. Two or three teachers will attune a student on their own, the rest require

the mentors help to attune students. It is good to have a mentor on campus. She is available to meet with parents, can call a meeting with teachers, and helps integrate Schools Attuned with things [the teachers] are already doing because she is familiar with the campus and curriculum.

The specifics of mentoring varied by each school. With the change in availability of mentoring in northern California, and because schools with mentors did not require teachers to attend monthly mentor meetings or work with mentors, we relied on teacher reports as to whether they received mentoring services. Just over half (53.5%) the trained teachers indicated they received mentoring services (Table 16).

**Table 16**  
*Number of Teachers Receiving Mentoring*

	n	%
Received mentoring	77	53.5
No mentoring	67	47.5
<b>TOTAL</b>	<b>144</b>	<b>100</b>

Trained teachers who received added mentoring services were much more likely to be implementing Schools Attuned in their classroom than teachers who did not receive mentoring ( $t [142] = 3.87, p < .001$ ). Mentored teachers were more likely to have used Schools Attuned strategies with their whole class ( $\chi^2 [1, N = 144] = 5.58, p < .05$ ), were more likely to have *attuned* at least one student ( $\chi^2 [1, N = 144] = 7.52, p < .01$ ), and were more likely to have completed a *Teacher's View* ( $\chi^2 [1, N = 144] = 7.15, p < .01$ ). Additionally, teachers who received mentoring were more likely to have completed the practicum portion of the Schools Attuned training ( $\chi^2 [2, N = 138] = 6.58, p < .05$ ).

Despite differences in level of implementation, both mentored and non-mentor teachers reported similar levels of teacher impact (scale means = 4.09 and 4.04 respectively). Both groups reported similar increases in their understanding of student learning challenges, overall understanding of how students learn, communication with other faculty members, and confidence in working with students with learning challenges.

Overall, teachers who received mentoring services scored higher on all eight scales of the teacher survey. Further, statistically significant differences were found on the Schools Attuned Implementation scale, Student Learning scale, and Instruction and Lesson Planning scale (Table 17).

**Table 17**

*Comparison between Mentored and Non-Mentored Teachers on the Survey Scales*

	Mentored Mean	Non-mentored Mean	Difference	t-value
Schools Attuned Implementation	13.34	11.03	2.31	3.87**
Student Learning	3.18	3.06	.12	2.51*
Instruction & Lesson Planning	3.35	3.24	.11	2.00*
Student Impact	3.62	3.47	.15	1.97
Schools Attuned Training	3.96	3.81	.15	1.78
School Culture subscale	3.27	3.20	.07	.88
Teacher Impact	4.09	4.04	.05	.70
Parent/Community Involvement	3.26	3.22	.04	.59

\*  $p < .05$ ; \*\*  $p < .01$

Overall, added mentoring services were beneficial to both the schools and teachers. For schools, mentors provided information about upcoming trainings, supported administrators with school level implementation issues, and served as a general reminder that Schools Attuned was available as a resource for teachers, parents, and students. For teachers, the mentors provided the additional support they needed to implement Schools Attuned in their classrooms, including attuning individual students and adopting classroom strategies to help all students learn.

Examining mentor applications of Schools Attuned was an exploratory study component. Our study was the first step in looking at mentoring and its added benefits. It is limited to two mentoring programs, one of which is no longer available to teachers. Additional research is needed to explore other types of mentoring programs and systems of support for teachers, how mentoring relates to school and teacher implementation, additional outcomes of mentoring programs, and how outcomes vary based on the type of mentoring provided.

## CONCLUSION AND NEXT STEPS

Implementation of Schools Attuned both at the school level and within the classroom of individual teachers varies greatly. School-level implementation strategies included classroom level implementation, full-school implementation, lead teacher/team implementation, and student curriculum implementation. Classroom-level implementation strategies included the full attuning process, modified-attuning process, and whole-class implementation. School, teacher, and student outcomes were dependent on the implementation strategies used by both the school and individual teachers.

Across the various Schools Attuned implementation methods, we found positive effects at the school, teacher, and student level. Schools Attuned helped schools build a common vocabulary, increased parent and community involvement, improved communication and collaboration, and strengthened the school culture. Teachers experienced positive changes both in their understanding and perceptions of student learning, and their instructional practices. Teachers also reported positive outcomes for students in their classroom, especially those who they formally *attuned* and demystified.

### Recommendations for Program Improvement

Based on the findings from our study, several opportunities for program improvement were identified. These included:

- Streamline the formal Attuning a Student process – Teachers and other school staff found the amount of paperwork and the overall process overwhelming and cumbersome. A more streamlined and user-friendly process would allow more teachers to implement the formal Attuning a Student process as intended.
- Develop a user-friendly web-based system for identifying accommodations and modifications linked to the student data – After completing the Attuning a Student process, teachers must go through the large binders of materials to identify appropriate strategies, accommodations, and/or modifications. A web-based process that allows teachers to enter the *Views* and then provides teachers with potential strategies would streamline the process, save teachers time, and allow teachers to begin implementing Schools Attuned strategies with the student earlier.

- Provide teachers with models for classroom level implementation – Teachers struggle with where to begin and develop their own modifications of Schools Attuned. Providing teachers with models of how Schools Attuned can be implemented in the classroom would create more consistency in how teachers use Schools Attuned, and provide teachers with options for using Schools Attuned in the classroom.
- Provide models for school level implementation – Schools Attuned is expanding from a classroom level program to a whole-school approach. Schools that wish to implement and sustain Schools Attuned would benefit from models of successful implementation and integration, including guides on who to train, developing plans for implementation, and how to maintain Schools Attuned use in the classroom and across the school. Models should be developed based on school context to better meet the needs of schools (e.g., large and small schools, private and public schools, religious and secular schools).
- Develop a system for teacher follow-up – The Schools Attuned *Core Course* training can be overwhelming for teachers and leave them wondering where to begin. They often have questions or simply need a reminder about a construct or strategy. Having some form of follow-up with teachers, either through mentoring or another format, would provide the necessary support to assist teachers to implement and sustain Schools Attuned in their classrooms.

## **Future Study**

Based on the finding from this study, additional research should be conducted to further examine the links between implementation and outcomes. The original intent of our study was to examine the effects and outcomes of Schools Attuned at the school, teacher, and student levels. During the first year of data collection, it became apparent that understanding how Schools Attuned was implemented was necessary to interpret findings and potential outcomes. However, our study was limited to schools within California. Additional data should be collected regarding other implementation methods used by schools and teachers.

A better understanding of levels of implementation and how that interacts with the school context (e.g., public, private, small, large) is needed to accurately link outcomes to specific implementation methods and to identify exemplary models of implementation. Additional research should be conducted to examine how teacher-level implementation is related to school-level implementation, and how both are related to student outcomes. Further, findings from the

exploratory study of mentoring indicated added mentoring programs are beneficial to schools and teachers. Additional research should more closely examine the relationship between the types and intensiveness of mentoring services available to teachers and teacher level implementation and outcomes.

Examples of research questions future studies could examine include:

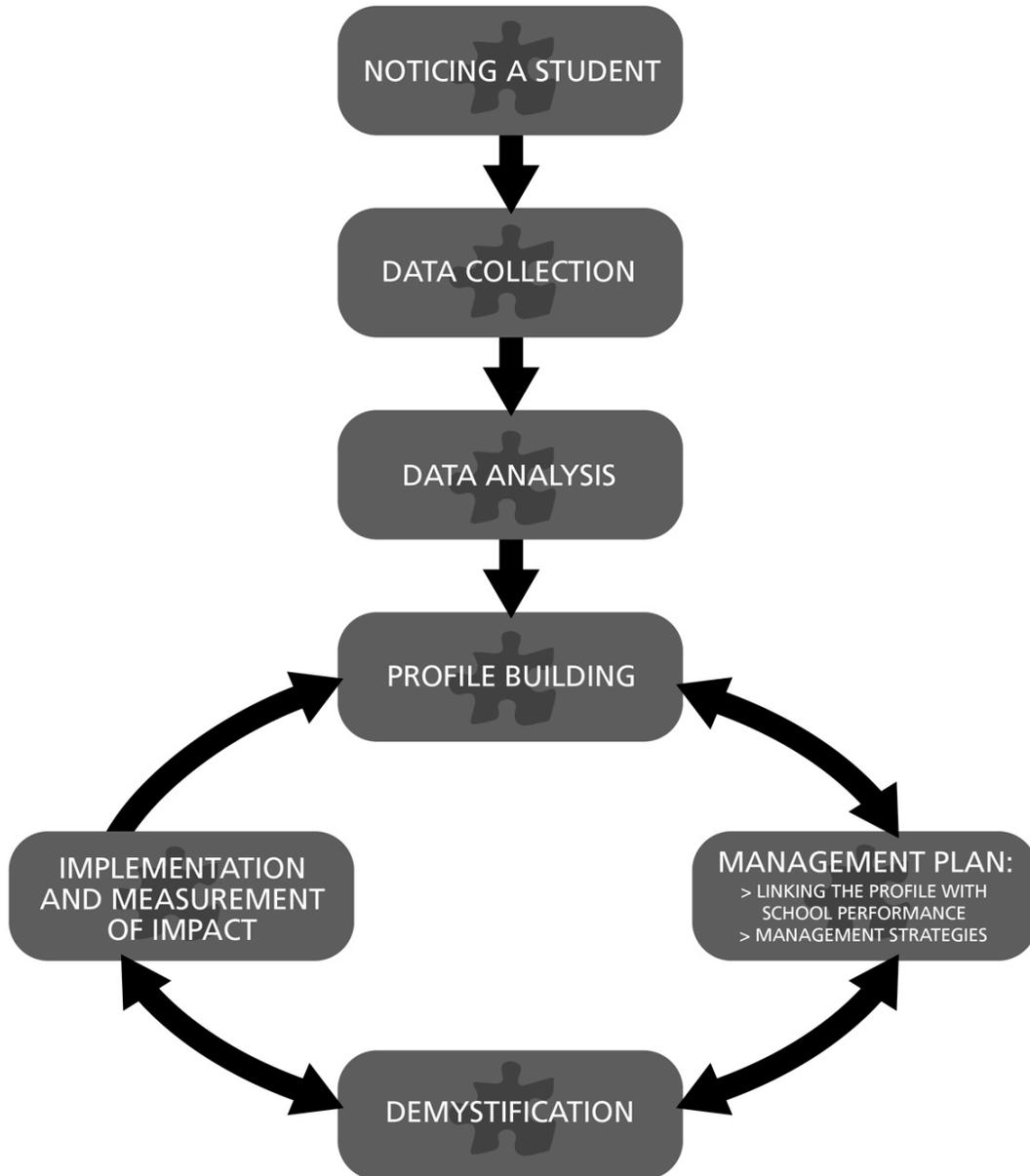
- What additional forms of classroom level implementation are in use by teachers across the country? What characteristics are common among teachers who are successfully implementing Schools Attuned in their classrooms?
- What additional models of school-level implementation are in use by schools? Which implementation strategies result in the greatest use of Schools Attuned strategies in the classroom and across the school?
- What is the minimum level of classroom and/or teaching experience that allows teachers to benefit the most from attending the *Core Course* training?
- What are teachers' reasons for not completing the practicum component of the training and what can All Kinds of Minds do to help increase the completion rate? Is there a difference between teachers who only complete the *Core Course* and the full training?
- What are the benefits of school level implementation? How does school level implementation affect classroom teaching and student learning?
- Is there a school-readiness and/or teacher-readiness factor for full Schools Attuned implementation? How can All Kinds of Minds prepare teachers and schools for successful implementation of Schools Attuned?
- How can schools and districts use Schools Attuned as a *Response to Intervention* (RTI)?

## REFERENCES

- All Kinds of Minds website: <http://www.allkindsofminds.org>
- Barry, A.E. (2005). How Attrition Impacts the Internal and External Validity of Longitudinal Research. *Journal of School Health*, 75(7), 367-270.
- Cronbach, L.J. (1951). Coefficient Alpha and the Internal Structure of Tests. *Psychometrika*, 16, 297-334.
- Ellickson, P.L. (1994). Getting and Keeping Schools and Kids for Evaluation Studies. *Journal of Community Psychology*, CSAP special issue, 102-116.
- Levine, M. (2002). *A Mind at a Time*. New York, NY: Simon & Schuster.
- Nunnally, J.C. (1978). *Psychometric Theory* (2nd ed.). New York, NY: McGraw-Hill.
- Zill, N., Sorongon, A., Resnick, G., Kim, K., McKey, R.H., & Clark, C. (2004). *Interim Report for Quality Research Consortium Data Coordination Center Cross-sectional Analyses*. Washington D.C.: U.S. Department of Health and Human Services, Administration for Children & Families.

# APPENDIX A: ATTUNING A STUDENT PROCESS

## ⚙️ ATTUNING A STUDENT



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## APPENDIX B: TEACHER DEMOGRAPHICS

Of the teachers who completed the survey, 367 indicated what grade level they taught. WestEd then grouped teachers into three categories based on the grade level(s): primary (grades K-1), elementary (grades 2-6), and middle school (grades 5-8).<sup>7</sup> Overall, 18.3 percent of teachers taught at the primary level, 39.0 percent in elementary grades, and 42.8 percent in middle grades (Table 18).

**Table 18**  
Number of Teachers by Grade Span

	Number of teachers	Percentage of teachers
Primary (K-1)	67	18.3
Elementary (2-6)	143	39.0
Middle School (5-8)	157	42.8
<b>Total</b>	<b>367</b>	<b>100</b>

Note: Thirty-seven teachers did not indicate the grade level taught.

Teacher data were also collected for the type of school: public, private, or charter. As can be seen in Table 19, more teachers worked at private schools (44.6%) than public schools (37.6%) or charter schools (17.8%).

**Table 19**  
*Number of Teachers by School Type*

	Number of teachers	Percentage of teachers
Public	152	37.6
Private	180	44.6
Charter	72	17.8
<b>Total</b>	<b>404</b>	<b>100</b>

Note: Private includes both secular and religious private schools

<sup>7</sup> Schools varied in the grade levels they served, with some middle schools teaching grades 5-8 and others teaching grades 6-8. Teachers working in the 5<sup>th</sup> and 6<sup>th</sup> grades were placed into the elementary category if they taught in self-contained classrooms, or the middle school category if students rotated through different teachers throughout the school day.

WestEd collected data from the teachers on how many years they had been teaching. Of the 387 who reported the number of years teaching, 27.6 percent of teachers had less than 4 years teaching experience, and 24.3 percent had been teaching for 20 or more years. Table 20 presents the number and percent of teacher by years of teaching.

**Table 20**

*Number of Years Teaching*

	Number of teachers	Percentage of teachers
0 - 4 years	107	27.6
5 - 9 years	87	22.5
10 - 14 years	66	17.1
15 - 19 years	33	8.5
20 or more years	94	24.3
<b>Total</b>	<b>387</b>	<b>100</b>

Seventeen teachers did not indicate number of years teaching

Data were also computed for the number of years since trained teachers attended the Schools Attuned *Core Course*. More than half (52.6%) the teachers attended the *Core Course* within the past two years, 39.1 percent were trained three to four years and, 8.3 percent were trained 5 or more ago (Table 21).

**Table 21**

*Number of Years Since Attending the Schools Attuned Course Course*

	Number of teachers	Percentage of teachers
1 - 2 years	70	52.6
3 - 4 years	52	39.1
5 or more years	11	8.3
<b>Total</b>	<b>133</b>	<b>100</b>

Thirty-nine trained teachers did not indicate when they attended the *Core Course*.

## APPENDIX C: FAMILIARITY WITH SCHOOLS ATTUNED

**Table 22:** *Familiarity, Exposure, and Implementation of Schools Attuned by Cluster*

	Implementing % Yes	Not Implementing % Yes	$\chi^2$ -value
I have never heard of Schools Attuned	0.5%	8.6%	14.5**
I have received professional development related to students with learning challenges	80.8%	41.4%	63.7**
I learned about Schools Attuned outside of the school	17.6%	9.6%	5.4*
I would like to be trained in SA	5.7%	29.3%	37.4**
I heard about Schools Attuned from a television or radio program	9.3%	1.0%	13.9**
I have visited the Schools Attuned or All Kinds of Minds website	76.7%	11.6%	168.2**
I collaborate with resource teachers to help students who are struggling	80.3%	49.5%	40.6**
I have read a book(s) related to Schools Attuned or AKOM	72.5%	13.6%	138.6**
I have read a book(s) by Mel Levine	76.1%	24.2%	105.4**
I attended a presentation about Schools Attuned	81.9%	40.9%	69.0**
I have had an <i>attuned</i> student in my class	76.2%	28.3%	89.8**
I have helped in the attuning or demystification of a student	81.9%	18.2%	158.6**
I have <i>attuned</i> a student	67.9%	7.6%	151.9**
I read the Schools Attuned bulletin board at my school	31.6%	20.2%	6.6*
I talk with other teachers about Schools Attuned	84.5%	33.8%	103.4**
I have heard about Schools Attuned strategies from other teachers	73.6%	43.9%	35.4**

\*  $p < .05$ ; \*\*  $p < .01$

Responses were on a 2-point Yes/No scale

**Table 22 (continued): Familiarity, Exposure, and Implementation of Schools Attuned by Group**

	Implementing % Yes	Not Implementing % Yes	$\chi^2$ -value
I have consulted with colleagues trained in Schools Attuned	83.4%	34.3%	97.0**
I learned a Schools Attuned strategy from our resource teacher(s)	40.4%	18.7%	22.2**
I learned a Schools Attuned strategy from the principal	26.4%	7.6%	24.7**
I tried a Schools Attuned strategy with a student in my class	85.0%	22.7%	152.2**
I tried a Schools Attuned strategy with the entire class	62.2%	7.6%	128.9**
I am familiar with some Schools Attuned terminology	90.7%	32.8%	138.0**
I tried something new in my classroom that related to Schools Attuned	73.6%	10.1%	162.3**
I changed my teaching based on what I have learned about Schools Attuned	50.8%	2.0%	120.5**
I am a Schools Attuned facilitator	0.5%	0.0%	1.0
I am a School Attuned mentor	1.6%	0.0%	3.1

\*  $p < .05$ ; \*\*  $p < .01$

Responses were on a 2-point Yes/No scale

**Table 23: Familiarity with Schools Attuned by Group**

	Implementing Mean	Not-implementing Mean	Difference	t-value
How familiar are you with Schools Attuned	4.78	2.75	2.03	32.1**

\*\*  $p < .01$

Response options were 1 = Never heard of Schools Attuned, 2 = I've heard of Schools Attuned, but am not sure what it is, 3 = I am somewhat familiar with Schools Attuned, 4 = I am very familiar with Schools Attuned, 5 = I was training in Schools Attuned