Technology Applications Readiness Grants for Empowering Texas (TARGET): 2003-2004

Author: Karin Samii-Shore,
Evaluation Analyst

PROGRAM OVERVIEW

Technology Applications Readiness Grants for Empowering Texas (TARGET) provide funding for projects that supply technology and technological training to teachers who serve disadvantaged populations. The AISD TARGET-funded project, Students Succeeding in Reading and Technology (SSRT), is a collaboration between fourteen elementary schools in AISD, two campuses in the Leander school district, two Austin-area private schools, and St. Edward's University.

The purpose of the SSRT program is to provide technology options to teachers to help them integrate technology into their classrooms and enhance students' reading abilities. The SSRT project provided hardware and software to all participating campuses and professional development in the use of two specific technologies (Scholastic READ180 and Learning.com EasyTech) and content area technology integration.

Professional development sessions held during the summer and several times during the school year helped teachers to: develop and implement a Unit of Practice (UOP), a lesson that integrated technology into an existing reading unit; use software designed to help struggling readers improve their reading fluency, vocabulary, and comprehension (Scholastic READ180); and use an on-line technology skills program that assisted students in learning new technology skills and that examined student technology progress (Learning.com EasyTech).

AISD received $749,814 to provide professional development and services to increase technology integration and reading achievement in 4th and 5th grade classrooms. AISD used those funds to provide: professional development, in the form of a one-week summer institute and several follow-up professional development days throughout the year ($145,359); stipends for teachers to attend professional development and develop Units of Practice ($65,671); hardware, software, and online subscription services and training to use those services ($512,733); and, travel to conferences and to consult with experts ($12,125).

Effects of SSRT on Teachers' Technology Skills

An online survey was administered to participants who attended SSRT technology skills and integration trainings during summer of 2003. Teachers were asked to report how proficient they believed they were on a variety of technology skills, before the training occurred, after the training, and at the end of the program. The survey assessed teachers' general skills (for

example: copying and saving files), word processing, spreadsheet, presentation software, Internet, Inspiration, and iMovie skills.

A total of 87 elementary teachers attended the SSRT summer training in 2003. Almost all teachers (n=76) answered the pre-training survey and the post-training survey, and 33 answered the post-program survey. Teachers reported that they were significantly more proficient at the end of training in six of the seven skill areas examined (all except spreadsheet skills, which were not covered during the training).[1] A comparison of teachers' self-reported proficiency post-program, however, indicated that teachers made significant (or nearly significant[2]) gains in only two of the seven areas over the course of the year.[1]

Effects of the SSRT Program on Students' Technology Skills

A random sample of SSRT classrooms and comparison classrooms from similar schools and grades were selected to answer a self-report survey about students' technology skills in seven areas described above. In all, 124 of SSRT students answered the pre-survey and 206 answered the post-survey. One hundred twenty-nine comparison students answered the post-survey as well. SSRT students were surveyed before the program began and again in May. Comparison students were surveyed once in May because it was assumed that there would be no differences in the students' initial technology skills based upon classroom or campus assignment.

SSRT students made significant gains in technological proficiency in all seven areas pre- to post-survey.[1] However, when the SSRT students were compared to the non-SSRT comparison group, the comparison group reported significantly greater proficiency in all skill areas.[2] Because of the research design, it is not possible to discern if the assumption that there were no differences between these groups at the outset was valid. In Year 2 of the grant, evaluators will test this by conducting a pre-survey with both groups.

Effects of SSRT on the Integration of Technology in the Classroom

SSRT professional development and ongoing support provided teachers with several different ways to integrate technology into their classrooms. Although the SSRT program was designed for teachers to use all of these technology solutions during the year, in reality, teachers found that they could only manage to integrate one or two technologies at most. Overall, at four of 18 campuses teachers reported that they had used all three of the technology components

[1] Chi square analysis indicated a significant difference at the $p<.05$ level.
[2] Chi-square analysis indicated a trend towards significance at the $p<.10$ level.

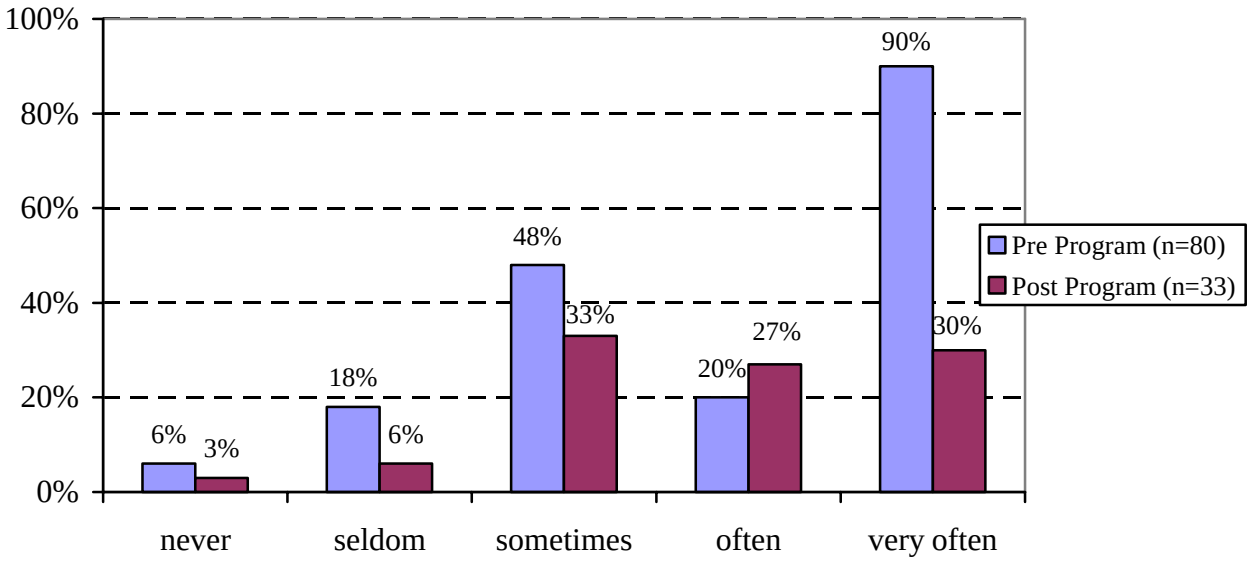
available to them through this grant (READ180, UOP, Learning.com), and one campus reported using none of the components.

Table 1. Campus and Classroom Participation in SSRT Technology Integration Activities

	Number of Campuses Participating	Number of Teachers Participating	Number of Students Participating
Learning.com	13	31	620
READ180	13	18	126
UOP	12	22	220

Source: SSRT Implementation Surveys, Spring, 2004.

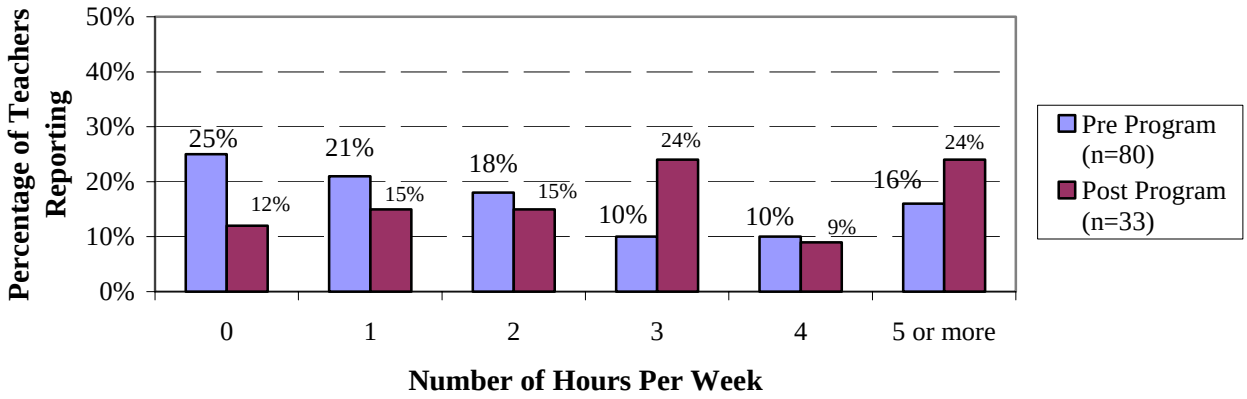
Figure 1. Teachers' Self-Reported Frequency of Technology Integration



Source: Teacher's Online Technology Surveys, July, 2003 and April, 2004.

Before the summer training began and at the end of the program, teachers were asked to estimate how often they integrated technology into their classroom practice and how many hours they used technology with students. Results showed that at the end of the program a greater percentage of teachers reported that they integrated technology into their curriculum often and very often as compared to before training began. Teachers also reported that they used technology with their students for a larger number of hours per week.

Figure 2. Number of Hours per Week Teachers Use Technology with Students



Source: Teacher's Online Technology Surveys, July, 2003 and April, 2004.

Effects of the SSRT Program on Student Achievement

A key goal of the SSRT Program was to increase students' reading achievement through the integration of educational technology. Participants were trained to use both the Units of Practice and READ180 to provide technology-rich reading lessons. The UOPs that teachers designed addressed important reading concepts that students had not sufficiently mastered in the previous year. Additionally, READ180 software and instructional systems provided help with comprehension, word fluency, and vocabulary to fourth and fifth graders who were found to need extra assistance.

Scholastic READ180

Most of the eighteen schools that participated began to use the READ180 software sometime in the fall of 2003. Teachers at each campus decided how the software would fit best into their particular routine. Most campuses integrated READ180 into their regular classroom practice (n=8), six pulled students out of class to attend sessions, and five campuses used READ180 as an after-school program. These numbers add up to more than 18 campuses because some campuses used READ180 in more than one way.

Students were identified as struggling readers on the basis of previous TAKS scores or teacher recommendations. Students were assessed using the Scholastic Reading Inventory (SRI) to determine where in the READ180 Program they should begin. The SRI is a criterion-referenced test that provides a measure of a student's reading comprehension. The score (Lexile level) indicates the approximate grade level in which the student is reading and assists the

teacher in matching the student with the appropriate level of text. Lexile levels can range for Beginning Reader (less than 100) to 1500. Scores for students reading on a 4th grade level range from 600 to 800. Scores for students reading on a 5th grade level range from 700 to 900.

SSRT teachers reported pre- and post-scores for 129 students. Average pre-SRI score was 336, which corresponds roughly to a 2nd grade reading level, the range of pre-scores was from Beginning Reader to 821. Only 10 pre-scores indicated a 4th grade reading level and 1 pre-score indicated that the student was reading on a 5th grade level. The range, mean, and median of the pre-scores indicated that teachers were able to correctly identify students for the program.

Post-SRI scores averaged 442 which corresponds to a 2nd grade reading level. On average students gained 69% of a grade level. Forty-seven students pre- to post-scores represented no change in grade level, 42 increased by one grade level, 21 increased by two grade levels, one student increased by three grade levels, four by four grade levels. Twenty-three students (18% of the sample) showed decreases in scores pre- to post-test. This clearly represents a challenge to staff and student participants. Several teachers and staff reported that students did not understand the importance of the pre- and post-tests and believe that as a result, the students may not have put forth serious effort.

Ongoing discussions with staff indicated that although they worked with teachers to get the READ180 software up and running, teachers were hampered by the difficulty of using the system and time constraints. In early spring SSRT facilitators visited campuses to provide such support as teachers would allow, but many teachers indicated that they were too pressed for time and burdened by pressure to help students prepare for TAKS to implement any further technology.

TAKS Reading

Because SSRT focused on students' reading achievement, the evaluator compared the percentages of students in different groups who met the minimum standard for reading on the TAKS exam to see if students derived any additional benefit from being in the SSRT Program. First, students in all SSRT classrooms were compared to students not in SSRT but in the same grade levels at the same schools. Analyses indicated that although 4th grade students in both groups met the minimum at similar rates, 5th grade students in SSRT met the minimum at a significantly higher rate (67% compared to 58% for comparison students[3]).

[3] Chi square analysis indicated that the difference was at the $p<.05$ level.

Table 2. Students Meeting Minimum Standard on TAKS Reading 2003-04

Group	Percentage Met Minimum on TAKS Reading	Number Met Minimum on TAKS Reading
4th Graders in comparison group	75%	176
4th Graders in SSRT	74%	275
5th Graders in comparison group*	58%	191
5th Graders in SSRT*	67%	173

**Significantly different at the p<.05 level. Source: AISD TAKS records, June 2004.*

Next, students who were designated to participate in the READ 180 portion of the program were compared with those who were not designated. Some of these students were not in the SSRT Program, but teachers felt they were behind enough in reading to be placed with the other READ 180 students. Students in the READ 180 program met the minimum at significantly lower rates (62%) as compared to 74% for students not in READ180.[4] This is as expected, because teachers chose their most struggling readers for the READ180 program and students' SRI scores indicate that most gained less than a grade level in reading comprehension over the course of the year.

Table 3. Students Meeting Minimum Standard on TAKS Reading 2003-04

Group	Percentage Met Minimum on TAKS Reading	Number Met Minimum on TAKS Reading
Students in READ180 (n=120)*	62%	75
Students not in READ180 (n=451)*	74%	336

**Significantly different at the p<.05 level. Source: AISD TAKS records, June 2004.*

SUMMARY AND RECOMMENDATIONS

The purposes of the Students Succeeding in Reading and Technology Program (SSRT) were to help teachers integrate technology into their classrooms and to enhance students' reading abilities.

Although many of the results from the initial surveys and focus groups were positive, classroom observations and later surveys indicated that teachers struggled to implement the all of

[4] Chi square analysis indicated that the difference was at the p<.05 level.

the technologies presented. Time constraints and the implementation of district curriculum frameworks were the most common reasons teachers gave for not implementing program components. READ180 was used for some of the year at many campuses, but teachers struggled to implement in an orderly fashion and, in the spring, some felt that they needed to change the way they used READ180 because of upcoming TAKS testing. Learning.com Easy Tech lessons were used by many teachers, but not in a uniform fashion.

Even with inconsistent implementation, students and teachers gained valuable technology skills and teachers reported increases in both integration of technology in the classroom and increased hours of use with students.

The READ180 portion of the program was the most difficult to implement, although anecdotal data from participants and staff indicate that students enjoyed the readings provided by the program and thus were interested and motivated to use it. Teachers in past programs who had used READ180 had similar issues with implementation (Kline, 2002); thus, a clear challenge to teachers and staff using the program is to obtain or provide, as relevant, adequate guidance and support for implementation.

Changes in students' SRI scores do not indicate that they gained the one grade level as would be expected from one full year of instruction. TAKS reading results suggest that being in the SSRT program provided a benefit to some students in terms of reading achievement, but this benefit may not be due to the READ180 program alone.

In Year 2 SSRT staff should focus on three goals. First, they should use ongoing data regarding implementation to address teachers' concerns and help them progress. Despite frustrations, teachers participating in the SSRT program had high esteem for the SSRT staff and the technologies. SSRT facilitators should capitalize on teachers' enthusiasm to help address and brainstorm solutions to issues such as how to balance district demands and program demands (i.e., IPGs). Finally, because teachers had difficulty managing the multiple demands of busy classrooms and three new technologies, staff should work with teachers to create individualized technology goals so that teachers of differing abilities can be successful.

REFERENCES

Kline, C. (2002). *Model Reading Intervention Program, Grade 4: 2001-2002* (OPE Publication 01.13). Austin, TX: Austin Independent School District.

Austin Independent School District

Office of Accountability
Maria Whitsett, Ph.D.

Department of Program Evaluation
Holly Williams, Ph.D.

Author
Karin Samii-Shore, M.A.

Publication Number 03.12

October 2004