



Overview of Data Collection 2006-07

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June 5, 2006

Evaluation of the Texas Technology Immersion Pilot (eTxTIP)

The Technology Immersion Pilot (TIP) sets forth a vision for technology immersion in Texas public schools that links ubiquitous access to technology with student achievement. The Texas Education Agency (TEA) directed nearly \$14 million in federal Title II, Part D monies toward funding a wireless learning environment for high-need middle schools through a competitive grant process. A concurrent research project funded by a federal Evaluating State Educational Technology Programs grant will scientifically evaluate whether student achievement improves over time as a result of exposure to technology immersion. The Texas Center for Educational Research (TCER)—a non-profit research organization in Austin—will be the TEA’s primary partner in this landmark effort.

PURPOSE OF THE EVALUATION

The overarching purpose of the study is to conduct a scientifically based evaluation at the state level to test the effectiveness of *technology immersion* in increasing middle school students’ achievement in core academic subjects. Technology immersion encompasses multiple components, including a laptop computer for every middle school student and teacher, wireless access throughout the campus, online curricular and assessment resources, professional development and ongoing pedagogical support for curricular integration of technology resources, and technical support to maintain an immersed campus. The evaluation will examine the relationships that exist among contextual conditions, technology immersion, intervening factors (school, teacher, and student), and student achievement. Moreover, the research will determine the impact of technology immersion on student achievement in core subject areas as measured by the *Texas Assessment of Knowledge and Skills (TAKS)*.

In addition to employing a scientific research design with the assignment of eligible middle schools to experimental and control groups, researchers will test the efficacy of empirical methods, practices, and instruments used to assess the impact of the technology intervention on student achievement. So that others may learn from and replicate the scientifically based evaluation approach, information on the evaluation approach, methods, and instrumentation will be disseminated widely to other school districts and States. Contact information for TCER researchers is listed in Table 1.

Table 1. TCER Contact Information

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INSTRUMENTATION AND DATA COLLECTION

As illustrated in Table 2, the evaluation relies on a mix of quantitative and qualitative methods. Quantitative measures, usually administered as pre- and post-measures, include principal and teacher surveys, student surveys; and district-submitted teacher, student, and teacher class roster databases. TCER also collects data from the Texas Public Education Information Management System (PEIMS) and Academic Excellence Indicator System (AEIS) through a data request to the TEA.

Table 2. Time Frame for Data Collection

School Year	Quantitative Measures						Site Visits			
	Principal & Teacher Surveys		Student Surveys		Teacher and Student Databases ^a		Interviews, Focus Groups		Classroom Observations	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
2006-07	New	X	6th	X	X	X		X		X
2007-08	New	X	6th	X	X	X		X		X

Note. Principal and teacher surveys will be administered online. Student surveys will be paper-and-pencil. New principals and teachers complete surveys in the fall and all principals and teachers complete surveys in the spring. Sixth graders entering middle school in the fall will complete surveys, and all 6th, 7th, and 8th graders will complete surveys in the spring.

^a Each school will provide three databases: teacher, student, and teacher class roster.

Table 3 shows that three groups or cohorts of students are being followed in the immersion pilot. One of these cohorts (grade 6 in 2004-05) will be followed for four years, one cohort (grade 6 in 2005-06) will be followed for three years, and one cohort (grade 6 in 2006-07) will be followed for two years. The most intense data collection will center on these three cohorts.

Table 3. Student Cohorts by School Year and Grade

Year	Middle School			High School
	Grade 6	Grade 7	Grade 8	Grade 9
2004-05	Cohort 1			
2005-06	Cohort 2	Cohort 1		
2006-07	Cohort 3	Cohort 2	Cohort 1	
2007-08		Cohort 3	Cohort 2	Cohort 1

DATA COLLECTION TIMELINE (2006-07)

Table 4 provides the data collection timeline for the 2006-07 school year for the eTxTIP project and the TEA.

Table 4. 2006-07 Data Collection Timeline for eTxTIP

Element	Date
July 2006	
<i>TEA Evaluation/Progress Reports</i>	July 15, 2006
August 2006	
TCER will submit database templates to campuses	August 14, 2006
Student database for each campus	Due September 25, 2006
Teacher database for each campus	Due September 25, 2006
Teacher class roster database for each campus	Due September 25, 2006
September 2006	
Principal online survey for new principals	Sept. 4-Sept. 29, 2006
Teacher online survey for new teachers	Sept. 4-Sept. 29, 2006
Student survey for 6th graders (Cohort 3)	Sept. 4-Sept. 29, 2006
Style of Learning Inventory for 6th graders (Cohort 3)	Sept. 4-Sept. 29, 2006
January 2007	
<i>TEA Evaluation/Progress Reports</i>	January 15, 2007
Proposed dates for March-May site visit	Due January 26, 2007
Master schedule for each campus	Due January 26, 2007
March 2007	
TCER site visits	March 1-30, 2007
April 2007	
TCER site visits	April 2-30, 2007
Principal online survey for all principals	April 2-May 4, 2007
Teacher online survey for all teachers	April 2-May 4, 2007
Student survey for 6th, 7th, and 8th graders	April 2-May 4, 2007
Style of Learning Inventory for 6th, 7th, and 8th graders	April 2-May 4, 2007
May 2007	
TCER site visits	May 1-4, 2007
Student database for each campus	Due May 7, 2007
Update teacher database	Due May 7, 2007
July 2007	
<i>TEA Evaluation/Progress Reports</i>	July 31, 2007

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QUANTITATIVE MEASURES

Researchers will gather information broadly from measures at the school, teacher, and student levels as described below.

School Measures

Principal survey

- All new principals will complete an online questionnaire addressing school, instructional, and technology issues in **fall 2006** (September 4-29, 2006). The survey will require roughly 30 to 45 minutes for completion.
- In **spring 2007**, all principals will complete an online questionnaire addressing school, instructional, and technology issues (April 2-May 4, 2007). The survey will require roughly 30 to 45 minutes for completion.

Teacher Measures

Teacher survey

- All new teachers will complete an online questionnaire covering technology proficiency, school technology, and instructional and learning issues in **fall 2006** (September 4-29, 2006). The online questionnaire will require about 45 to 60 minutes for completion. Teachers will have the option of completing all or part of the survey at one time.
- In **spring 2007** (April 2-May 4, 2007), all teachers will complete an online questionnaire covering technology proficiency, school technology, and instructional and learning issues.

Student Measures

Student Survey

- All 6th graders will complete a paper-and-pencil survey measuring technology proficiency and use in **fall 2006** (September 4-29, 2006). The survey will require about 30 minutes for completion.
- All 6th, 7th, and 8th grade students will complete a paper-and-pencil survey measuring technology proficiency and use in **spring 2007** (April 2-May 4, 2007). The survey will require about 30 minutes for completion.

Style of Learning Inventory (SLI).

- All 6th-graders will complete the *Style of Learning Inventory (SLI)* in **fall 2006** (September 4-29, 2006). The *SLI*, which requires approximately 30 minutes for completion, measures dimensions of student self-regulation of learning (i.e., self-generated behaviors oriented toward the attainment of learning goals).
- All 6th, 7th, and 8th grade students will complete the SLI in **spring 2007** (April 2-May 4, 2007).

TEACHER AND STUDENT DATABASES

Individual districts will provide data files with information on teachers and students as well as a class roster data file that links students to teachers. Researchers will provide a data template that is aligned to the extent possible with PEIMS data elements. Data templates and specific directions will be distributed to campuses by August 14, 2006.

Teacher data file. The teacher-level database will include data fields for each teacher (e.g., ID numbers, gender, ethnicity, professional experience, and teaching grade level and assignment). The **fall 2006** teacher database is due to TCER by September 25, 2006. In **spring 2007**, districts will update the teacher database to identify staff changes. The revised database is due to TCER by May 7, 2007.

Student data file. The student-level database will include data fields for each student (e.g., ID numbers, name, grade, gender, ethnicity). The **fall 2006** student database is due to TCER by September 25, 2006. An additional student-level database will be submitted in **spring 2007**. The spring database is due to TCER by May 7, 2007.

Teacher class roster data. In order to link core-content teachers and their assigned students, districts also will submit a class roster database in **fall 2006**. This database will include one record for each student that a teacher has in each of his/her core-content classes. The database is due to TCER by September 25, 2006.

TEXAS ASSESSMENT OF KNOWLEDGE AND SKILLS (TAKS)

TCER will collect TAKS data for participating students through a data request to the Texas Education Agency. TCER will also collect data on student attendance.

SITE VISITS (Spring 2007)

Site visits provide an in-depth look at participating campuses. In the third project year, researchers will conduct site visits to all campuses in **spring 2007** (March to early May) to gauge progress. Teams of two to three researchers will conduct one- to two-day visits, depending on campus size. Site visits will allow evaluators to study contextual conditions, explore school interactions, and gather information on intervening factors.

Data Collection Procedures

Data collection will involve building walk throughs, interviews with principals and other administrators, teacher and student focus groups, and classroom observations. In some cases, researchers may conduct follow-up telephone interviews with school personnel or follow-up contacts to verify findings from site visits.

Site Visit Scheduling

TCER researchers will contact principals and data coordinators to identify possible dates for **spring 2007** site visits in January 2007. Campus schedules and teacher/student rosters will be used as guides to construct site visit schedules.

- Evaluators will construct detailed schedules for the site visits using the school's master schedule (submitted to TCER upon request). Teacher focus groups (or possibly interviews) will be scheduled during teacher conference periods to the extent possible.

- At least one week prior to the site visit, evaluators will distribute a detailed schedule to the principal/data coordinator for review and feedback. The principal will verify staff availability and room locations and submit any necessary changes to TCER within three days. TCER will provide a final schedule that the principal will distribute to *all* campus staff so that everyone is aware of researchers' activities.

Data Collection Measures for Site Visits

School-level measures. Researchers will gather information on the school context by collecting relevant documents, conducting interviews with key personnel, and recording general descriptive information about the school.

- **Interviews.** Researchers will conduct interviews lasting approximately one-hour with the campus principal, technology coordinator, and other key staff members. In addition, researchers will conduct a 30-to-45 minute interview with the superintendent or another district administrator.

Teacher measures. During site visits in 2007, selected *6th-, 7th-, and 8th grade* teachers will participate in focus groups. Observations will be conducted in a sample of grades 6, 7, and 8 classrooms.

- **Focus groups.** Selected teachers of grades 6, 7, and 8 (approximately 6-8) will participate in small-group discussions on school and instructional issues. To the extent possible, focus groups will be scheduled during teachers' conference time. Focus groups will last about 45 minutes.
- **Classroom observation.** Researchers will conduct classroom observations in a sample of grades 6, 7, and 8 classrooms (English/language arts, mathematics, social studies, and science). Researchers will use time-interval ratings to record information relative to the classroom context, teacher activities, and student activities. Observations will last approximately 45 minutes. Note that classroom observations are *NOT* for the purpose of teacher appraisal or feedback on instructional practices. Instead, researchers will gather information on indicators related to the conceptual framework, and only aggregate data will be reported.

Student measures. In spring 2007, researchers will conduct small-group discussions (**focus groups**) with randomly selected groups of 6th-, 7th-, and 8th-grade students (approximately 6-8 students in each focus group). Discussions, lasting approximately 45 minutes, will center on school, instructional, and learning issues.

PROTECTION OF HUMAN SUBJECTS

Federal Requirements

Federal requirements that govern the protection of human subjects, including those for prior consent before individuals are asked to provide personal information, are contained in ED Regulations for the Protection of Human Subjects, Title 34, Code of Federal Regulations, Part 97. Whether or not these requirements apply to a grantee's use of various data collection instruments and procedures depends on whether the information that is solicited will be used for "research" purposes as the term is defined in Section 97.102(d)—i.e. "a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge."

According to a ruling by the U.S. Department of Education, the eTxTIP project *is not required* to have to meet the procedural requirements governing research that are contained in Part 97 due to the exemption allowed under Section 97.101(5): “Research and demonstration projects which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs or (iii) possible changes in or alternatives to those programs or procedures.” In particular, this research will evaluate the Technology Immersion Pilot, funded by the No Child Left Behind Act of 2001, Title II, Part D, Enhancing Education Through Technology. Additionally, this research has been approved by a federal agency (U.S. Department of Education).

This research, which is being conducted in established or commonly accepted educational settings involving normal educational practices for normal students, poses minimal risk to the subjects and will not adversely affect the rights and welfare of the subjects. Moreover, this research could not practically be carried out without this exemption. In addition, TCER has an established record in collecting and maintaining confidential data and in conducting studies in schools involving human subjects. TCER will submit new Confidentiality Agreements to each campus in fall 2006. Organizational procedures and safeguards that have previously been used to minimize disruptions to the school environment will be employed in this work. For example, subjects will be fully informed about project expectations, provided with pertinent information about the nature of their participation, and following the study, provided with information on the results of the evaluation

Information collected from project participants (school personnel, students) will relate specifically to aspects of the educational technology intervention being implemented in schools. In no case, will items or procedures treat individuals in an unethical manner or pose a threat to an individual’s welfare. On the other hand, the knowledge gained through studying the conditions and practices existing in experimental and control schools will provide potential explanations for why programs work, for whom, and under what conditions. This information will inform the improvement of these schools’ educational programs and will also provide information of value to others seeking to use technology in the most efficient and effective manner to support learning.

REPORTS TO DISTRICTS AND CAMPUSES

Researchers will provide reports to participating districts and campuses at least annually regarding information collected during site visits and through other measures. However, any information that could potentially bias study results may be withheld until later stages of the study.

REVISIONS TO THE DATA COLLECTION PLAN

If changes are made to the data collection plan, each district and campus will receive a revised version of the plan before the start of the 2006-07 school year.