EVALUATION OF THE TEXAS TECHNOLOGY IMMERSION PILOT

Findings from the Second Year

May 2007

Prepared for
Texas Education Agency

Prepared by
Texas Center for Educational Research

Credits

Texas Center for Educational Research

The Texas Center for Educational Research (TCER) conducts and communicates nonpartisan research on education issues to serve as an independent resource for those who make, influence, or implement education policy in Texas. A 15-member board of trustees governs the research center, including appointments from the Texas Association of School Boards, Texas Association of School Administrators, and State Board of Education.

For additional information about TCER research, please contact:

Catherine Maloney, Director
Texas Center for Educational Research
12007 Research Blvd.
P.O. Box 679002
Austin, Texas 78767-9002
Phone: 512-467-3632 or 800-580-8237
Fax: 512-467-3658

Reports are available at www.tcer.org and www.etxtip.info

Contributing Authors

Shapley Research Associates, LLC
Kelly Shapley, Ph.D.

Texas Center for Educational Research
Daniel Sheehan, Ed.D.
Catherine Maloney, Ph.D.
Fanny Caranikas-Walker, Ph.D.
Briana Huntsberger, M.P.Aff.
Keith Sturges, M.A.A.

Prepared for

Texas Education Agency
1701 N. Congress Avenue
Austin, Texas 78701-1494
Phone: 512-463-9734

Research Funded by

U.S. Department of Education

Table of Contents

Executive Summary

Methodology

Evaluation Design

The evaluation employs a quasi-experimental research design, and in the first year, included 22 experimental and 22 control schools. In the project's second year, however, the research design was modified when two middle schools in one district (one experimental and one control) were lost due to damage caused by Hurricane Rita on the Texas Gulf coast. Thus, second-year results (for the 2005-06 school year) are for the remaining 21 treatment and 21 control schools. A re-analysis of baseline data for the new sample revealed that school and student characteristics generally were unchanged and

small (402 students, on average), but enrollments vary widely (from 83 to 1,447 students). Although schools are highly concentrated in rural and very small Texas districts, about a third of districts and schools are in large cities or suburban locations across the state.

The second-year study focused on two student cohorts. Cohort 1 included 5,538 seventh graders (2,627 immersion, 2,911 control) who completed their second project year; Cohort 2 included 5,507 sixth graders (2,685 immersion, 2,822 control) who finished their first year. Altogether, 1,257 teachers particip

technically proficient, use technology more often for learning, interact more often with their peers in small-group activities, and have fewer disciplinary problems than control-group students.

Also consistent with first-year results, we found no significant effect of technology immersion in the second year on student self-directed learning, and we found a significantly negative immersion effect on student attendance. Moreover, the availability of technology across two years provided no significant increase in the intellectual challenge of immersion teachers' core-subject lessons.

Given greater abundance of technology, teachers in immersion schools collaborated more often with their peers on technology-related issues than control teachers, and students used technology more often in immersion classrooms. Teachers at immersion schools compared to control had a significantly steeper growth rate for collaborative interactions with colleagues that supported improvements in instructional practices (e.g., developing lesson plans, exchanging information about students), as well as for the frequency of their students' classroom activities involving technology. Despite their positive growth trend, statistics indicated that by spring 2006 teachers in immersion classrooms had students use various technology resources infrequently (i.e., about once or twice a

Technology immersion had no significant effect on student self-directed learning. We theorized that opportunities for independent and self-guided learning afforded through one-to-one technology would positively affect students' personal self-direct. Findings in the second year replicated first-year results showing there was no significant immersion effect on self-directed learning. As both immersion and control students in Cohort 1 progressed from sixth to seventh grade, their responses to statements measuring self-direction revealed a significantly negative growth trend. Results for Cohort 2 students, similarly, revealed no significant immersion effect (ES = 0.03).

Outcomes for student engagement varied. Students in immersion schools had significantly fewer disciplinary actions, similar levels of school satisfaction, and significantly lower school attendance rates than control-group students. One-to-one computing is often credited with increasing student engagement as measured by such indicators as stronger commitment to academic work, increased attendance, and reduced disciplinary problems. Accordingly, interviewed administrators, teachers, and students involved in this study have cited greater student interest and motivation for school and learning as positive immersion effects. Results for quantitative measures, however, were mixed.

Disciplinary Action Reports for the 2005-06 school year showed that immersion students had proportionately fewer behavioral and disciplinary problems than their counterparts in control schools (ES = 0.14 and 0.16 for Cohorts 1 and 2, respectively). Conversely, surveys of students' school satisfaction showed no significant differences between immersion and control students' satisfaction with the kinds of work they do in classes or with the relevance of their schoolwork. Unexpectedly, technology immersion had a significantly negative effect on school attendance. For Cohort 1 students, school attendance rates declined across years, and by the end of seventh grade, the estimated average attendance rate for economically advantaged immersion students was 95.9% compared to 96.4% for

- Writing. After adjusting for Cohort 1 students' initial TAKS writing scores (as fourth graders in 2003), student demographic characteristics,

skills, and information and media literacy. In the next section to follow, we describe how the generally low levels of implementation may have contributed to second-year results.

Nature of Second-Year Implementation

Most of the middle schools struggled in the second year to implement the prescribed components of technology immersion. Full implementation of the immersion model requires support in several ways: Leadership, Teacher Support (buy-in), Parent and Community Support, Technical Support, and Professional Development