TEXAS EDUCATION AGENCY

Grant Application

The Texas Longitudinal Data System

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Texas Longitudinal Data System

Abstract

The Texas Education Agency (TEA) proposes to expand the Public Education Information Management System (PEIMS) to include classroom level information for students and teachers and to expand the collection of student course completion data to include grades one through twelve. In addition, TEA will work with the Texas Higher Education Coordinating Board (CB) as part of this grant opportunity to expand the collection of student and faculty data in the Education Data Center (EDC) to include classroom level information and grades. This will provide a collection of continuous P–20 classroom level information in the state's existing data warehouse, while protecting the confidentiality of student and staff data.

Tremendous resources are invested in educational interventions that take place at the classroom level. Yet Texas cannot currently make the direct link between a student and a classroom, or between the high school classroom and the college classroom. This project will make it possible to evaluate the effectiveness of classroom interventions, education programs, and teacher characteristics, including teacher preparation programs. Districts will also be able to follow the performance of their graduates in higher education and modify their curricula accordingly.

In order to make the information more accessible, a user interface will be developed to provide district administrators with access to a series of aggregate reports, as well as ad hoc reporting capability through a web portal. Pilot projects will be developed for district administrators in the use of customized analytics and anonymous cohorts. The latter will provide districts with the ability to compare the performance of student groups in their district to a similar group based on selected characteristics or a compilation of districts across the state. Having this ability will allow the state to determine best practices that can be shared by identifying programs that are more effective for students with different characteristics.

The support received through a Statewide Longitudinal Data System grant will allow Texas to transform the existing Texas Public Education Information Resource (TPEIR) data warehouse into a model that will further the use of more robust, timely performance data for elementary, secondary, and postsecondary education. The enhanced TPEIR database, modified to include student/teacher linkages throughout the P-20 continuum, will build the capacity to make decisions based on evidence of effectiveness at multiple levels and for multiple purposes: at the local level for improved P-12 performance, at the state level for policy-making and scaling up of interventions that prove successful; and at the national level for research into policies and practices that close the gaps and improve performance for all students.

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1. Introduction

The Setting. Texas is big. Its educational challenges are great. The Texas Education Agency (TEA) works with over 1,200 independent school districts employing, in over 8,000 schools, more than 385,000 professional staff working to educate more than 4.6 million public school students—over half of whom are economically disadvantaged, and over 60 percent of whom are minority. The Texas Higher Education Coordinating Board (CB) works with 35 public universities, 50 community college districts, three state colleges, one technical college system, and nine health-related institutions, as well as 41 independent colleges and universities and two independent junior colleges—a total postsecondary student population of more than 1.2 million.

While many states have stagnant or dwindling numbers, and the nation's population overall is aging, Texas' rate of population growth is unparalleled. The Hispanic population will account for nearly 80 percent of the population growth in Texas over the next half-century and unless we raise Hispanic educational outcomes in Texas—they are currently the lowest of those for any large ethnic group—economic competitiveness and quality of life will decline. In many ways, the demographic trends in Texas prefigure those in many other states. As Steve Murdock, the former state demographer of Texas and now the director of the U. S. Census Bureau put it: "As Texas goes, so goes the nation." Educational efforts tried and proven successful in Texas can have profound ramifications nationally.

The Challenge. Texas has made substantial educational progress since the passage of No Child Left Behind, but still has a long way to go. In many of our urban school districts, ninth-graders, especially poor students and students of color, have only a 50 percent chance of on-time graduation from high school. Our statewide college-going rate directly from high school has improved to 51.9 percent and our six-year college graduation rate has risen to 57.2 percent, numbers that still do not place Texas among the national leaders. Of those who do matriculate to college, over half require developmental education. Furthermore, the likelihood of achieving a postsecondary degree in Texas, as in other states, is statistically linked to ethnicity and socioeconomic status. At current rates of success, an African-American or Hispanic 7th grade public school student has a less than 10 percent probability of earning a bachelor's degree. In contrast, a white student has a 30 percent probability.

The Response. TEA's Public Education Information Management System (PEIMS) was designed in 1986 as a state level reporting system to answer basic questions needed for policy decisions related to Texas public schools. It provides both snapshot and cumulative data that have served for over twenty years as important navigational tools for those charting the course toward closing the gaps in student performance in Texas. As a result, students in Texas are achieving at higher rates and gaps between groups are closing. The Educational Data Center (EDC), initially established by the CB for higher education program oversight and funding, is increasingly used for education research and evaluation.

Over the years, confidence in Texas' educational data systems grew, and requests for data collection and analyses increased to include accountability, funding allocations, and monitoring of Texas schools. In 2001, Texas P-16 Public Education Information Resource (TPEIR) was funded by the 77th Texas Legislature to build an integrated data warehouse that would provide a comprehensive view of public education in Texas. TPEIR combines "raw" data from public

schools, higher education, and educator certification to allow tracking of students from prekindergarten into Texas colleges and universities, and in some cases, back into school districts as teachers. This collaborative project managed by the TEA and the CB provides information on the postsecondary choices of students in Texas high schools by school, school district and/or county. Now, as more users (educators, policymakers) have become familiar with the benefits and methods of using educational data for decision-making, requests for more in-depth analyses, disaggregated to the classroom level have increased.

The Vision. The support received through an SLDS grant will allow Texas to accelerate its course toward transforming the existing TPEIR system into a model that will further the use of even more robust, timely performance data to be at the core of decision-making in elementary, secondary and postsecondary education. The enhanced TPEIR database, modified to include student/teacher linkages throughout the P-20 continuum, will build the capacity to make decisions based on evidence of effectiveness at multiple levels and for multiple purposes: at the local level for improved P-12 performance, at the state level for policy-making and scaling up of interventions that prove successful; and at the national level for research into policies and practice that close the gaps and improve performance for all students.

The Work. Both agencies will improve their data collection, each including student/teacher links, with postsecondary adding the collection of grades for the first time (at the state level). Linkages between elementary, secondary, and postsecondary records will be created in the TPEIR data warehouse. Local independent school districts and institutions of higher education will be assisted in making changes to meet the new reporting requirements. Functionality of user interfaces will be developed for specific audiences (i.e. administrators, classroom teachers, policymakers, researchers), including new standardized reports and the capability for customized analytics. Finally, piloting will ensure that the tools developed are used.

2. Need for Project

Informing Policy. The Texas legislature has enacted major educational policy changes in recent years to improve the education of our students. State legislation was passed in 2006 that directed the CB and the TEA to develop college readiness standards which, when fully in place in 2012, will prepare Texas high school graduates for the challenges of postsecondary education and the workplace. Additionally, the state legislature in 2007 mandated a new "4 X 4" curriculum, which will require Texas high school graduates to complete four years each of English/Language Arts, Mathematics, Science, and Social Science. The proposed project will develop the capability to define and add performance metrics that will allow stakeholders to better predict and measure the effects of changes in state policy.

Informing Practice. Tremendous resources are invested in educational interventions that take place at the classroom level. Yet Texas cannot currently make the direct link between the high school classroom and the college classroom, to evaluate the effectiveness of classroom-level interventions or teacher characteristics. This project will make that possible. Districts will be able to track their students into Calculus and other courses, and adjust their own curricula or classroom-level interventions accordingly. Districts and institutions of higher education can evaluate teacher preparation programs by the effectiveness of their graduates. In short, the proposed project will allow Texas to truly place data at the core of education policy and decision-making at multiple levels.

2.1. Status of the Current System

PEIMS. TEA developed the Public Education Information Management System (PEIMS) as a state-level reporting system to facilitate accountability, funding allocations, and monitoring of Texas public schools. The PEIMS data collection includes four categories of information; education organizations, district finances, staff, and students.

Organizations include schools, districts, shared service arrangements, and education service centers. District financial data include budgets and expenditures. Staff information includes identifying and demographic information, as well as employment, salary, teaching experience, highest degree earned, and courses taught. Student information includes indentifying and demographic information, enrollment, special program participation, attendance, course completion, graduates, non returning students, and disciplinary actions. Students and staff are assigned a unique identifier that can be used to track their information across systems, and across multiple years.

The PEIMS data collection is a web based batch reporting system that includes both snapshot and cumulative data. School districts submit their data through four separate collections a year. The data must pass a series of data integrity checks and statewide edits before being accepted. Superintendents as well as education service center staff must approve the final submission. School districts have web access and download capability to execute over 400 reports for current school year data, as well as the two prior years of data in the active data collection system. Districts are generally restricted to viewing information on their own students only. However, they are able search for students statewide using basic demographic matching to locate non returning students for leaver reporting.

PEIMS improvements already underway: In addition to the work proposed for this grant, TEA is working on other projects to improve the PEIMS data collection system and to make resulting data easier to access. The agency is currently in the process of developing a new web portal called LoneStar. The first phase of the project, expected to be complete in the fall of 2008, will provide access to the aggregated data using business intelligence tools widely used in education.

In 2007 the Texas Legislature provided $4.8 million dollars to fund a redesign of the PEIMS data collection system. The PEIMS Redesign is a two-year project to upgrade and improve the PEIMS collection at the state level, once the data are received at the agency. It includes updating the architecture of the system by replacing the remaining mainframe programs, written in CA-IDEAL, to run on a UNIX platform; redesigning the database to remove the 80-character limitation on data once collected; providing additional hardware capacity for faster processing; and providing additional tools for enhanced reporting and data downloads. The PEIMS redesign project is in its second year and is expected to be complete in August 2009.

In July 2008 TEA received a $750,000 Michael and Susan Dell Foundation Grant to identify the requirements for a more complete redesign of the statewide data collection system. Work on the project began in August with IBM Global Services as the contract vendor. A business case, requirements specification, and implementation plan are due to be completed in January 2009.

The PEIMS system enables TEA to meet current state and federal reporting requirements, including EDFacts; accountability reporting; and dropout reporting. However, it does not

provide a means to link students to individual classes or instructors. Student course completion data are collected for grades nine through twelve only. It does not include summer school courses, locally developed courses, or special education courses that have been modified to meet the IEP needs of the special education student. As a result, it is not possible to analyze student performance by attributes such as class size or teacher characteristics.

EDC. The higher education data collection system began in the early 1970s, as reports were designed and refined with the assistance of representatives from the higher education institutions. In the mid 1970s, CB staff established standard institutional profiles consisting of summaries of various data collected from the institutions. These data collections are stored in a data warehouse and data aggregates and summaries are accessible via online query. At the CB, the Educational Data Center (EDC) is responsible for collecting these data from Texas institutions of higher education, including faculty, students, admissions, class summary credit hours, and degrees and credentials earned. Through an agreement with TEA, the CB is able to access information on Texas high school graduates in order to follow students' progress from high school graduation through two-year and four-year institutions, including graduate and professional schools. The CB provides standardized aggregate reports for all public school districts that report 1) their overall college-going rate, and 2) the names of colleges to which their students matriculate (in aggregates of five). The reports are available on both the CB and TPEIR websites. Upon special request, the agency can provide to P-12 administrators information regarding the persistence and degree completion rates of a graduating cohort.

Linking Data P-20: TPEIR and EDC: TPEIR. The data from PEIMS and EDC are loaded into an operational data store, as well as a P–20 data warehouse. The Texas Public Education Information Resource (TPEIR) is managed by TEA in partnership (through an MOU) with the CB. The warehouse currently contains seventeen years of P-12 data, and seventeen years of higher education data from Texas colleges and universities. The warehouse provides the ability to link individual students from P-20 through enrollment and graduation from Texas colleges. Standardized, aggregate reports are available to school districts and the public through the TPEIR public website.

Linking Data P-20: TPEIR and ERCs: ERCs. The CB oversees a network of state Education Research Centers (ERCs) established at UT Austin, UT Dallas and Texas A&M University. Researchers gain access to data at a research center site once the project is approved by the ERC Joint Advisory Board. The core database includes seven years of PEIMS data, four years of standardized student assessment results, (TAKS), as well as postsecondary student data. TEA and the CB match data to assure that researchers can follow a student anonymously from PK to 20 if the student was educated in Texas for those years.

All identifying student information in the core database, including name, date of birth, and social security number, is replaced with an alternate identifier. Any supplemental data collected or requested by researchers, such as survey data, is also matched by TEA and/or CB in order to maintain the anonymity of individuals. Since small numbers are not removed, the data are still subject to FERPA regulations.

Need and Uses. Longitudinal data from PEIMS and the EDC are available to education administrators, policymakers and other stakeholders through aggregate reports on the TPEIR and

CB websites. TPEIR offers a number of standardized reports on college-going rates, educator certification, and other areas of interest including reports generated for legislators tailored to report on schools within their legislative districts. ERC data are available for researchers.

Governance. The TPEIR Committee provides strategic planning and direction for use of the longitudinal data system. It is a subcommittee of the Texas P-16 Council, and is co-chaired by TEA and CB staff. The TPEIR Charter defines data ownership, confidentiality and access requirements, as well as the goals and objectives of the data warehouse.

Institutional Support/Sustainability. TEA maintains the warehouse with a team of five staff in Information Analysis who support the development and maintenance of the web portal, reports, and quality assurance testing; along with two ETL programmers and a data modeler in Information Systems.

Federal Reporting. PEIMS provides the agency with the information to meet current state and federal reporting requirements, including EDFacts, accountability reporting, and dropout reporting. These reporting requirements are fulfilled through the PEIMS operational data store at this point in time.

Privacy Protection and Data Accessibility. The data in the PEIMS data collection system, as well as the data warehouse, are secured in DB2 databases. School districts are able to perform statewide student searches using student identifying information, but otherwise only have access to their own student's data in the PEIMS data collection system. Only authorized state-level staff have access to the data outside of the collection system, including staff from TEA, CB, the Legislative Budget Board, and the State Auditor's Office. All authorized users are required to sign confidentiality agreements, and be approved by the TEA confidentiality officer.

Data Quality. TEA maintains detailed, historical documentation on the PEIMS data for use by analysts, including data models, data dictionaries, and user guides. Quality assurance checks are built into both the PEIMS and EDC data collection systems, as well as the processes for populating the operational data store and the data warehouse.

Interoperability. TEA and the CB have access to shared data in TPEIR through a memorandum of understanding. The Legislative Budget Board and the State Auditor's Office have direct reporting access to data in the PEIMS operational data store. School districts have access to three years of their own district data in the PEIMS collection system, and otherwise have access to longitudinal data through a series of reports on the TPEIR and CB web sites.

Enterprise-wide Architecture. The TPEIR data warehouse is an integrated longitudinal data store that uses a dimensional design with time as a dimension. It supports analysis of dropout and graduation rates as well as analysis of student performance across time and into postsecondary education. Unique identifiers are assigned to students and staff. TEA maintains data models and a data dictionary for the warehouse.

2.2. Limitations of the Current System

TEA collects student course completion data for state defined courses for students in grades 9 – 12 only. Credit is reported for each course taken by a student, but grades are not collected. The fact that course completion is only collected for high school students limits the ability to analyze a students' performance based on earlier course work.

PEIMS assigns a unique identifier to teachers, and collects information on the courses taught by an instructor, but it does not collect classroom level data for teachers or students. Therefore, it is not possible to link a teacher to a particular class and students. This affects the State's ability to analyze student performance in relation to classroom factors, or teacher preparation and credentials, as well as the ability to assess the relative importance of classroom factors that affect student performance.

The CB does not currently collect student-level information on classes, or grades. This makes it impossible to "drill down" into a program or department to analyze patterns of success or failure. District administrators do not have the data available to evaluate how their graduates perform in postsecondary education (beyond persistence and degree completion). They cannot monitor their graduates' progression in specific fields of study.

In addition, the CB currently provides information on the college-going rates only for students who matriculate to a public or private postsecondary institution in the state. A school district's college-going rate appears artificially low if a significant number of their students attend a college outside of Texas. Finally, existing data are not used optimally to improve P-20 decision-making and program evaluation, due in part to the limited functionality of the interfaces that provide only standardized reporting.

2.3. Benefits of the Proposed Project

The collection of classroom level data and expanded course completion data will provide the ability to analyze student performance by a range of factors not currently available. The collection of more detailed postsecondary data will provide feedback to school administrators on the effectiveness of educational programs. These improvements will provide greater accessibility, functionality, and usability of new and existing data. Changes will benefit stakeholders by providing ad hoc query of data for improved evaluation of academic programs.

The project will provide a number of benefits:

- It will enhance longitudinal studies from preschool through postsecondary education.
- It will provide the ability to perform analysis of outcomes in many different types of courses, including grade levels 1-8, summer school, locally developed courses, locally modified special education courses, career and technology courses.
- It will provide the ability to monitor how high school graduates progress academically in higher education by specific field of study.
- It will provide easy extensibility if the need should arise to gather additional class level data, for example, performance data such as the P-12 students' class grades, should that become a requirement in the future.
- It will provide better information to principals, superintendents, and local boards of education.

- It will provide better service to institutions of higher education, researchers, policymakers, and education agencies.
- It will provide the basis for evaluating educator preparation programs.

2.4. Determining SLDS Needs and Uses

TEA conducted a feasibility study in 2004 on the collection of classroom level data. The study outlined three proposals for possible implementation. Additional analysis will be conducted to determine the most cost effective design for the collection of this information that will impose the minimum burden on the school districts.

The CB held a conference call with representative institutions of higher education about the feasibility of collecting new data, and the effort proposed changes would place on them. Institutions participating in this informal focus group were receptive to making the proposed changes, and saw long term benefits, although the transition period will require additional resources.

3. Objectives for Texas P-20 Longitudinal Data System

Goal: Two project components, TEA's *P-12 Classroom Link* and the *Higher Education Class Link*, will be integrated into a seamless longitudinal data system that will place the use of more robust, timely performance data at the core of decision- and policy-making in education at multiple levels.

Objective I: *Collections:* Improve the robustness of existing databases by adding student performance and teacher data at the classroom level.

Measurable Outcomes

a) PEIMS data collections will be expanded: Classroom level data and course completion data will be collected for grades 1─12.
b) EDC data collection will be expanded to receive student/class data including grades and links to faculty, grades 13─20.
c) K-12 districts and institutions of higher education will be trained and will have modified their systems to meet new reporting requirements.
d) Linkage of the enhanced PEIMS and EDC collections will be established through TPEIR.

Objective II: *Reporting:* Improve accessibility of new and existing data—and functionality of systems—for basic level research and reporting, leading to improved student performance.

Measurable Outcomes

a) A web portal hosted at TEA will provide access to a set of standardized aggregate reports for school administrators to follow the performance of their graduates in postsecondary education.
b) Aggregate level data will be available for analysis of student performance by classroom and teacher attributes.
c) School administrators will be able to run ad hoc reports against aggregate data, and select comparison groups based on student or teacher characteristics.
d) Training in how to access data through the user interface will be completed (primary audience: ESCs, school districts).

Objective III: *Decision-making:* Facilitate the use of data for decision-making and research to improve student performance by working with key stakeholders to demonstrate the data's value.
Measurable Outcomes
a) "Customized analytics" pilot completed.
b) "Anonymous cohorts" pilot completed.

4. Project Design

The following values were articulated in the development of the goal and strategies for this project and establish a framework for enhancing the existing longitudinal data system.

- Both the TEA and the CB are committed to improving the quality of education for the students of the State of Texas, and all changes incorporated must directly support this commitment to excellence.
- The privacy and confidentiality of students must be maintained to the standards of the Family Educational Rights and Privacy Act (FERPA).
- Any processes created to gather data, correlate data, and distribute information must be as efficient as possible and should not place an inordinate burden on the districts, individual school campuses, or institutions of higher education across the State.
- Technical solutions must provide the ability to correlate teacher data and student data to facilitate research on the factors that contribute to student performance.
- Technical solutions should provide stakeholders with aggregated classroom level data, P-20, in standard reports, as well as the ability to generate customized analytics.

4.1. P-12 Classroom Link

The PEIMS data collection system will be modified to include the collection of classroom data, course completion, and expanded course information. The data will be loaded to the PEIMS operational data store, as well as TPEIR. Analysis by TEA program area staff and CB project staff will determine requirements for the development of the aggregate data marts and reports.

The *P-12 Classroom Link* component will result in additional costs to the school districts for maintenance to their vendor software, training, and staff to report and verify the additional data. For this reason TEA is requesting additional funding to offset the financial impact to the school districts and the regional education service centers for the first year of the project.

The project will have a significant impact on the school extract software, the PEIMS data collection, and data warehouse software. In order to provide sufficient lead time for the school districts to modify their software and report this information through PEIMS, detailed requirements for the district data collection will be included in the 2010 – 2011 Data Standards, published in December 2009. The first year of the data collection will be the 2010 – 2011 school year. Aggregated results and reports will be available in the 2011 – 2012 school year.

4.2. Higher Education Class Link

The *Higher Education Class Link* includes the expansion of the data collected with the addition of the student class record and two pilot analysis projects using the added data to demonstrate the value locally to institutions and to enable anonymous cohort comparison.

The student class record will provide progression tracking and enable the linking of the student class records with the faculty records that are currently collected. The new record will be collected at the end of the semester and will include grades as well as indicators for dual enrollment and performance in developmental education. Records will be included for all students registered on the census date and for students enrolled afterwards and will include both undergraduate and graduate courses.

Additional edits and data validation exception reports will be added to ensure the accuracy of the new data. Consistent with the reporting process for other records collected, institutions will submit the data and generate exception and summary reports as many times as necessary to eliminate errors. The institution must then also "certify" that the data they submitted are accurate.

Once collected and certified, the student class record will be loaded into the CB and TPEIR data warehouses and made available to the ERCs after being processed to remove identifying information. A series of aggregate tables will be created in TPEIR to correlate class attributes such as class size, faculty attributes, and student attributes by class and grade at the institution and state levels. Reports will be developed analyzing student outcomes by classroom and faculty attributes.

The addition of the student class record is projected to be in excess of nine million records annually. Additional storage capacity and processing capacity will be required to edit the data and process the results quickly**.** The addition of the student class record will result in significant additional costs to the higher education institutions including charges to modify their student information systems, staff training costs, and staff to report and verify the additional data. Additional funding is requested to defray the financial impact on the institutions.

In order to provide sufficient lead time for higher education institutions to modify their software and report this information, detailed requirements for the expanded data collection will be completed in 2009 with the EDC Data Manual scheduled to be published in November 2009. In-house design and development will continue during the first half of 2010 with the first semester for submission of the expanded data to follow for the Fall 2010 with a submissions due date for February 2011. Concurrent with the in-house development, CB staff will be working with institutions and software vendors to make the software changes to accommodate the new reporting requirement. Aggregated results and reports will be available starting in late spring of 2011. The analysis and requirements gathering for two pilot projects designed to facilitate data-driven decision-making will begin in 2010, and they will be implemented in 2012.

4.3. Achieving Objectives

Objective I: *Collections:* Improve the robustness of existing databases by adding student performance and teacher data at the classroom level.
(Responsibility for outcomes for this objective are noted individually below.)

Outcome I. a. Enhanced PEIMS data collection. (TEA responsibility)
P-12 Classroom Link. The PEIMS data collection system currently meets nine of the ten recommended elements of a longitudinal data system defined by the Data Quality Campaign. The remaining element is the ability to match teachers to students. While the system currently

collects course information for teachers and students, it does not include information at the classroom level that is required to link an individual student to an individual teacher.

TEA will expand the current PEIMS data collection to include class roster information, as well as expand the collection of course completion to include grades 1–12.

Outcome I. b. Enhanced EDC data collection. (CB responsibility)
Higher Education Class Link. The CB will expand the postsecondary student data collection to include courses, sections, and grades. Combined with data from PEIMS, the CB will develop aggregate reports to provide information to school administrators on how students from individual districts are performing in higher education by course.

There are large higher education institutions in states bordering Texas that enroll significant numbers of Texas students. The CB will seek data-sharing agreements with neighboring states (Oklahoma, New Mexico, Louisiana, Arkansas), or specific institutions within those states. These data would be of particular value to schools located close to the border. For example, schools in El Paso have a college-going rate that may appear artificially low according to the CB data because some New Mexico institutions allow El Paso graduates to enroll at the in-state tuition rate, drawing many El Paso graduates out of state.

Outcome I. c. Supporting data collection from the field. (TEA and CB responsible for P-12 and higher education collections, respectively)

Data for the state level systems (PEIMS and EDC) originate in the schools and institutions. The TEA will provide support in the form of technical assistance and funding, based on a formula allocation, to defray the costs of making modifications to their existing systems to meet the new, expanded reporting requirements.

The CB will provide similar support to institutions of higher education. The financial support will be only for the first collection year, and the formula will be based on student enrollment.

Outcome I. d. Data linked through TPEIR. (TEA responsibility)
PEIMS data, combined with information on educator certification, will be combined in TPEIR and aggregated by teacher preparatory program, years of experience, academic degree, subject area, and class size to support the analysis of factors contributing to student achievement.

Objective II: Reporting: Improve accessibility of new and existing data—and functionality of systems—for basic level research and reporting, leading to improved student performance. (All reporting outcomes are TEA's responsibility, with support from the CB for reports that require higher education data.)

Outcome II.a. Standardized high school to college reports.
TEA will provide access to a set of standardized aggregate reports for school administrators to follow the performance of their graduates in postsecondary education.

Outcome II. b. Reports on student performance by classroom and teacher attributes.
Aggregate level data will be available for analysis of student performance by classroom and teacher attributes.

Outcome II. c. Ad Hoc Reports.
A user-interface will be developed to encourage greater use of the new data through easily accessible standardized reports. This interface will be linked to sites that are routinely accessed

by P–12 administrators and curriculum officers. Each standardized report will include an explanation of how the results can be used to evaluate and improve district programs, such as

College-going rate, overall, by ethnicity, and by economic status

Enrollment and performance by class subject (i.e. College Algebra, Calculus, English Composition)

Outcome II. d. Training of ESCs and school districts.
TEA will provide training for school districts and Educational Service Centers in how to access data through the user interface.

Objective III: Decision-making: Facilitate the use of data for decision-making and research to improve student performance by working with key stakeholders to demonstrate the value of the data. (All Objective III outcomes are the CB's responsibility.)

Outcome III. a. Customized analytics pilot.
Staff will begin by working with the ISDs to determine what type of information would be most useful for policy-making decisions. Included in this discussion will be layout designs and the ability to provide the information in a flexible format so that each ISD can customize their report as much as possible. During the data-gathering phase the CB will ask for volunteer districts and will work with them during the testing and implementation phases.

Outcome III. b. Anonymous cohorts pilot.
The CB will provide a feature that will allow an administrator at the school or district level the ability to compare the performance of student groups from their campus/district to a similar student group based on selected characteristics, but the comparison group will be anonymous and/or may be a compilation of students from many districts across the state. Having this ability will also allow the state to better determine best practices that can be shared by determining programs that are more effective with students with different characteristics.

4.4. Governance

The proposed governance structure for the work to be performed under the grant includes an executive level Grant Oversight Committee, chaired by the TEA Deputy Commissioner of Finance and Administration, and comprised of executive level sponsors from both agencies. The committee will determine policy, approve projects and expenditures, review deliverables, review risks, and resolve issues. Each agency will have a separate project director who oversees the project plan and development activities for their respective project team, and reports regularly to the Grant Oversight Committee. The existing TPEIR committee will review the plans for the use of the data warehouse, and provide strategic direction.

In addition, the Policy Committee on Public Education Information (PCPEI) and its technical subcommittee, the Information Task Force (ITF), are external governance committees made up of representatives from school districts, education service centers, education software vendors, and representatives from the governor's office, lieutenant governor's office, State Senate Education Committee, House Committee on Public Education, the Legislative Budget Board, and the State Auditor's Office. These committees review and approve proposed changes to the PEIMS data collection to ensure that the collection doesn't place an undue burden on the school districts.

Governance: Data Ownership/Management/Confidentiality/and Access Agreements. TEA will collaborate with the CB on this project. Each agency will maintain its own data collection and reports. TEA will continue to maintain the data warehouse. This collaboration is an extension of the current TPEIR charter that allows each agency to access student-level data through the TPEIR data warehouse or data extracts for the purpose of education research and aggregate reporting. Both agencies are bound by FERPA regulations that prohibit the release of identifying student information or aggregate counts less than five that might potentially identify a student.

4.5. Meeting Technical Requirements

Federal Reporting. The current PEIMS data collection system meets TEA's federal reporting requirements including EDFacts and Accountability Reporting. However, much of the data are combined with other data sources after it is collected from the school districts. At present this information is available to the public in a series of reports on the agency web site. The LoneStar portal project will make some of these reports more easily accessible in one location on the web site.

Privacy Protection. This project is an extension of the existing data warehouse project. All identifying student information will continue to be restricted to authorized staff only as defined in the TPEIR charter. Only aggregate data will be made available to school district staff and other stakeholders. Only de-identified data will be made available to researchers.

When subsets of student data are made available to external users on request, the student name, social security number, and date of birth are removed from the files and replaced by an alternate ID. Student data provided to the ERCs are matched by TEA and the CB so that researchers can follow a student from pre-kindergarten to grade 20, if the student was educated in Texas during those years.

Data Quality (TEA). Data quality checks are included in every step of the PEIMS collection and TPEIR data loading processes. The first phase of the PEIMS data collection consists of a series of data validation checks and district error reports. The submission and validation cycle is repeated until no critical errors remain. Both the district superintendent and the Education Service Center PEIMS Coordinator must certify the final data submission.

Once the collection is complete, the data are loaded into an operational data store where a series of quality assurance tests are run by software developers and user acceptance tests are performed by PEIMS support staff.

Prior to being loaded into the TPEIR database, PEIMS data are again validated and transformed according to a series of business rules. After being loaded to the data warehouse structures, the data are again validated by the TPEIR reporting staff.

Data Quality (CB). Data quality checks are included in every step of the EDC data collection process. Each submission consists of data validation checks and produces a detail report containing each record having error or questionable results along with exception message(s). Following the edit report are institutional summaries of the data submitted plus a comparison to the previous year's submission for additional validation. Once an institution's submission is error-free, the institution's designated Reporting Official provides a written certification

statement that the data submitted for the specified report is error-free and has been verified by the institution as correct and is approved for use in publications.

Interoperability. TEA and the CB share P-20 data by agreement through the TPEIR data warehouse and through extracts provided to the CB for inclusion in High School Graduation to Higher Education reports. In addition, the most recent three years of PEIMS data are available to school districts through data collection reports and downloads. Authorized users in other state agencies, including the State Auditor's Office and the Legislative Budget Board, also have secure, direct access to PEIMS data. The interoperability between agencies will be increased with the ability of school administrators to have more extensive access to the aggregate data for analysis and reporting.

Enterprise-wide Architecture. The classroom link data collected through this project will conform to the existing architecture of the TPEIR data warehouse. The database contains longitudinal data in a dimensional design with time as a dimension. Students and teachers are assigned unique identifiers that can be used to link their data across time and across different data collections. Documentation on the classroom link data will be included in the TPEIR data model and data dictionary.

5. Institutional Support

Both the TEA and the CB have well-established longitudinal data systems and the agencies have both benefited from the support of their commissioners as well as the Texas legislature to develop and maintain these systems. As recently as July 2008, TEA received a *CCD State Award* from NCES in recognition of outstanding performance in timely and complete reporting of the common core of data for the school year 2007-08. In 2003, TPEIR won a *Best of Texas – Best IT Collaboration* award from the Center for Digital Government. Important to the success of this project, the two agencies have experience working together on data-sharing projects, most notably through TPEIR and the Education Research Centers.

5.1. Education Research Centers

The model for ERCs in Texas has been hailed as an anticipated "preferred method for conducting longitudinal educational research with State education data." (Correspondence dated April 15, 2008, to Raymund Paredes, Commissioner of Higher Education and Robert Scott, Commissioner of Education, from LeRoy S. Rooker, Director, Family Compliance Office, USDE Office of Planning, Evaluation and Policy Development.)

TEA and CB staff members have learned a great deal about working effectively across agencies in the process of establishing the ERCs (developing data-sharing agreements) and implementing complex projects. The strong relationships based on trust and professional respect earned through collaborative implementation of the TPEIR project and establishment of the ERCs will facilitate the completion of proposed collaborative activities.

5.2. TEA Current Resources for SLDS

TEA currently has staff devoted to the annual maintenance and operation of the PEIMS data collection system and operational data store, the TPEIR P-20 data warehouse, TPEIR web portal and reports, as well as staff that coordinate with the Texas Education Research Centers on the availability of data for research.

Enterprise Data Management has a team of four staff that plan and design the PEIMS data collection, including coordination with internal and external review committees, development of data standards, quality assurance, and training of software vendors and education service center staff.

*Information Technology Service*s provides technical project management for the PEIMS collection, a team of experienced database administrators and modelers, and two ETL programmers for the TPEIR data warehouse. Maintenance of the PEIMS collection system and operational data store is outsourced to a vendor with over eight years of experience with the PEIMS system.

The Division of Information Analysis. The TPEIR web portal and reports are developed and supported by the Division of Information Analysis with five staff. Theses staff also coordinate data loading and perform quality assurance for the data warehouse and fill information requests.

There is currently adequate facility space for staff to support the existing statewide longitudinal data system, and adequate infrastructure in the form of hardware, software and network resources. The data center operation and system administration for TEA and the CB is outsourced through the Texas Department of Information Resources. In the future both systems will be housed and maintained by contract staff in a single state data center.

5.3. CB Current Resources for Data Collection and Management

Planning and Accountability. The division of Planning and Accountability (PNA) is comprised of 35 full time employees and 3 research interns with a budget of $2.5 million for FY 2009 to support the agency mission of accountability, planning and research. The division is comprised of four departments: Educational Data Center (EDC); Finance and Resource Planning; Planning and Information; and Program Evaluation and Research. The EDC 12 full time staff manages the collection of data from the higher education institutions in the state, with a budget of approximately $578,000 for FY2009. This includes all public and non-profit independent institutions for a total of 139 institutions. The EDC staff will be directly involved in the implementation of the project being proposed and will support the maintenance of the additional data collection and access at the end of the project.

Information Technology Services. The division of Information Technology Services (ITS) is comprised of 36 full-time employees with approximately 4 resources assigned for ongoing support of the EDC data collection and warehouses and of the ERC project. Other development staff are assigned to EDC and ERC application, web or database projects as needed. ITS provides infrastructure support (e.g., network connectivity, email, PC support) for all CB staff, and the information security officer monitors the controls required for ensuring confidentially of data and FERPA compliance. Management of the CB's data center is outsourced and is being consolidated into a state-wide data center for twenty-six state agencies. ITS is funded overall rather than by project, but the FY2009 annual ITS budget is $4.8 million with approximately 20% or $960,000 allocated to support EDC projects and staff.

5.4. Resources Requested and Sustainability

The TEA staff and contractors currently dedicated to the development, support and operation of the PEIMS and TPEIR systems will provide ongoing support for the *TEA Classroom Link* data

collection and reporting once the project is complete. Likewise, the CB staff currently dedicated to the EDC and ERCs will provide ongoing support for the *Higher Education Class Link* once modifications have been made and the project is complete.

Additional leased facility space will be required in the next year for TEA to support the contractors who currently maintain the PEIMS data collection, as well as additional contractors working on the PEIMS redesign, and the collection of the Classroom Link data.

Funding for additional hardware resources is being requested as part of this grant proposal for the PEIMS and EDC collections database servers, ftp servers, application servers, and storage space to support the increased volume of course completion data to be collected for the *P-12 Classroom Link* and the *Higher Education Class Link*.

6. Project Management Plan

6.1. The Project within TEA's Organizational Structure

The project will reside in the Information Systems (IS) Division of TEA, with participation from the Department of Assessment, Accountability, and Data Quality (AADQ), where responsibility for TPEIR resides. The organizational chart below (Figure 5.1) depicts the reporting relationships and identifies the groups within IS and AADQ that will be responsible for major portions of the project:

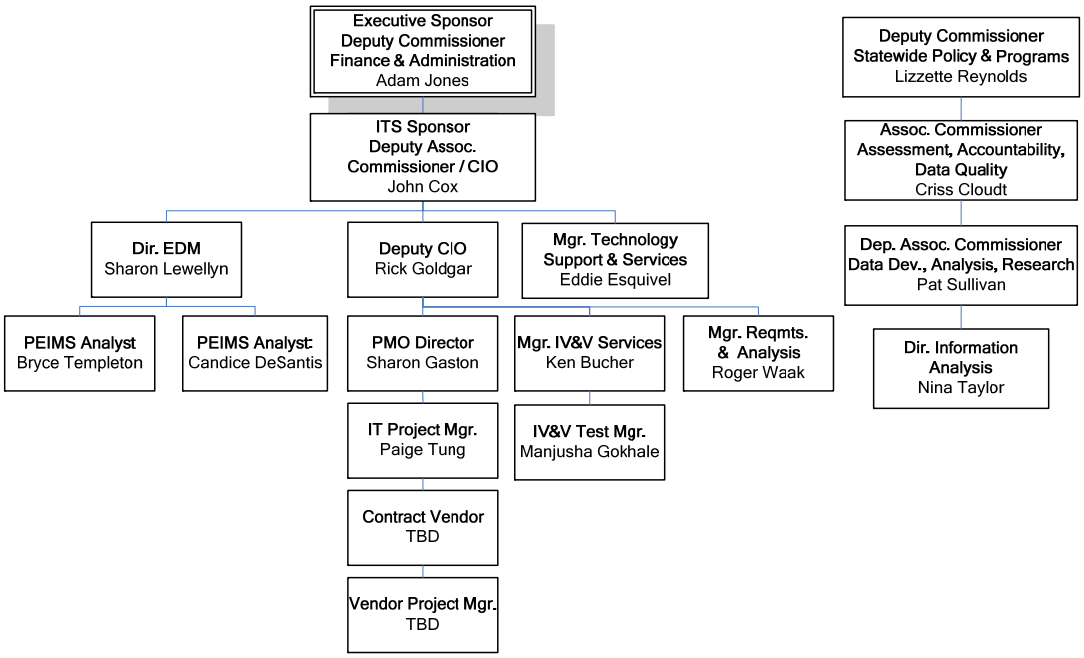

Figure 1. *TEA SLDS Organizational Chart*

6.2. Oversight Entities

The SLDS Grant Oversight Committee will determine policy, approve projects and expenditures, review deliverables, review risks, and resolve issues.

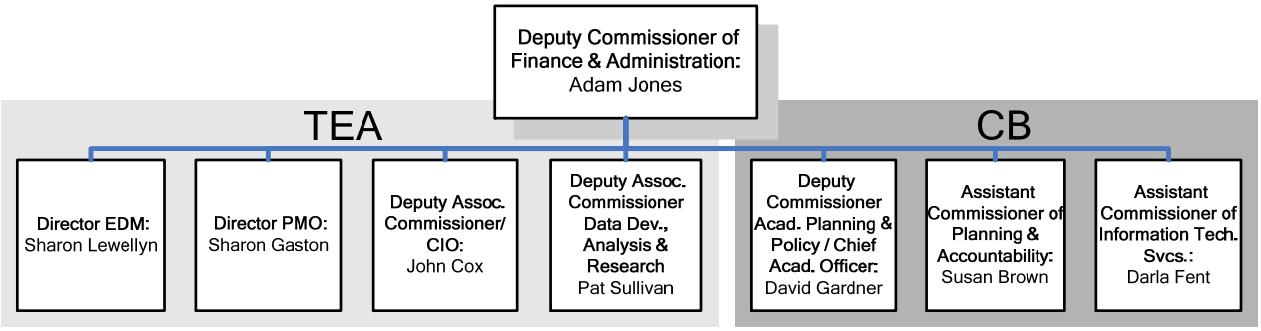

Figure 2. *Grant Oversight Committee*

6.3. Management Controls

The TEA has a firmly established project management framework in place for the PEIMS project using a formal project plan and a controlled approach supported by standard industry project management software to include project planning, scheduling, tracking, oversight, monitoring of resources, complying with TEA software development standards, processes and procedures. The CB follows very similar methods and processes to ensure effective project management.

Initiation. The initiation phase will consist of reviewing the business and data opportunity with key stakeholders. Preparing and executing the Request for Offer (RFO) and vendor selection. The Project Management Office will organize the project, establish the development methodology, identify phase deliverables and develop the project plan based on an iterative development model.

Requirements Gathering and Analysis. During this phase, the business analyst will analyze the data standards requirements both new and modifications to existing ones. The data standards will be the input into the system requirements along with requirements gathered from stakeholders. These standards and requirements will be documented and a detailed project plan will be developed. Also during this phase an architectural vision is identified.

Design Solution. During the design stage of each iteration the team reviews system requirements and determines the set of requirements to be implemented during that iteration. The team identifies any changes and performs domain analysis for building, enhancing or updating to reflect the new system context and requirements. They refine the system architecture, identify any issues and hold a team design review.

Implement Solution. During the implementation stage of the iteration the coding, frequent builds and unit testing are done for each requirement.

Verify and Validate. The build will be verified and validated against the business requirements. During this phase, the iteration will be transitioned from development to the testing environment.

Demonstration. Each iteration is required to produce a functional working piece of the system that can be demonstrated to the business or technical stakeholders.

Deployment. This phase requires active stakeholder participation. They are required to perform final acceptance testing of the completed system. In addition the final system integration testing will be performed. The end users will be trained and the system deployed into production.

7. Project Personnel and Resources

The following table describes the TEA SLDS internal project team and includes the maximum amount of time that will be dedicated to this effort:

TEA: Internal Staff			
Role	**Responsibility**	**Name/Title**	**FTE**
Executive Sponsor	Has ultimate authority for the overall project, ensuring requirements are identified and fulfilled. Chairs the Grant Oversight Committee.	Adam Jones – Deputy Commissioner of Finance and Administration	5%
Information Technology Services Sponsor	Reviews and approves project objectives and deliverables.	John Cox – Deputy Associate Commissioner / CIO	5%
AADQ TPEIR Sponsor	Reviews and approves objectives and deliverables.	Pat Sullivan – Deputy Assoc. Commissioner Data Dev., Analysis	5%
Technical Project Director	Provides project management staffing and other project issues.	Sharon Gaston – Director, PMO	30%
Business Project Director	Manages and coordinates school district requirements, data collection planning, training and support.	Sharon Lewellyn – Director, Enterprise Data Management.	20%
TPEIR Project Manager	Provides management and coordination of TPEIR planning and implementation.	Nina Taylor – Director of Information Analysis	10%
Project Manager	Develops project plan and leads implementation of the project.	Paige Tung – ITS Project Manager	40%
Verification and Validation Review	Reviews and evaluates all project requirements to develop verification & validation tests and software configuration management strategy.	Independent Verification & Validation Tester	80%
Technical Support Review	Evaluate and address any hardware configuration or Data Center issues.	Eddie Esquivel – Tech. Support and Customer Service Mgr.	5%
PEIMS Business Analyst	Develops Data Standards and provides user training	Bryce Templeton – PEIMS Analyst	26%

PEIMS Analyst	Performs User Acceptance Testing	Candice DeSantis – PEIMS Analyst	12%

Table 1. *TEA Internal Staff*

The following table describes the proposed TEA SLDS external project team and includes the maximum amount of time that will be dedicated to this effort:

TEA External/Contract Staff			
Role	**Responsibility**	**Name/Title**	**FTE**
Contract Project Manager	Leads implementation of the project plan developed with TEA staff.	To Be Hired	30%
Business Analyst	Responsible for gathering project requirements	Susan Lambert-Lindley	30%
Dev. Resources (Architect, Tech. Lead, 4 developers, 1 tester)	Responsible for design and implementation of technical deliverables such as design documentation, code, builds, test cases, etc.	To Be Hired	100%

Table 2. *TEA External Staff*

TEA Information Technology Services Sponsor – John Cox is the Deputy Associate Commissioner and Chief Information Officer for the Texas Education Agency. Mr. Cox oversees the Information Technology Services, Enterprise Data Management, and Agency Infrastructure Divisions. There are 151 full time employees and 57 contractors and temporary staff in these three units. He has over 30 years of experience: prior to joining TEA in June 2005, he served as the Director of Information Resources at the CB for five years, senior consultant with a national systems integration firm, Director of Information Systems at Midwestern State University, and held several information technology management positions at Stephen F. Austin State University.

TEA TPEIR Sponsor – Pat Sullivan, TEA Deputy Associate Commissioner for Data Development, Analysis, and Research will serve on the Grant Oversight Committee. Dr. Sullivan manages the divisions of Accountability Research and Information Analysis, which includes the TPEIR data warehouse planning and reporting. She chairs the Data and Information Review Committee, and represents the agency at the NCES National Forum for Educational Statistics. Dr. Sullivan has over ten years of experience providing assessment and accountability data reports to Boards, administration, and the public. She will review the planned projects, deliverables, and expenditures.

TEA Business Project Director – Sharon Lewellyn is the Acting Director of Enterprise Data Management (EDM). The division is responsible for planning, designing, and supporting the PEIMS data collection statewide for 1,200 school districts, and coordinating the review process for internal and external governance committees. Ms. Lewellyn has over twenty years of

experience managing information systems services, including database administration and data warehouse development. She played a lead role in the design and development of the TPEIR data warehouse when it was first developed in 2001. As the Business Project Manager Ms. Lewellyn will oversee the design, training, and statewide support for the PEIMS Classroom Link project, and is expected to devote an average of twenty percent of her time to the project.

TEA Technical Director – Sharon Gaston is the Director of the Project Management Office (PMO). This division is responsible for the development and maintenance of over 55 applications that allow the Agency to fund, support and monitor the Texas Education System. Ms. Gaston has over 20 years experience in the software development industry, with extensive experience ranging from software engineering, development, quality assurance and project / program management to executive management. She played a lead role in the development and management of the current PEIMS RFO award. As the Technical Director for the Classroom Link project, Ms Gaston will be responsible for developing the RFO, managing the RFO process, staffing the project and overseeing the implementation and is expected to spend an average of 10-15% of her time on the project.

CB Internal Staff			
Role	**Responsibility**	**Name/Title**	**FTE**
CB Executive Sponsor	Has ultimate authority and responsibility for *Higher Education Class Link*, ensuring CB project responsibilities are identified and fulfilled. Member of project GOC.	David Gardner	5%*
Information Systems Sponsor	Reviews and approves project objectives and deliverables.	Susan Brown	5%*
Technical Project Director	Provides project management staffing and other project issues.	Darla Fent	10%*
EDC Project Director	Manages and coordinates institutions of higher education requirements, data collection planning, training and support.	Doug Parker	30%*
Project Manager	Develops detailed project plan and leads implementation of the project.	To Be Hired	100%
Verification and Validation Review	Reviews and evaluates project requirements to develop verification and validation and software configuration management strategy.	Kathy Cox	20%*
Technical Support Review	Evaluate and address any hardware configuration or DCS issues.	Jim Bronson	5%*
EDC Data Analysts (2 positions)	Develops Data Standards, implements the design of the additional data collection and provides user training.	To Be Hired	100%

Developer (2 positions)	Responsible for the design and implementation of technical deliverables such as design documentation, code, builds, test cases, etc.	To Be Hired	100%

***Project-related FTEs that are supported with state funds, rather than federal funds.**

Table 3. *CB Internal Staff*

CB External/Contract Staff			
Role	**Responsibility**	**Name/Title**	**FTE**
Database modeler / administrator (2 positions)	Responsible for leading the implementation of the project plan developed in collaboration with the TEA staff.	To Be Hired	100%

Table 4. *CB External Staff*

CB Executive Sponsor – David Gardner, the CB Associate Commissioner for Academic Excellence and Research, leads the Board's Planning and Accountability Division, the Academic Affairs and Research Division, and the Division of P-16 Initiatives. His primary responsibilities include coordination of the Board's efforts toward *Closing the Gaps* through academic excellence and research at Texas institutions of higher education. Previously, Dr. Gardner served the agency as the Associate Commissioner for Academic Excellence and Research and as the Assistant Commissioner for Planning and Information Resources. Gardner provided leadership for statewide initiatives such as Texas' higher education plan *Closing the Gaps by 2015*, the college and university electronic library resource sharing consortium, the Texas Accountability System for Higher Education, and the Texas Public Education Information Resource, which includes information on all students enrolled in Texas public schools, as well as both public and private higher education institutions in Texas.

CB Information Systems Sponsor - Susan E. Brown serves as Assistant Commissioner for Planning and Accountability. She has served as the Board representative for the Education Research Centers in cooperation with the Texas Education Agency. She was responsible for the initial development of the higher education Accountability System developed in 2004. Currently, the operations of the Educational Data Center which is responsible for receiving data from Texas institutions, reports to her. In addition, she is responsible for making updates to the state's higher education plan, *Closing the Gaps by 2015*.

CB Business Project Director – Doug Parker is the Director of the Educational Data Center (EDC). The Educational Data Center is responsible for the collection and review of state-mandated data reports from Texas institutions of Higher Education. Mr. Parker has over 20 years of experience with software development and project management at the CB.

CB Technical Director – Darla Fent is the Assistant Commissioner for Information Technology Services (ITS) and has management oversight of the development and maintenance of the applications that allow the Agency to fund, support and monitor the Texas Higher Education

System. Dr. Fent has over 30 years experience in the software development industry, with 20 years in institutions of higher education. As the Technical Director for the Higher Education Class Link project, she will be responsible for staffing the project and overseeing the implementation and is expected to spend an average of 10% of her time on the project.

8. Timelines

8.1. TEA P-12 Classroom Link

ID	Task Name	Duration	Start Date	End Date
1	**Initiation and Planning**	142 days	09/01/09	03/17/10
2	Executive Steering Committee Kickoff	3 days	09/01/09	09/03/09
3	Meeting with Stakeholders	1 day	09/04/09	09/04/09
4	**RFO Process**	126 days	09/01/09	02/23/10
5	Develop RFO	30 days	09/01/09	10/12/09
6	Select RFO committees	2 days	10/13/09	10/14/09
7	Release RFO	30 days	10/15/09	11/25/09
8	Close RFO	1 day	11/26/09	11/26/09
9	Evaluate Responses	30 days	11/27/09	01/07/10
10	Interview of Responders	3 days	01/08/10	01/12/10
11	Contract negotiation/ execution/Award	30 days	01/13/10	02/23/10
12	**Develop Project Plan**	30 days	09/04/09	10/15/09
13	**Acquire Infrastructure Upgrades**	30 days	09/04/09	10/15/09
14	**Vendor Set-up (VM, Tracker, DataStage) and Orientation**	15 days	02/24/10	03/16/10
15	**Project kickoff with Stake holders and Vendor**	1 day	03/17/10	03/17/10
16	**Requirements Gathering and Analysis**	145 days	09/01/09	03/22/10
17	Develop Data Standards	90 days	09/01/09	01/04/10
18	Classroom Link Requirements Gathering (Data and Reports)	45 days	01/05/10	03/08/10
19	Architecture Analysis	10 days	03/09/10	03/22/10
20	Publish Addendum to Approved Data Standards	5 days	03/09/10	03/15/10
21	SRS review and signoff	5 days	03/09/10	03/15/10
22	**Design**	50 days	03/09/10	05/17/10
23	System Design	30 days	03/09/10	04/19/10
24	Data Model Analysis	30 days	03/09/10	04/19/10
25	Test Case Development	30 days	03/09/10	04/19/10
26	Test Harness Design	20 days	04/20/10	05/17/10
27	Design Review and Signoff	5 days	04/20/10	04/26/10
28	**Implementation, IV&V, Demo**	220 days	04/20/10	02/21/11
29	Create Iteration Schedule	20 days	04/20/10	05/17/10
30	Iteration 1-x	200 days	05/18/10	02/21/11
31	**Deploy last iteration to test environment**	35 days	02/22/11	04/11/11
32	Regression and integration testing	20 days	02/22/11	03/21/11
33	UAT	15 days	03/22/11	04/11/11

ID	Task Name	Duration	Start Date	End Date
34	Training of ESC'S, Vendor, Districts	15 days	03/22/11	04/11/11
35	**Deploy to production**	5 days	04/12/11	04/18/11
36	**Initial Classroom Link Collection**	100 days	04/12/11	08/29/11
37	**Classroom Link Data Analysis**	25 days	08/30/11	10/03/11
38	**Classroom Link Enhancements**	135 days	10/04/11	04/09/12
39	Requirements	30 days	10/04/11	11/14/11
40	Design	10 days	11/15/11	11/28/11
41	Implementation, IV&V, Demo	60 days	11/29/11	02/20/12
42	Deployment with PEIMS Collection	5 days	02/21/12	02/27/12
43	Transition to Maintenance	30 days	02/28/12	04/09/12
44	**TPEIR**	230 days	02/22/11	01/09/12
45	Data Warehouse Requirements Gathering	90 days	02/22/11	06/27/11
46	Data Mart Design	30 days	06/28/11	08/08/11
47	Implementation, IV&V, Demo	80 days	08/09/11	11/28/11
48	Create Iteration Schedule for DataMart and Report Development	10 days	08/09/11	08/22/11
49	Iteration 1-x	70 days	08/23/11	11/28/11
50	Deploy last iteration to test environment	25 days	11/29/11	01/02/12
51	Regression and integration testing	15 days	11/29/11	12/19/11
52	UAT	10 days	12/20/11	01/02/12
53	Training of ESC'S, Vendor, Districts	10 days	12/20/11	01/02/12
54	Deploy to Production	5 days	01/03/12	01/09/12
55	**Maintenance**	585 days	01/10/12	04/07/14
56	Classroom Link	520 days	04/10/12	04/07/14
57	DataMart	520 days	01/10/12	01/06/14
58	Reports	520 days	01/10/12	01/06/14
59				

Table 5. TEA's Timeline for Classroom Link

8.2. CB Higher Ed Class Link

ID	Task Name	Duration	Start Date	End Date
1	**Add Student Course/Class Enrollment and Outcomes Data Set**	1332 days	03/01/09	04/07/14
2	**Initiation/Planning**	30 days	03/01/09	04/09/09
3	Meet with Stakeholders	5 days	03/01/09	03/05/09
4	Develop Project Plan	30 days	03/01/09	04/09/09
5	Requirements Gathering and Analysis	160 days	04/10/09	11/19/09
6	Develop Data Standards and Definitions	90 days	04/10/09	08/13/09
7	Develop New Report Requirements for use in	30 days	08/14/09	09/24/09

ID	Task Name	Duration	Start Date	End Date
	TPEIR			
8	CB Data Committee Review and Sign-Off	10 days	08/14/09	08/27/09
9	Publish EDC Data Manual to the Institutions	60 days	08/28/09	11/19/09
10	**Detailed Design**	65 days	08/28/09	11/26/09
11	Create Data Model/Finalize Data Table Design	60 days	08/28/09	11/19/09
12	Design Data Collection/Validation Mechanism	30 days	08/28/09	10/08/09
13	Develop Internal Reports	30 days	08/28/09	10/08/09
14	Develop External Reports and Data Sets (TPEIR, PREP, ERCs)	10 days	08/28/09	09/10/09
15	Detailed Design Sign-off	5 days	11/20/09	11/26/09
16	**Construction**	75 days	11/27/09	03/11/10
17	Create New Data Collection Tables	5 days	11/27/09	12/03/09
18	Program Data Collection Mechanism	10 days	12/04/09	12/17/09
19	Program Data Collection Loading Mechanism	10 days	12/18/09	12/31/09
20	Program Edit Checking Mechanism	50 days	01/01/10	03/11/10
21	Program Internal Reports	10 days	01/22/10	02/04/10
22	Create New Data Warehouse Tables based on Model	5 days	12/04/09	12/10/09
23	Program Data Loading Mechanism	30 days	12/11/09	01/21/10
24	**Testing**	36 days	03/12/10	04/30/10
25	Test New Data Collection Tables	5 days	03/12/10	03/18/10
26	Test Data Collection Mechanism	5 days	03/19/10	03/25/10
27	Test Data Collection Loading Mechanism	5 days	03/26/10	04/01/10
28	Test Edit Checking Mechanism	15 days	04/02/10	04/22/10
29	Test Internal Reports	5 days	04/23/10	04/29/10
30	Test New Data Warehouse Tables based on Model	5 days	03/12/10	03/18/10
31	Test Data Loading Mechanism	5 days	03/19/10	03/25/10
32	Testing Completed – Signoff	1 day	04/30/10	04/30/10
33	**Implementation**	348 days	05/03/10	08/31/11
34	Deploy to Production	5 days	05/03/10	05/07/10
35	Institutional Data Collection Support	207 days	05/03/10	02/15/11
36	Institution Testing	115 days	05/10/10	10/15/10
37	First Higher Education Data Collection Submission	45 days	12/15/10	02/15/11
38	Release External Reports	76 days	02/15/11	05/31/11
39	Provide First New Data Sets to Authorized Users (TEA for TPEIR, ERCs)	66 days	06/01/11	08/31/11
40	**Maintenance**	585 days	01/10/12	04/07/14
41	**Pilot Project - Custom Analytics**	450 days	04/26/10	01/13/12

ID	Task Name	Duration	Start Date	End Date
42	Requirements Gathering and Analysis	120 days	04/26/10	10/08/10
43	Detailed Design	120 days	10/11/10	03/25/11
44	Construction	120 days	03/28/11	09/09/11
45	Testing	60 days	09/12/11	12/02/11
46	Implementation	30 days	12/05/11	01/13/12
47	**Pilot Project - Anonymous Cohorts for Comparison**	450 days	04/26/10	01/13/12
48	Requirements Gathering and Analysis	120 days	04/26/10	10/08/10
49	Detailed Design	120 days	10/11/10	03/25/11
50	Construction	120 days	03/28/11	09/09/11
51	Testing	60 days	09/12/11	12/02/11
52	Implementation	30 days	12/05/11	01/13/12

Table 6. CB's Timeline for Higher Ed Class Link

9. Budget Narrative (Justification)

9.1. TEA Budget Narrative

The budget requested will be to award a contract for resources as staff augmentation to expand the current PEIMS system to collect classroom-level data and expanded course completion data and enhance the TPEIR data warehouse. In addition, TEA will need to upgrade the current infrastructure to support the processing of this additional data. The budget consists of the following major components: contracted resources, infrastructure costs and disbursements to school districts to help defray their implementation costs.

9.1.1. TEA CONTRACT RESOURCES

The hourly rates below are an average of the not-to-exceed prices, which are the maximum hourly rate prices a vendor may charge under the Texas Department of Information Resources IT Staffing Services program. TEA will negotiate rates based on worker qualifications, job scope, and other pertinent information in order to obtain the best value.

Position	Average Hourly Rate	Position	Average Hourly Rate
Project Manager	$125.20	Technical Lead	$102.72
QA / SCM	$88.43	Developers	$88.51
Architect	$104.16	Documentation / Technical Writer	$61.03
Business Analyst	$88.38		

Table 7. *Pay Rates*

The overall project budget is based on preliminary estimates of the resources that will be required to complete the following functions. The current personnel are fully engaged on PEIMS maintenance and mainframe migration efforts; therefore, it will be necessary to hire a full staff of contracted resources with the federal grant funds.

9.1.2. TEA INFRASTRUCTURE COSTS

The classroom link data collection will significantly increase the size of the data collected and stored at TEA. Therefore it will be necessary to upgrade the current hardware to be able to store and process this data. The following are proposed as upgrades to TEA's state Data Center Services contract:

- Production UNIX server processor upgrade - $58,250
- Production Windows app server - $7,000
- Taxes and fees (one-time cost) - $68,620
- Additional disk space - $5,000 annually
- Production server instance charge - $9410 annually

9.1.3. TEA DISBURSEMENT FOR SCHOOL DISTRICTS AND EDUCATIONAL SERVICE CENTERS (ESC)

To support this project additional funding will be necessary for the schools to implement the expanded data collection. The additional cost to the schools will be ongoing. It is TEA's intention to provide assistance for the first collection year.

Size of districts (# of students)	Full cost per pupil	# Pupils in this category	Cost
1-5000 + TYC, TSD or TSBVI	$1.00	1,066,727	1,066,727
5001-30,000	$0.75	1,578,052	$1,183,539
> 30,000	$0.50	2,030,053	$1,015,027
		Total disbursement	**$3,265,293**

Table 8. *Disbursement for School Districts calculation*

Number of ESCs	Disbursement amount per ESC	Total ESC Disbursement
20	$10,000	$200,000

Table 9.*Disbursement for Educational Service Centers*

9.1.4. TEA RESOURCE TASKS AND COSTS

2009 – TEA staff will begin to develop and execute an RFO for a vendor contract and develop an overall plan for the project, including meeting with stakeholders, gathering and analyzing data requirements, developing data standards and definitions, developing new reporting requirements for use in PEIMS and TPEIR. The development team, once in place, will work with the current staff for knowledge transfer, to understand and identify impacts to the current architecture, to design modifications based on requirements, and begin implementation.

Budget Justification – Year 2009		
Budget Item	**Narrative Description**	
Salaries and Wages for Agency In-Kind Resources		
Deputy Commissioner of Finance and Administration - Grant Sponsor - 5%	Chairs the Grant Oversight Committee for this project. Has ultimate authority over and is responsible for the overall project ensuring that the requirements are identified and fulfilled.	$9,000.00
Deputy Associate Commissioner/CIO - Information Systems Project Sponsor - 5%	Reviews and approves project objectives and deliverables. Oversees the RFO Process.	$6,800.00
Director, Project Management Office - Technical Director - 30%	Manage the preparation and execution of the RFO process and plan and staff the project.	$31,615.00

Director, Enterprise Data Management - Business Director - 20%	Participate on Oversight Committee and RFO process. Provides management and coordination of school district requirements, data collection planning, training and support.	$22,630.00
Project Manager - 40%	Develop and manage detailed project plan. Provide contract management of vendor.	$35,475.00
PEIMS Business Analyst - 15%	Develops the data standards, provides input to application requirements and training for ESCs, and district software vendors	$25,675.00
Architect	Review project architecture and design documents	$1,500.00
IV&V Tester - 80%	Develop test cases, scripts and execute testing.	$52,000.00
Data Modeler - 10%	Analyze and enhance the data model	$8,125.00
Configuration Manager	Builds and Deployment	$1,200.00
RFO Evaluation Team	Evaluates RFO	$25,160.00
Technology Infrastructure Manager	Scope infrastructure needs and cost.	$1,500.00
Salaries and Wages Subtotal		**$220,680.00**
Employee Benefits Subtotal	Calculated at 30% of salaries	**$66,204.00**
Total Indirect Costs	Indirect costs are 16.9% of agency salary.	**$48,483.40**
Total Agency In-Kind Contribution for 2009		**$335,367.40**
Travel		
IES Annual 2-day meeting	For travel over a 3-day period. Estimated airfare at $2000 depending on notice; up to 2 nights at $85/night state rate; $36/day for food; $60/day rental car	$2,500.00
Travel Subtotal		**$2,500.00**
Materials and Supplies		
Software licenses for contractors	Licenses for VM, Tracker and Visual Studio at $4000x6 developers + 1 tester	$28,000.00
General Office Supplies	Office supplies required by project	$2,000.00
Materials and Supplies Subtotal		**$30,000.00**
Contracted Vendor Costs		
TEA Contracted Vendor		

Vendor PM - 25%	Staff and hire contract developers and testers	$65,000.00
Business Analyst - 25%	Requirements gathering and analysis	$45,760.00
Architect - 25%	Review project architecture and design documents	$54,080.00
Tech Lead - 50%	Design new features	$107,120.00
Developer1 - 50%	Implementation of new features	$92,560.00
Developer2 - 50%	Implementation of new features	$92,560.00
Developer3 - 50%	TPEIR Developer	$92,560.00
Tester - 25%	Develop test cases and scripts	$36,400.00
TEA contract with CB	See CB Detailed Budget section 9.2	$156,388.00
Contracted Vendor Subtotal		**$742,428.00**
Other		
Other Subtotal		**$-**
Total Direct Costs		**$774,928.00**
Total Indirect Costs	Indirect costs is 16.9% of: travel ($423), the first 25K of contractor costs ($4225), supplies and materials $5,070	**$13,942.50**
Equipment – Contracted through the state Data Center Services contract		
Production UNIX server processor upgrade	To support the increased collection of data	$58,250.00
Production Windows app server	To support the increased collection of data	$7,000.00
Taxes and fees (one-time cost)	Taxes on equipment, installation and maintenance	$68,620.00
Additional disk space - annually	Annual Data Center charge for disk space	$5,000.00
Production server instance charge - annually	Annual Data Center charge for server instances	$9,410.00
Equipment Total		**$148,280.00**
Total Funding Requested for 2009		**$937,150.50**

2010 – The major portion of the project will be accomplished during 2010. Several of the tasks begun in 2009 will continue into year two of the grant, in particular implementation and testing of the changes required for the new data collection. Specific construction tasks will include: creating data collection tables, developing and programming data collection and loading mechanisms, programming edit checking and internal report formats, creating new data

warehouse tables, and developing aggregate and other processes. The project will then move into the testing phase and then into production where the initial collection will become part of the PEIMS summer collection.

Budget Justification – Year 2010		
Budget Item	**Narrative Description**	
Salaries and Wages for Agency In-Kind Resources		
Deputy Commissioner of Finance and Administration - Grant Sponsor - 2.5%	Chairs the Grant Oversight Committee for this project. Has ultimate authority over and is responsible for the overall project ensuring that the requirements are identified and fulfilled.	$4,500.00
Deputy Associate Commissioner/CIO - Information Systems Project Sponsor - 2.5%	Reviews and approves project objectives and deliverables. Member of Oversight Committee	$3,200.00
Director, Project Management Office - Technical Director - 8.5%	Participate on oversight committee, oversee implementation and manage budget	$8,500.00
Director, Enterprise Data Management - Business Director - 8.5%	Provides management and coordination of school district requirements, data collection planning, training and support.	$8,500.00
Project Manager - 30%	Daily management of the detailed project plan	$27,000.00
PEIMS Business Analyst - 17%	Provide training to the ESCs, and district software vendors. Execute User Acceptance testing	$12,350.00
PEIMS Business Analyst 2 - 8%	Develops the data standards, provides input to application requirements and performs UAT	$7,150.00
IV&V Tester - 80%	Develop test cases and scripts. Execute system and integration tests	$57,850.00
Data Modeler - 10%	Data mart and data warehouse design	$7,800.00
Configuration Manager	Builds and Deployment	$1,200.00
Salaries and Wages Subtotal		**$138,050.00**
Employee Benefits Subtotal	Calculated at 30% of salaries	**$41,415.00**
Total Indirect Costs	Indirect costs are 16.9% of agency salary.	**$30,329.59**
Total Agency In-Kind Contribution for 2010		**$209,794.59**

Travel		
IES Annual 2-day meeting	For travel over a 3-day period. Estimated airfare at $2000 depending on notice; up to 2 nights at $85/night state rate; $36/day for food; $60/day rental car	$2,500.00
Travel Subtotal		**$2,500.00**
Materials and Supplies		
General Office Supplies	Office supplies required by project	$2,000.00
Materials and Supplies Subtotal		**$2,000.00**
Consultants and Contracts		
Stipend payments to Districts	Payment calculation based on district size:1-5000 +TYC, TSD or TSBVI = $1.00 per pupil; 5001-30,000 = $0.75 per pupil; > 30,000 = $0.50 per pupil	$3,265,293.00
Stipend payments to ESCs	$10,000 * 20 ESCs	$200,000.00
Contracted Vendor Costs		
TEA Contracted Vendor		
Vendor PM - 30%	Manage project plan and resources	$78,000.00
Business Analyst - 30%	Validate requirements and help develop test cases	$54,912.00
Architect - 30%	Review design and code	$64,896.00
Tech Lead - 75%	Implementation of new features; unit test and move to UAT	$160,680.00
Developer1 - 100%	Implementation of new features; unit test and move to UAT	$185,120.00
Developer2 - 100%	Implementation of new features; unit test and move to UAT	$185,120.00
Developer 3 - 100%	TPEIR Developer	$185,120.00
Tester - 100%	Test new features	$145,600.00
TEA contract with CB	See CB Detailed Budget section 9.2	**$852,525.00**
Consultants and Contracts Subtotal		**$5,377,266.00**
Other		
Other Subtotal		**$-**
Total Direct Costs		**$5,381,766.00**
Total Indirect Costs	Indirect costs is 16.9% of: travel, materials and supplies and the first 25K of contractor costs and	**$9,210.50**
Equipment – Contracted through the state Data Center Services		

contract		
Additional disk space - annually		$5,000.00
Production server instance charge -annually		$9,410.00
Equipment Total		**$14,410.00**
Total Funding Requested 2010		**$5,405,386.50**

2011 – The initial data collection will be completed and the data loading, analysis and processing begins. Staff will continue gathering and analyzing needs based on results of the initial collections.

Budget Justification – Year 2011		
Budget Item	**Narrative Description**	
Salaries and Wages for Agency In-Kind Resources		
Deputy Commissioner of Finance and Administration - Grant Sponsor - 2.5%	Chairs the Grant Oversight Committee for this project. Has ultimate authority over and is responsible for the overall project ensuring that the requirements are identified and fulfilled.	$4,500.00
Deputy Associate Commissioner/CIO - Information Systems Project Sponsor - 2.5%	Reviews and approves project objectives and deliverables. Member of Oversight Committee	$3,200.00
Director, Project Management Office - Technical Director - 8.5%	Participate on oversight committee, oversee implementation and manage budget	$9,860.00
Director, Enterprise Data Management - Business Director - 8.5%	Participate on oversight committee	$9,860.00
Project Manager - 30%	Daily management of the detailed project plan	$27,000.00
PEIMS Business Analyst - 26%	Develops the data standards, provides input to application requirements, perform UAT and training	$18,200.00
PEIMS Business Analyst 2 - 12%	Work on data standards, develop UAT scripts, perform UAT and customer support.	$7,900.00
IV&V Tester - 38%	Develop test cases and scripts. Execute system and integration tests	$25,000.00
Data Modeler	Data mart and data warehouse design	$650.00
Configuration Manager	Builds and Deployment	$1,200.00
Salaries and Wages Subtotal		**$107,370.00**

Employee Benefits Subtotal	Calculated at 30% of salaries	**$32,211.00**
Total Indirect Costs	Indirect costs are 16.9% of agency salary.	**$23,589.19**
Total Agency In-Kind Contribution for 2011		**$163,170.19**
Travel		
IES Annual 2-day meeting	For travel over a 3-day period. Estimated airfare at $2000 depending on notice; up to 2 nights at $85/night state rate; $36/day for food; $60/day rental car	$2,500.00
Travel Subtotal		**$2,500.00**
Materials and Supplies		
General Office Supplies	Office supplies required by project	$2,000.00
Materials and Supplies Subtotal		**$2,000.00**
Consultants and Contracts		
Contracted Vendor Costs		
TEA Contracted Vendor		
Vendor PM - 10%	Manage project plan and resources	$26,000.00
Business Analyst - 10%	Collect requirements for modifications and enhancements	$18,304.00
Tech Lead - 25%	Design new features	$53,560.00
Developer1 - 50%	Implementation of new features; unit test and move to UAT	$92,560.00
Tester - 25%	Test new features	$36,400.00
TEA contract with CB	See CB Detailed Budget section 9.2	**$429,905.00**
Consultants and Contracts Subtotal		**656,729.00**
Other		
Other Subtotal		**$-**
Total Direct Costs		**$661,229.00**
Total Indirect Costs	Indirect costs is 16.9% of: travel, materials and supplies and the first 25K of contractor costs	**$9,210.50**
Equipment – Contracted through the state Data Center Services contract		
Additional disk space - annually		$5,000.00
Production server instance charge -annually		$9,410.00
Equipment Total		**$14,410.00**

Total Funding Requested 2011		**$684,849.50**

2012 – The effort will be considered to be in maintenance. Staff will continue to analyze the requirements for user-recommended and/or mandated enhancements and will continue to provide maintenance for the data collection and analysis projects.

Budget Justification – Year 2012		
Budget Item	**Narrative Description**	
Salaries and Wages for Agency In-Kind Resources		
Deputy Commissioner of Finance and Administration - Grant Sponsor - 2.5%	Chairs the Grant Oversight Committee for this project. Has ultimate authority over and is responsible for the overall project ensuring that the requirements are identified and fulfilled.	$4,500.00
Deputy Associate Commissioner/CIO - Information Systems Project Sponsor - 2.5%	Reviews and approves project objectives and deliverables. Member of Oversight Committee	$3,200.00
Director, Project Management Office - Technical Director - 8.5%	Participate on Oversight Committee, oversee implementation and manage budget	$8,500.00
Director, Enterprise Data Management - Business Director - 8.5%	Participate on Oversight Committee	$8,500.00
Project Manager - 15%	Daily management of the detailed project plan	$13,333.00
PEIMS Business Analyst - 7%	Provide training to the ESCs, and district software vendors. Execute User Acceptance testing	$5,000.00
IV&V Tester - 20%	Develop test cases and scripts. Execute system and integration tests	$12,500.00
Data Modeler - 5%	Data mart and data warehouse design	$4,225.00
Configuration Manager	Builds and Deployment	$600.00
Salaries and Wages Subtotal		**$60,358.00**
Employee Benefits Subtotal	Calculated at 30% of salaries	**$18,107.40**
Total Indirect Costs	Indirect costs are 16.9% of agency salary.	**$13,260.65**
Total Agency In-Kind Contribution for 2012		**$91,726.05**
Travel		

IES Annual 2-day meeting	For travel over a 3-day period. Estimated airfare at $2000 depending on notice; up to 2 nights at $85/night state rate; $36/day for food; $60/day rental car	$2,500.00
Travel Subtotal		**$2,500.00**
Materials and Supplies		
General Office Supplies	Office supplies required by project	$1,000.00
Materials and Supplies Subtotal		**$1,000.00**
Consultants and Contracts		
Awarded Vendor Costs		
TEA Contracted Vendor		
Vendor PM - 5%	Manage project plan and resources	$13,000.00
Business Analyst - 5%	Collect requirements for any modifications and enhancements	$9,152.00
Tech Lead - 10%	Design new features	$21,424.00
Developer1 - 20%	Implement new features	$37,024.00
Tester - 20%	Test new features	$29,120.00
TEA contract with CB	See CB Detailed Budget section 9.2	**$291,865.00**
Consultants and Contracts Subtotal		**401,585.00**
Other		
Other Subtotal		**$-**
Total Direct Costs		**$405,085.00**
Total Indirect Costs	Indirect costs is 16.9% of: travel, materials and supplies and the first 25K of contractor costs	**$9,041.50**
Equipment – Contracted through the state Data Center Services contract		
Additional disk space - annually		$5,000.00
Production server instance charge -annually		$9,410.00
Equipment Total		**$14,410.00**
Total Funding Requested 2012		**$428,536.50**

2013 – The effort will be considered to be in maintenance. Staff will continue to analyze the requirements for user-recommended and/or mandated enhancements and will continue to provide maintenance for the data collection and analysis projects.

Budget Justification - Year 2013		
Budget Item	**Narrative Description**	
Salaries and Wages for Agency In-Kind Resources		
Deputy Commissioner of Finance and Administration - Grant Sponsor - 2.5%	Chairs the Grant Oversight Committee for this project. Has ultimate authority over and is responsible for the overall project ensuring that the requirements are identified and fulfilled.	$4,500.00
Deputy Associate Commissioner/CIO - Information Systems Project Sponsor - 2.5%	Reviews and approves project objectives and deliverables. Member of Oversight Committee	$3,200.00
Director, Project Management Office - Technical Director - 8.5%	Participate on Oversight Committee, oversee implementation and manage budget	$8,500.00
Director, Enterprise Data Management - Business Director - 8.5%	Participate on Oversight Committee	$8,500.00
Project Manager - 15%	Daily management of the detailed project plan	$13,333.00
PEIMS Business Analyst - 7%	Provide training to the ESCs, and district software vendors. Execute User Acceptance testing	$5,000.00
IV&V Tester - 20%	Develop test cases and scripts. Execute system and integration tests	$12,500.00
Data Modeler - 5%	Data mart and data warehouse design	$4,225.00
Configuration Manager	Builds and Deployment	$600.00
Salaries and Wages Subtotal		**$60,358.00**
Employee Benefits Subtotal	Calculated at 30% of salaries	**$18,107.40**
Total Indirect Costs	Indirect costs are 16.9% of agency salary.	**$13,260.65**
Total Agency In-Kind Contribution for 2013		**$91,726.05**
Travel		
IES Annual 2-day meeting	For travel over a 3-day period. Estimated airfare at $2000 depending on notice; up to 2 nights at $85/night state rate; $36/day for food; $60/day rental car	$2,500.00
Travel Subtotal		**$2,500.00**

Materials and Supplies		
General Office Supplies	Office supplies required by project	$1,000.00
Materials and Supplies Subtotal		**$1,000.00**
Contracted Vendor Costs		
TEA Contracted Vendor		
Vendor PM - 5%	Manage project plan and resources	$13,000.00
Business Analyst - 5%	Collect requirements for any modifications and enhancements	$9,152.00
Tech Lead - 10%	Design new features	$21,424.00
Developer1 - 20%	Implement new features	$37,024.00
Tester - 20%	Test new features	$29,120.00
TEA contract with CB	see CB detailed budget section 9.3	**$287,188.00**
Consultants and Contracts Subtotal		**$396,908.00**
Other		
Other Subtotal		**$-**
Total Direct Costs		**$400,408.00**
Total Indirect Costs	Indirect costs is 16.9% of: travel, materials and supplies and the first 25K of contractor costs	**$9,041.50**
Equipment – Contracted through the state Data Center Services contract		
Additional disk space - annually		$5,000.00
Production server instance charge -annually		$9,410.00
Equipment Total		**$14,410.00**
Total Funding Requested 2013		**$423,859.50**
Total Funding Requested 2009 - 2013		**$7,879,782.50**

Table 10. *TEA Resources Tasks and Costs calculation*

9.2. CB Budget Narrative (Justification)

The Coordinating Board budget has been incorporated into TEA's budget under contractural costs and has been supplied in this document for reference only. The budget consists of the following components: salaries and wages, benefits, travel, materials and supplies, consultants and contracts including stipends to schools, and a minimal amount of equipment.

9.2.1. CB CONTRACT RESOURCES

The overall project budget is based on preliminary estimates of the resources that will be required to complete the listed functions. Existing staff will continue to work on current processes until full implementation of the new model.

Position	Average Hourly Rate
Database Modeler/ Administrator	$90.00

Table 11. *Pay Rates*

9.2.2. INFRASTRUCTURE COSTS

The higher education class link data collection will significantly increase the size of the data collected and stored at the CB. Therefore it will be necessary to purchase additional desktop computers and printers for individuals hired to conduct the project, and server and disk storage space to be able to process and store this data. The following items are proposed:

- Four desktop computers and printers for newly-hired individuals, one in year one, two in year two, and one in year three of the grant - $10,000
- Additional disk space - $5,000 annually
- Server instance charge - $10,000 annually

9.2.3. DISBURSEMENT FOR HIGHER EDUCATION INSTITUTIONS

To support this project additional funding will be necessary for the institutions to implement the expanded data collection. The additional cost will be ongoing, however it is our intention to provide assistance for only the first collection year. The calculation of the support is based on student enrollment with a minimum of $2,000 and a maximum of $10,000 per institution. To allow for efficient use of the funds in this budget category project staff will work with software contractors to implement the required changes to the institutions administrative software. If that is successful the disbursement to institutions could be adjusted accordingly.

Total support for the first year of collection, $303,000.

9.2.4. RESOURCE TASKS AND COSTS

2009 – A Project Manager will be hired to develop an overall plan for the project including: meeting with stakeholders, gathering and analyzing data requirements, developing data standards and definitions, developing new reporting requirements for use in TPEIR, designing a data collection/validation mechanism, developing internal reports, and developing external reports and data sets. A data manual to the institutions will be published.

CB Budget Justification – Year 2009		
Budget Item	**Narrative Description**	
Salaries and Wages		
Project Manager	Prepare detailed project plans, coordinate project tasks, monitor progress, and report to stakeholders (9 mo. @ 100% time)	$48,750.00
Data Analyst	Develops the data dictionary and updates the reporting requirements after they are determined. (100% time)	$45,000.00
Salaries and Wages Subtotal		**$93,750.00**
Employee Benefits Subtotal (Calculated at 30% of salaries)		**$28,125.00**

Travel		
Texas Association of Registrars Organization Conference (2)	For one person to attend each of the TACRO Conferences to help determine new reporting requirements and gain "buy-in" from the institutions.	$1,000.00
Travel Subtotal		**$1,000.00**
Materials and Supplies		
Desktop computer and printer.	For use by data analyst.	$2,500.00
Materials and Supplies Subtotal		**$2,500.00**
Consultants and Contracts		
Consultants and Contracts Subtotal		**$0.00**
Other		
Other Subtotal		**$0.00**
Total Direct Costs		**$125,375.00**
Total Indirect Costs (Indirect costs are 16.9% of: 100% of agency salary, travel, and the first $25K of contractor costs.)		$16,013.00
Equipment		
Production server instance charge – annually	Annual charge for acquiring an additional server instance at the state-wide data center. Based on established state-wide unit rates.	$10,000.00
Additional disk space - annually	Annual charge for acquiring additional disk storage at the state-wide data center based on an expected growth of 9 million records per year. Later years will recover storage required for initial development and for dual data collection in 2011.	$5,000.00
Equipment Total		**$15,000.00**
Total Requested		**$156,388.00**

2010 – A major portion of the project will be accomplished during 2010.Several of the tasks begun in 2009 will continue into year two of the grant, in particular gathering and analyzing data requirements. In addition, heavy project efforts will focus on construction, testing, and implementation of the new data collection system. Specific construction tasks will include: creating data collection tables, developing and programming data collection and loading mechanisms, programming edit checking and internal report formats, and creating new data warehouse tables. The project will then move into the testing phase and then into production. Initially, a pilot group of institutions will submit data on both the currently existing system and the new system for the same period and the two data sets will be compared. Institutions will be given a one-time stipend to help with the costs associated with moving from the current data collection system to the new one. Project staff will provide ongoing institutional support on all phases of the project. Staff will begin gathering and analyzing requirements for the pilot projects.

CB Budget Justification – Year 2010		
Budget Item	**Narrative Description**	
Salaries and Wages		
Project Manager	Prepares detailed project plans, coordinates project tasks, monitors progress, develops plans for testing and testing coordination, and reports to stakeholders (100% time)	$65,000.00
Data Analyst	Works on the data editing processes and implementation of the feedback reports to the institutions. (100% time)	$45,000.00
Developer	Develops and implements the design of the additional data collection. (100% time)	$60,000.00
Developer 2	Develops and implements the design of the additional data collection.(100% time)	$60,000.00
Salaries and Wages Subtotal		**$230,000.00**
Employee Benefits Subtotal (Calculated at 30% of salaries)		**$69,000.00**
Travel		
Texas Association of Registrars Organization Conference (2)	For one person to attend each of the TACRO Conferences to provide training on the new reporting requirements and provide clarification of the data elements.	$1,000.00
Texas Association of Institutional Researchers	For one person to attend the TAIR annual conference to provide training on the new reporting requirements and discuss the new data elements that will be available for research.	$500.00
Gathering ISD Input	For five one-day meetings around the state to gather input from the ISDs/high schools on the most useful method of providing performance data back to them.Two people will attend each meeting.	$4,000.00
Travel Subtotal		**$5,500.00**
Materials and Supplies		
Desktop computers and printers (2)	For use by database administrators.	$5,000.00
Training materials	Materials for institutional training.	$1,000.00
Materials and Supplies Subtotal		**$6,000.00**
Consultants and Contracts		
Stipend payments	To defray institutions' costs to meet new reporting requirements. The calculation of the support is based on student enrollment with a minimum of $2,000 and a maximum of $10,000 per institution.	$303,000.00

Database Modeler/ Administrator (Contract)	To fund two FTEs for six months each to design the logical and physical data model changes and to write the load procedures for the enhanced data collection.	$180,000.00
Consultants and Contracts Subtotal		**$483,000.00**
Other		
Other Subtotal		**$0.00**
Total Direct Costs		**$793,500.00**
Total Indirect Costs (Indirect costs are 16.9% of: 100% of agency salary, travel, and the first $25K of contractor costs.)		**$44,025.00**
Equipment		
Production server instance charge – annually	Annual charge for acquiring an additional server instance at the state-wide data center. Based on established state-wide unit rates.	$10,000.00
Additional disk space - annually	Annual charge for acquiring additional disk storage at the state-wide data center based on an expected growth of 9 million records per year. Later years will recover storage required for initial development and for dual data collection in 2011.	$5,000.00
Equipment Total		**$15,000.00**
Total Requested		**$852,525.00**

2011 – Implementation of the new system as well as the initial data collection will continue. External reports will be released and data sets will be provided to authorized users (TEA for TPEIR). Project staff will continue gathering and analyzing needs for the two pilot projects, Custom Analytics and Anonymous Cohorts for Comparison. The pilot projects will be designed, constructed and tested during this year.

CB Budget Justification – Year 2011		
Budget Item	**Narrative Description**	
Salaries and Wages		
Project Manager	Revises project plans as needed, coordinates project tasks, testing of changes required during the first data collection cycle, and pilot projects, monitors progress, and reports to stakeholders (100% time).	$65,000.00
Data Analyst	Works on the data editing processes and implementation of the feedback reports to the institutions. (100% time)	$45,000.00
Data Analyst 2	Updates reporting requirements. (100% time)	$45,000.00
Developer	Develops and implements the changes in data validation and reporting during the first data collection	$60,000.00

	cycle and the pilot projects (100% time).	
Developer 2	Develops and implements the changes in data validation and reporting during the first data collection cycle and the pilot projects (100% time).	$60,000.00
Salaries and Wages Subtotal		**$275,000.00**
Employee Benefits Subtotal (Calculated at 30% of salaries)		**$82,500.00**
Travel		
Texas Association of Registrars Organization Conference (2)	For one person to attend each of the TACRO Conferences to provide training on the new reporting requirements and provide clarification of the data elements.	$1,000.00
Texas Association of Institutional Researchers	For one person to attend the TAIR annual conference to provide training on the new reporting requirements and discuss the new data elements that will be available for research.	$500.00
Gathering ISD Input	For five one-day meetings around the state to gather input from the ISDs/high schools on the most useful method of providing performance data back to them. Two people will attend each meeting.	$4,000.00
Travel Subtotal		**$5,500.00**
Materials and Supplies		
Desktop computer and printer.	For use by data analyst 2.	$2,500.00
Training materials	Materials for institutional training.	$1,000.00
Promotional materials	Promotional material for school districts to provide instruction on accessing the performance data for their students. The materials will also provide examples of different ways the data can be used.	$1,000.00
Materials and Supplies Subtotal		**$4,500.00**
Consultants and Contracts		
Consultants and Contracts Subtotal		**$0.00**
Other		
Other Subtotal		**$0.00**
Total Direct Costs		**$367,500.00**
Total Indirect Costs (Indirect costs are 16.9% of: 100% of agency salary, travel, and the first $25K of contractor costs.)		**$47,405.00**
Equipment		
Production server instance charge – annually	Annual charge for acquiring an additional server instance at the state-wide data center. Based on established state-wide unit rates.	$10,000.00
Additional disk space - annually	Annual charge for acquiring additional disk storage at the state-wide data center based on an expected growth of 9 million records per year. Later years will recover storage required for initial development and for dual	$5,000.00

	data collection in 2011.	
Equipment Total		**$15,000.00**
Total Requested		**$429,905.00**

2012 – Implementation of the two pilot projects will continue. Project staff will continue to update pilot projects to include user-recommended enhancements and will continue to provide maintenance for the data collection and pilot projects.

CB Budget Justification – Year 2012		
Budget Item	**Narrative Description**	
Salaries and Wages		
Project Manager	Revises project plans as needed, coordinates project tasks, leads the technical team in enhancement and maintenance of the data collection and pilot projects, monitors progress, and reports to stakeholders (100% time).	$65,000.00
Data Analyst	Works on the data editing processes and implementation of the feedback reports to the institutions. (100% time)	$45,000.00
Developer	Develops enhancements and provides maintenance for the data collection and the pilot projects (100% time).	$60,000.00
Salaries and Wages Subtotal		**$170,000.00**
Employee Benefits Subtotal (Calculated at 30% of salaries)		**$51,000.00**
Travel		
Texas Association of Registrars Organization Conference (2)	For one person to attend each of the TACRO Conferences to provide training on the new reporting requirements and provide clarification of the data elements.	$1,000.00
Texas Association of Institutional Researchers	For one person to attend the TAIR annual conference to provide training on the new reporting requirements and discuss the new data elements that will be available for research.	$500.00
Gathering ISD Input	For five one-day meetings around the state to gather input from the ISDs/high schools on the most useful method of providing performance data back to them. Two people will attend each meeting.	$4,000.00
Meeting with other states	For two people to make two trips to each surrounding state – Louisiana, New Mexico, Oklahoma, and Arkansas – to finalize agreements to collaborate on data exchange.	$16,000.00

Travel Subtotal		**$21,500.00**
Materials and Supplies		
Training materials	Materials for institutional training.	$1,000.00
Promotional materials	Promotional material for school districts to provide instruction on accessing the performance data for their students. The materials will also provide examples of different ways the data can be used.	$1,000.00
Materials and Supplies Subtotal		**$2,000.00**
Consultants and Contracts		
Consultants and Contracts Subtotal		**$0.00**
Other		
Other Subtotal		**$0.00**
Total Direct Costs		**$244,500.00**
Total Indirect Costs (Indirect costs are 16.9% of: 100% of agency salary, travel, and the first $25K of contractor costs.)		**$32,365.00**
Equipment		
Production server instance charge – annually	Annual charge for acquiring an additional server instance at the state-wide data center. Based on established state-wide unit rates.	$10,000.00
Additional disk space - annually	Annual charge for acquiring additional disk storage at the state-wide data center based on an expected growth of 9 million records per year.	$5,000.00
Equipment Total		**$15,000.00**
Total Requested		**$291,865.00**

2013 – Implementation of the two pilot projects will continue. Project staff will continue to update pilot projects to include user-recommended enhancements and will continue to provide maintenance for the data collection and pilot projects.

CB Budget Justification - Year 2013		
Budget Item	**Narrative Description**	
Salaries and Wages		
Project Manager	Coordinates project tasks, leads the technical team in enhancement and maintenance of the data collection and pilot projects, monitors progress, and reports to stakeholders (100% time).	$65,000.00
Data Analyst	Works on the data editing processes and implementation of the feedback reports to the institutions. (100% time)	$45,000.00

Developer	Develops enhancements and provides maintenance for the data collection and the pilot projects (100% time).	$60,000.00
Salaries and Wages Subtotal		**$170,000.00**
Employee Benefits Subtotal (Calculated at 30% of salaries)		**$51,000.00**
Travel		
Texas Association of Registrars Organization Conference (2)	For one person to attend each of the TACRO Conferences to provide training on the new reporting requirements and provide clarification of the data elements.	$1,000.00
Texas Association of Institutional Researchers	For one person to attend the TAIR annual conference to provide training on the new reporting requirements and discuss the new data elements that will be available for research.	$500.00
Meeting with other states	For two people to make two trips to each surrounding state – Louisiana, New Mexico, Oklahoma, and Arkansas – to finalize agreements to collaborate on data exchange.	$16,000.00
Travel Subtotal		**$17,500.00**
Materials and Supplies		
Training materials	Materials for institutional training.	$1,000.00
Promotional materials	Promotional material for school districts to provide instruction on accessing the performance data for their students. The materials will also provide examples of different ways the data can be used.	$1,000.00
Materials and Supplies Subtotal		**$2,000.00**
Consultants and Contracts		
Consultants and Contracts Subtotal		**$0.00**
Other		
Other Subtotal		**$0.00**
Total Direct Costs		**$240,500.00**
Total Indirect Costs (Indirect costs are 16.9% of: 100% of agency salary, travel, and the first $25K of contractor costs.)		**$31,688.00**
Equipment		
Production server instance charge – annually	Annual charge for acquiring an additional server instance at the state-wide data center. Based on established state-wide unit rates.	$10,000.00
Additional disk space - annually	Annual charge for acquiring additional disk storage at the state-wide data center based on an expected growth of 9 million records per year.	$5,000.00
Equipment Total		**$15,000.00**

Total Requested		**$287,188.00**

Table 12. *Resources Tasks and Costs calculation*

The overall project budget is based on preliminary estimates of the resources that will be required to complete the listed functions. Existing staff will continue to work on current processes until full implementation of the new model.

Appendix A – Optional Attachments

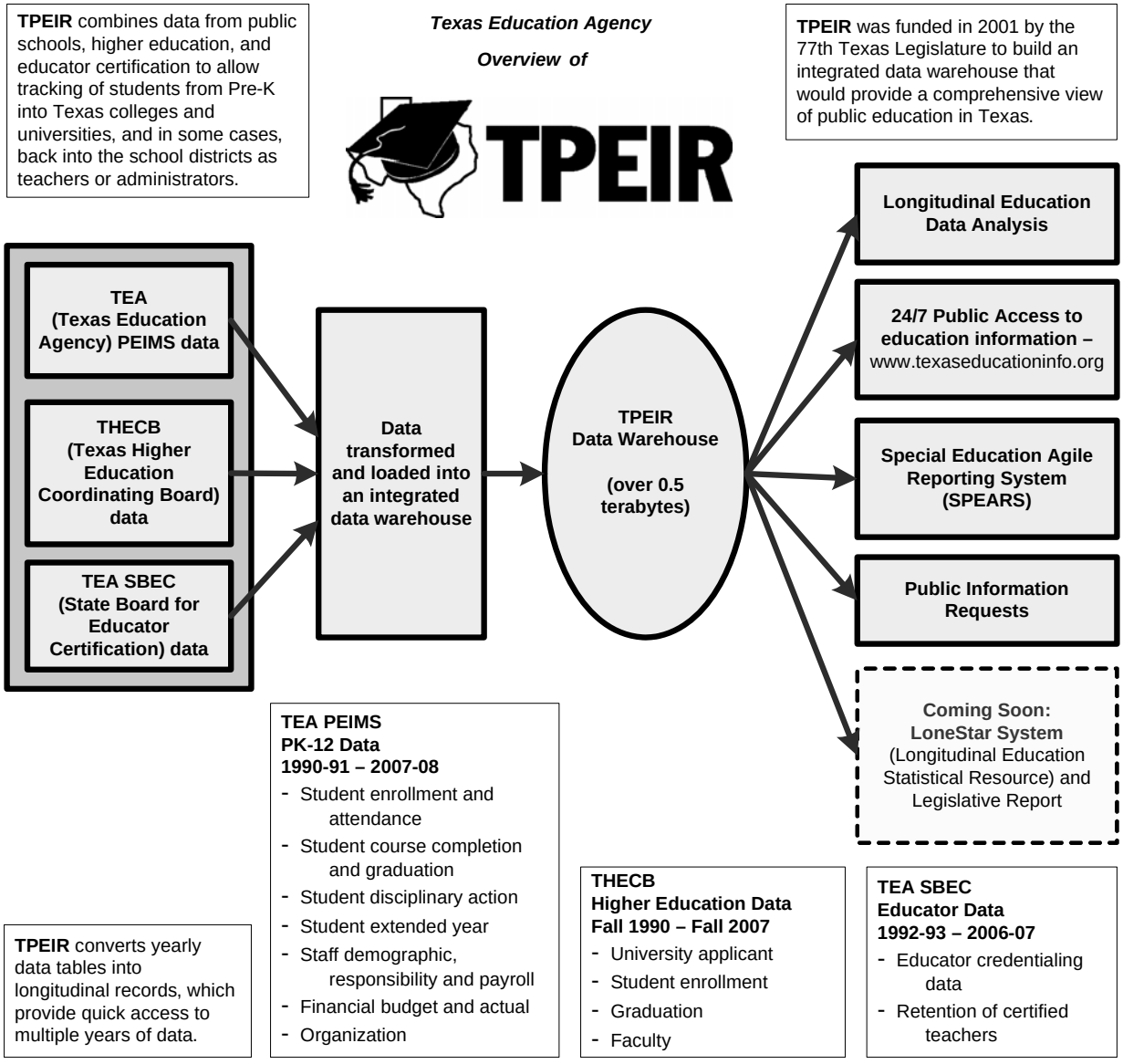

Figure 3. *Texas Public Education Information Resource*

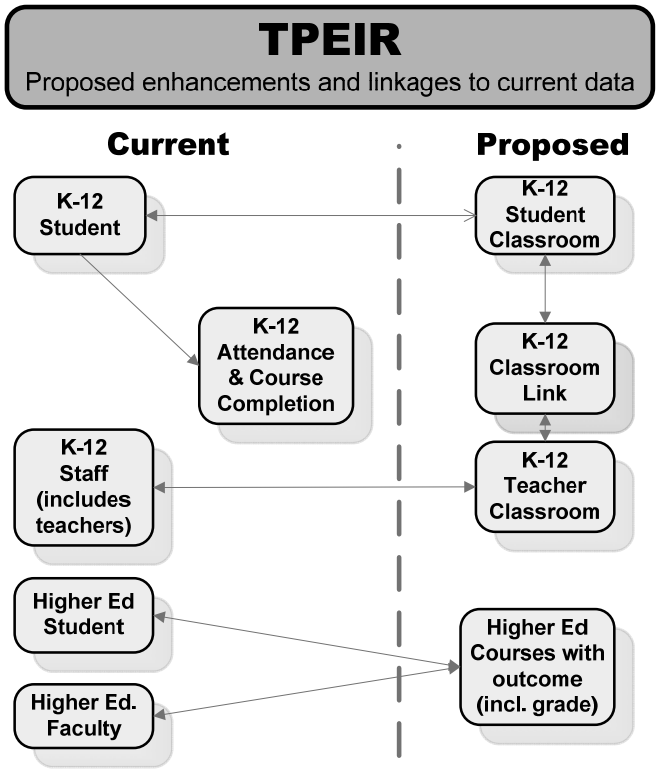

Figure 4. *Planned enhancements to TPEIR*

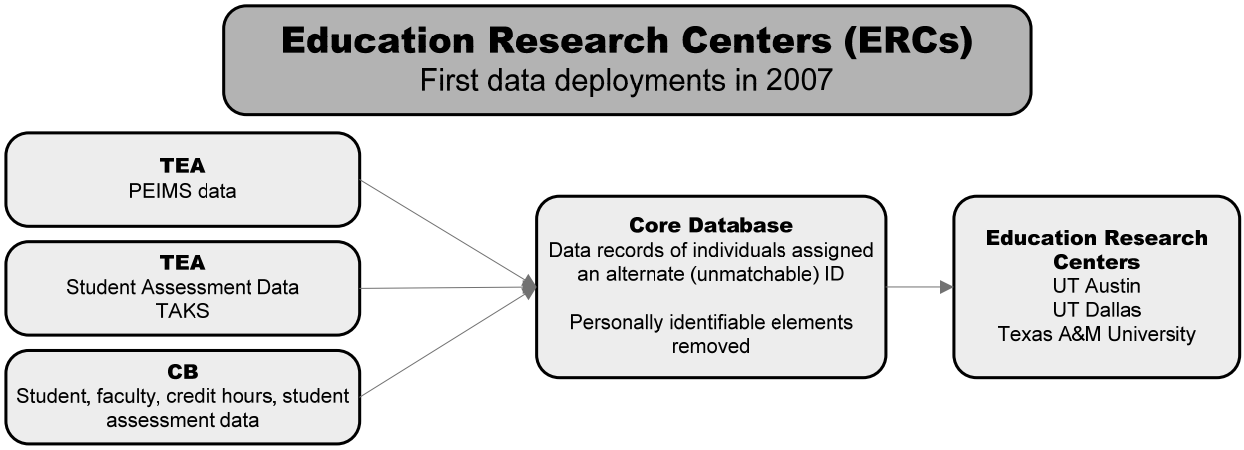

Figure 5. *Education Research Centers*

Status of Core Elements Completion for Establishing a Statewide Longitudinal Data System

Core Elements	Current Texas SLDS Status
1. Analysis of the business needs (multiple reporting and decision support needs) of key stakeholders, including the State, districts, school boards, schools, teachers, parents, students, the public, and other constituents	Most of this work was performed when TPEIR was first developed, which determined the reports on the TPEIR web portal.
2. Cataloging current and planned local data collection methods and data structures	In progress. The Data Information and Review Committee (DIRC) currently tracks this information.
3. Designing statewide longitudinal data systems architecture	
a. Including in data model the business needs of key stakeholders, who participate as data providers and users, and whose needs should determine the data types and items to be maintained in the system, years of data maintained, and data quality achieved (all of which define the breadth and depth of subsequent possible analyses)	There is a data model for TPEIR, but it does not currently contain the business needs of key stakeholders or the data quality achieved.
b. Developing effective data quality assurance system that contains:	
i. Data dictionary, with well defined content and common definitions for data elements* to assure the same definitions, codes, and periodicity across all schools in the State at data entry points	The TPEIR data dictionary contains common definitions for all data elements, codes, and time dimensions across all schools in the state.
ii. Business rules for data format, acceptable values, missing data options, and logical comparisons to prior data	Business rules are specified for acceptable values and missing data for TPEIR and from the PEIMS data collection.
iii. Automated data edit processes to verify data quality and to ensure that rules are met before allowing data into the State's data system	Completed. The PEIMS EDIT+ web application follows the rules outlined in the PEIMS Data Standards to ensure data quality. EDIT+ provides numerous reports that allow districts and schools to review to assist in data quality.

Core Elements	Current Texas SLDS Status
iv. Systems and procedures to assure correct utilization of data by the users and providers	Completed. The PEIMS Data Standards contain detailed definitions, edits, and business rules for all data collected. The PEIMS Data Documentation contains detailed definitions and historical information on the PEIMS operational data store for internal users. Similar documentation is planned for TPEIR.
c. Developing an effective, statewide data model that defines and describes the logical and physical relationships between data items and systems and system structure that allows efficient data maintenance and retrieval (containing relevant and linked current and historical data)	The TPEIR Data Model is an integrated dimensional model of all data in the PK-16 data warehouse including information from PEIMS, Educator Certification, and higher education. Tables are longitudinal, and school year is a dimension.
d. Assuring secure access to data and formal reports to protect the confidentiality of individuals, in compliance with FERPA and the statistical reliability of results	Completed. Access to FERPA-protected data is restricted to authorized agency staff only. Reports on the public web site of both agencies do not contain identifying student data or counts less than 5.
e. Structured to enable efficient data extraction for time-based analyses	Completed. TPEIR is a dimensional data warehouse where school year is a dimension.
f. Allowing modifications and enhancements to the system's data and architecture, including system expansion over time	Completed. TPEIR is an integrated warehouse that can be easily extended to include additional data, fact tables, or dimensions.
4. Creating, assigning, and tracking a unique, permanent student identifier assigned at state level	
a. Allowing the matching of individual student records across databases and years for every student enrolled in preK-12 state education system (using an automatic system creation of IDs or an individual creation through direct online interaction with ID system)	Completed. PEIMS uses the Person Identification Database (PID) to match student and staff records to an existing ID or to assign a unique ID for new individuals. This number is used to link students' records across time and across other TEA internal applications.
b. Allowing for program evaluation (including potential capacity to track students past the 12th grade)	It is possible to link students from K-12 to postsecondary education enrollment in Texas through TPEIR. TPEIR is not currently used for program evaluation, but PEIMS data is.

Core Elements	Current Texas SLDS Status
c. Allowing for student record transfers among States when students move across state borders (requiring inter-state agreements and compliant with FERPA regulations)	TPEIR does not contain transcript information since PEIMS and EDC do not collect it. The Texas Records Exchange System (TREx) supports student record transfer between Texas schools and Student Transcript transmission to colleges and universities through the UT SPEEDE server.
5. Planning and implementing data collection	
a. From districts and/or schools so that the SEA can incorporate data in the system for all students, classrooms, and schools under the SEA's jurisdiction, including:	
i. Development of collaboration among all parties within the SEA and between the SEA and school districts in data collection, reporting, and dissemination	TEA works with the Policy Committee on Public Education Information and the Information Task force to plan, review, and approve any changes to the PEIMS data collections. Both committees include representatives from school districts and education service centers.
ii. Provisions for the needs of districts that have limited ability to participate in technology systems	Completed. Districts work with their Education Service Centers (ESC) to handle these types of issues with their PEIMS submission.
b. Conducting cost/benefit and sustainability analyses of dynamic vs. static data extraction systems (data entered directly by school personnel into the statewide system with instantaneous error feedback vs. data files imported from districts on a periodic basis)	Completed. A study was conducted in the past to examine the feasibility of a more real-time data collection. Another study is currently underway to determine requirements for a redesign of the PEIMS data collection system.
c. Shortening reporting time and increasing the accuracy of student assessment data (e.g. through technology-based assessments)	Student assessment data is collected through an outsourced contract and housed in a separated data system.
6. Implementing statewide longitudinal data system (warehouse)	
a. Development of the system according to the designed architecture	Complete.
b. Testing of the system	Complete

Core Elements	Current Texas SLDS Status
c. Going live	TPEIR was developed in 2002
7. Designing, using, and maintaining business intelligence tools (analytical & reporting)	
a. Streamlining reporting capabilities to local, state, and federal agencies, using pre-defined, automated reports (including for EDEN, NCLB, NCES, and the public)	A BI tool cannot be used exclusively for EDFact and NCES reporting. The BI tool can be used for the Report Card function needed from NCLB. SAS software is currently used for this type of reporting activity.
b. Supporting:	
i. Multiple reporting and analyses needs of different stakeholders	The BI tool is perfect for policy makers, educators and members of the public.
ii. High-level longitudinal analyses, required for data-driven decision making by policymakers, educators, and members of the public	Longitudinal analyses are provided upon request, most often facilitated by the use of SAS software.
c. Providing timely, accurate, and user-friendly dissemination of the needed data, reports, and analyses results to:	
i. Parents/guardians and students	Agency analytic units provide data files and reports upon request and through the TEA web page. SAS software is frequently used to create these products.
ii. Teachers	Agency analytic units provide data files and reports upon request and through the TEA web page. SAS software is frequently used to create these products.
iii. Schools	Agency analytic units provide data files and reports upon request and through the TEA web page. SAS software is frequently used to create these products.
iv. District administrators	Agency analytic units provide data files and reports upon request and through the TEA web page. SAS software is frequently used to create these products.
v. State officials and administrators	Agency analytic units provide data files and reports upon request and through the TEA web page. SAS software is frequently used to create these products.

Core Elements	Current Texas SLDS Status
vi. Universities/colleges and the business community	Agency analytic units provide data files and reports upon request and through the TEA web page. SAS software is frequently used to create these products.
vii. The public	Agency analytic units provide data files and reports upon request and through the TEA web page. SAS software is frequently used to create these products.
d. Engaging in longitudinal education research to inform policy and decision making	TEA provides de-identified data to the Education research Centers for research. The BI tool cannot be used for this function. SAS Data sets are being reformatted and there is no use of a reporting tool.
e. Leading the State, districts, and teachers in the development and use of innovative analytical tools and reports to inform policy and decision making	
8. Establishing logistical capacity to create and maintain a statewide longitudinal data system	
a. Developing efficient administrative processes, infrastructure components, and policy commitments for effectively implementing the maintenance of the statewide longitudinal data system, regarding:	
i. Assuring continued data collection and quality	TPEIR has been in use since 2002
ii. Assuring continued dissemination of data and analyses results	Agency analytic units disseminate data and analysis results upon request.
iii. Assuring data security and confidentiality, including addressing potential concerns of stakeholders about student privacy in automated systems	Access to identifying student information in PEIMS and TPEIR is restricted to authorized agency staff only. The data is secured in a DB2 database with role based security.
iv. Assuring continued funding	Complete
v. Assuring continued adequate human resources	These functions are performed by dedicated agency staff.
vi. Assuring continued enabling legislation	

Core Elements	Current Texas SLDS Status
vii. Assuring the continued adequacy of hardware, software, and networking capabilities	Infrastructure is currently adequate.
b. Assuring sustainability and effectiveness of the system by:	
i. Assuring administrative buy-in	Completed.
ii. Assuring qualified staff, training, technical, and other resources dedicated to the State's administrative technology over the long term to ensure the system's continued effectiveness (including the commitment and ability of staff to implement, use, and continually develop the data system)	Ongoing
iii. Developing a strong plan for the SEA and other stakeholders to continually evaluate and improve the effectiveness of the data system and of associated processes, both in their reporting and decision-support functions, and to periodically assess the degree to which they meet agency and other stakeholders' needs	
c. Involving and supporting stakeholders by establishing and/or facilitating the existence of:	
i. A policy advisory committee that includes representatives from each key stakeholder group	The Policy Committee on Public Education Information and the Information Task Force performs this function for the PEIMS Collection. TPEIR has an established committee to determine stakeholder needs.
ii. A data provider/collection group	
iii. A data user group	
iv. An internal agency coordination group to oversee data collection, management, and dissemination	Completed. The Data Information and Review Committee (DIRC) currently oversees data collection.
d. Planning and funding initial and ongoing efficient and effective training of key state and local data collectors and users, according to their functional needs, on:	
i. Data Entry, Cleaning, and Transfer	Ongoing PEIMS provides ongoing training to ESC PEIMS Coordinators and software vendors on the PEIMS data collection. TEA uses the train-the-trainer

Core Elements	Current Texas SLDS Status
	approach, and the ESCs will train the districts. TEA does not train for data entry.
ii. Data Extraction	In progress. Software vendors and/or the Education Service Centers provide this training.
iii. Unique Student ID System	Completed. This is handled through the Person Identification Database (PID) process.
iv. Business Intelligence Tools and use of data for decision making	Desired but lack funding.

[1] See Forum Data Definitions Handbook for an example of standards.

Table 13. *Texas SLDS Core Elements*

Appendix B – Résumés of Key Personnel

Executive Sponsor, Adam Jones
Professional Experience
2003 to present
Texas Education Agency

Deputy Commissioner for Finance and Administration/Chief Operating Officer, 2007 – present

- Deputy chief executive and chief operating officer of the state department of education, a 950-employee agency with an annual administrative budget of over $125 million and fiduciary responsibility for over $25 billion in state and federal funds for public education.
- Responsible for all financial and administrative functions of the agency including finance, information technology, contracting, human resources, the administration of the state school finance system, grant administration and evaluation, organizational development, and the regulation of private driver training providers.
- Oversee the agency strategic communications function, including public information, state and federal governmental relations and the liaison office to the State Board of Education.

Associate Commissioner for Finance and Operations/Chief Operating Officer, 2003 – 2007

- Served as chief operating officer for the state department of education, responsible for all financial and operational functions of the agency including accounting, budget, contracting, school finance, organization development, human resources, and information technology.

2003
Texas Senate Education Committee

Committee Director

- Managed the Texas Senate committee responsible for legislation and policy concerning K-12 and higher education in Texas.
- Served as education policy advisor to Chairwoman Florence Shapiro and the members of the Texas Senate.

1994 to 2003
Texas Education Agency

Assistant Commissioner for Governmental Relations, 2000 – 2003

- Served as senior advisor to the Commissioner of Education on all issues pertaining to the agency's interaction with the Texas Legislature, Office of the Governor and the United States Congress.

Senior Director for Budget and Planning, 1999 – 2000

- Served as chief budgetary officer for an 844-employee agency with an operating budget in excess of $100 million and a program budget of over $14 billion in state and federal funds for K-12 public education.

Associate Senior Director, Office of Finance and Accountability, 1995 – 1999

- Served as executive assistant and project manager to the Deputy Commissioner for Finance and Accountability.

Education

- MA, Public Policy - Duke University
- BA, Economics - University of Texas

Information Technology Services Sponsor, John Cox
Professional Experience

2005 to present
Texas Education Agency
Deputy Associate Commissioner - Information Technology Services, Agency Infrastructure and Enterprise Data Management / Chief Information Officer

- Provides executive leadership to and management of the Information Systems, Agency Infrastructure and Enterprise Data Management Divisions.
- Responsible for agency information technology resources investments, information technology contracts management, and managing the financial aspects of the division.
- Develops and manages strategic operating plans and biennial budgets of over $30 million.
- Develops Information Resource Strategic Plans and Biennial Operating Plans.
- Develops policies and procedures to implement and support an integrated, responsive, and secure information technology environment. Well versed in the state legislative process, including bill analysis and fiscal note preparation.
- Maintains collaborative relationships with other state agencies and information technology organizations.
- Serves on numerous IT planning workgroups tasked with developing State of Texas strategic and operating plans.
- Responsible for 151 full-time employees and 57 contractors and temporary staff.
- Designated agency Information Resources Manager.

2000 to 2005
Texas Higher Education Coordinating Board
Director of Information Resources

- Served as the Texas Higher Education Coordinating Board's representative on the Interagency Steering Committee, along with the TEA and SBEC representatives, tasked with project oversight of the inter-agency project which delivered the Texas Public Education Information Resource (TPEIR), a nationally recognized web-based system for longitudinal analysis of Texas public P-16 educational information.
- Created State of Texas information resource strategic and operating plans. Devised policies to support a responsive, integrated, and secure information technology environment.
- Oversaw development of agency Information Resource Strategic Plans and Biennial Operating Plans.
- Developed and managed strategic operating plans and biennial budgets of over $6 million. Served on numerous state-level IT planning workgroups tasked with developing State of Texas strategic and operating plans.
- Effected use of structured development methodologies; software and database development tools; project management practices; and software, including Microsoft Project and other estimating and planning tools and methods.
- Managed a team that utilized multi-vendor computing environments and Bull, Sun hardware and Wintel hardware; GCOS, UNIX and Wintel operating systems, and

networks linking remote locations. Determined architectural strategy and implemented technology platforms to meet agency and agency's IT goals.
- Oversaw multiple projects for custom developed software applications and implementation of purchased software applications.
- Designated agency Information Resources Manager.

1998-2000
Applied Information Sciences
Senior Consultant for the Austin Division, Project Manager
- Directed planning, development and implementation for $3 million client-server, enterprise database systems integration project for the Texas Department of Criminal Justice.
- Directed planning, development and implementation for $1.2 million web-enabled, client-server, enterprise database systems integration project for the Texas Commission on Alcohol and Drug Abuse. The application won a Best Practices award at a Government Technology Conference.

1992–1998
Midwestern State University
Director of Information Systems
- Managed implementation of a fiber-optic based Campus Wide Area Network (CWAN) for the university including video-conferencing capabilities for distance education.
- Developed Information Resource Strategic Plans and Biennial Operating Plans.
- Developed procedures to implement an integrated, responsive and secure information technology environment.
- Instituted use of structured development methodologies; software and database development tools; project management practices; and software, including Microsoft Project and other estimating and planning tools and methods.
- Managed the implementation and operation of a regional internet service provider node connected to the Texas Higher Education Network (THENet).
- Directed numerous projects for custom developed software applications and implementation of purchased software applications in the agency and higher education arena.
- Chaired the Information Technology Steering Committee for the university.
- Designated Information Resources Manager for the university.

1974 to 1992
Stephen F. Austin State University
Assistant Director for Administrative Services, 1991 – 1992
Manager of Administrative Systems, 1978 – 1991
Programmer Analyst, 1976 – 1978
Programmer, 1976 – 1976
Student Programmer/Teaching Assistant, 1974 – 1976
- Managed Systems Development, Communications and Operations Divisions.
- Managed all phases of client/server analysis, development and implementation in both the local and wide area network environments.

- Effected use of structured development methodologies; software and database development tools; project management practices; and software including Microsoft Project and other estimating and planning tools and methods.
- Supervised numerous projects for custom developed software applications and implementation of purchased software applications in the agency and higher education arena.

Education

- BS, Computer Science and Accounting – Stephen F. Austin State University

Business Project Director, Sharon Lewellyn
Professional Experience

1995 to present
Texas Education Agency

Acting Director, Enterprise Data Management, 2008 – present

- Direct the Public Education Information Management System (PEIMS) data collection planning and design. Oversee the development of the statewide data standards and reporting policies for all public school districts.
- Coordinate the review and approval of internal and external governance committees, including representation from school districts, state education service centers, software vendors, and state agencies.
- Oversee training and support for state education service centers and software vendors on the PEIMS and TREx applications.

Manager of Application Support, 2006 – 2008

- Managed five sections within the Information Systems Division, including Database Administration, Data Warehouse Implementation, Internet Services, FileNet Support, Crystal Reports, SAS, and Cognos Support.
- Developed automation plans, proposals, and business cases. Reviewed legislation for automated system requirements. Conducted technical reviews and audits. Participated in the development and evaluation of RFO's. Managed budget.
- Planned and scheduled infrastructure projects. Consulted with project teams on requirements for new development. Analyzed hardware and software requirements. Performed capacity planning.
- Managed the mainframe outsourcing contract. Represented the agency on committees and projects for the planning and conversion of the State Data Center Consolidation project.

Manager of Database Administration, 1996 – 2006

- Managed the Database Administration, Online Systems Support, and Mainframe Computer Access sections of the Information Systems Division.
- Participated in the design and implementation of the Texas Public Education Information Resource (TPEIR) data warehouse.
- Developed automation plans and budgets. Participated in technical reviews and audits.
- Reviewed proposed legislation for automated system requirements. Analyzed requirements for new development.
- Determined technical, operational, and support requirements for database implementation. Performed capacity planning.
- Developed implementation policies and standards.

Database Administrator, 1995 – 1996

- Analyzed requirements for new development; developed and maintained logical and physical data models.
- Created and maintained DB2, Model 204, and Sybase database objects, roles and permissions.

- Conducted ongoing performance monitoring and tuning.
- Maintained database backup and maintenance procedures; performed recovery as needed.
- Provided technical support to application development staff.
- Maintained custom security application.

1984 to 1995
Texas Department of Mental Health and Mental Retardation
Manager of Database Administration, 1987 – 1995

- Managed the Database Administration section of Information Systems.
- Developed automation plans and cost estimates; assisted in the development and evaluation of RFO's.
- Designed and managed the development and maintenance of a statewide, geographically distributed database for 30 state hospitals and state schools.
- Developed procedures for remote maintenance of distributed databases.
- Evaluated and recommended software for acquisition.
- Developed implementation policies and standards.

Database Administrator, 1985 – 1987

- Analyzed requirements for new development.
- Designed and maintained database objects in Model 2004.
- Conducted ongoing performance monitoring and tuning.
- Maintained database backup and maintenance procedures; performed recovery as needed.
- Maintained custom application security system.
- Consulted with developers on application and database design, system performance, implementation standards, and software errors.

Programmer, 1984 – 1985

- Conducted requirements gathering sessions with subject matter experts.
- Analyzed Requirements; Developed functional and system requirements.
- Designed and developed statewide case management and claims billing applications in Model 204.
- Developed and executed test plans.
- Developed system documentation.

1974 – 1984
The University of Texas at Austin
Programmer, 1981 – 1984

- Developed and maintained applications for Credit By Exam test scoring, validity testing, and student information systems in COBOL, SAS, and Natural under MVS.
- Converted third generation COBOL applications to Adabase.
- Designed and developed programs for NCS 7008 optical scanner.

Statistician, 1974 – 1981

- Managed the course evaluation data collection, and reporting system.
- Developed project plan, schedules, and budget.
- Developed statistical reports using SAS and FORTRAN.

- Developed project documentation, correspondence, and procedures.

Education

- BA - University of Texas at Austin

Dr. Patricia Sullivan
Professional Experience

2007 to present
Texas Education Agency

Deputy Associate Commissioner of Data Development, Analysis and Research

- Manages the divisions of Accountability Research and Information Analysis.
- Coordinated the implementation of the Education Research Centers, including contracts, policy, and committee meetings.
- Managed the development and appointment of the Education Research Center Joint Advisory Board.
- Designed, developed an Education Research Center data warehouse.
- Manages agency TPEIR, and dual-agency K-16 data warehouse.
- Coordinates ad hoc requests for information from the Public Education Information Management System.
- Coordinates ORG database rewrite project, budget, and actions.
- Analyzes legislation and proposes new legislation for each legislative session.
- Maintains agency forms, bulletin 742, web pages.
- Chairs and manages the Data Information Review Committee (DIRC), charged with reviewing all data collections made of the schools and districts as well as the review of all data implications from proposed State Board of Education and commissioner rules.
- Develops program documentation standards and procedures.
- Managed the development and implementation of the Texas Records Exchange System (TREx), allowing the electronic exchange of student transcripts and records between public school districts and between public schools and institutions of higher education.
- Manages the development of data management procedures to improve data quality control.
- Facilitates agency-wide planning and project implementation.
- Develops and writes division operating procedures, standards, and policies.
- Provides technical and customer assistance for special projects related to crisis event data exchanges.
- Serves as the Texas state agency representative (SEA) to the United States Department of Education National Forum and participates in biannual meetings.
- Participates in Senior management initiatives as needed.

Manager of Data Development and Research Projects Unit

- Coordinated development of catalog of agency data collections, measures, indicators, and report elements.
- Coordinated development and maintenance of data development request processes.
- Developed and documented system requirements and business rules.
- Designed, developed and maintained agency enterprise data management system.
- Coordinated agency data committees.
- Managed implementation of committee action items.
- Coordinated ORG database rewrite project, budget, and actions.
- Coordinated documentation of complex datasets and programs, including requirements, change requests, and problem reports.

- Analyzed legislation and commissioner and board rules to identify data and information requirements.
- Maintained agency forms, bulletin 742, web pages.
- Developed program documentation standards and procedures.
- Coordinated documentation of complex computer block diagrams and machine logic flowcharts.
- Managed the development of data management procedures to improve data quality control.
- Facilitated division-wide planning and project implementation.
- Developed and wrote division operating procedures, standards, and policies.
- Provided technical and customer assistance for special projects related to TEA hurricane data activities, including the Louisiana Student Records database and Katrina Rita Indicator.
- Coordinated the evaluation committee for the RFO.
- Managed 3 division budgets, in consulation with directors.

1998 to 2004
San Marcos CISD
Director/Assistant Supt. of Research, Evaluation and Technology

- Provided analysis of all student data in order to provide research based strategies to improve instruction at all levels and schools.
- Coordinated all district PEIMS submissions.
- Provided leadership to improve student attendance, reduce truancies and dropouts, and improve the district high school completion rate.
- Managed the technology district wide, including student and finance system computers and software, telecommunications contracts and service, curriculum management systems, and all instructional software acquisition and maintenance.
- Oversaw technology staff development for technical staff, teachers, administration, and support staff.
- Coordinated and recommended Board policy changes in coordination with the Texas Association of School Boards.
- Provided a complete analysis of the District AEIS report, by district and campus, allowing Planning Committees direction for improvement.
- Provided a longitudinal analysis of College Admissions test scores, allowing additional insight into needed strategies to improve outcomes.
- Testified for the legislative education committee for HB 457 of the 77th legislature, which was eventually enacted into law, limiting the LEA's accountability for students enrolled in Juvenile Detention Centers within their boundaries.
- Implemented a district-wide system for teachers to electronically enter all attendance, grades, and progress reports, as well as obtain access to student demographic information, grades, schedules, and discipline records.
- Provided regular upgrades to district systems through strategic partnerships with telecommunication companies, Cisco systems, and others for support and maintenance.
- Managed a large budget for data processing, Title II money, Erate submissions and rebates, local budgets, and obtained grant money from State, Federal, and private grants and gifts.

- Supervised 10 district-level staff and as well coordinated technology leaders from each campus.
- Implemented a graphical system for counselors that easily allowed access to all facets of the students' educational record.
- Implemented and trained administrators to access and use the triand system, which provides access and reports on student and group TAKS data.

2003 to present
Hays CISD
Grant External Evaluator

- Provides formative and summative evaluation services for the Federal Teaching American History Grant.
- Prepares all documents for evaluation, including surveys, pre and post tests, small group focus groups, teacher evaluations, etc.

1997 to 1998
El Paso ISD
Executive Director of Technology

- Provided Free Internet service to four high schools through a partnership with Time Warner Cable.
- Prepared Erate application.
- Developed a strategic plan for technology with a large group of teachers, parents, community leaders, and administration.
- Introduced video conferencing across the district.
- Supervised a department of 52 people.

1992 to 1997
Socorro ISD
Director of Technology

- Implemented the first broadband network for the Socorro District.
- Worked with SBC and Cisco to provide services to each of 30 schools and admin offices.
- Conducted an annual technology fair for all teachers.
- Presented at TCEA with staff development activities.
- Implemented Pentamation across the district for student and finance systems.
- Coordinated all data services in the district.
- Supervised PEIMS submissions.

1990 to 1992
Las Cruces Public Schools
District Evaluator

- Provided assessment and evaluation services for the district.
- Using SAS, prepared reports by downloading files from an AS400.
- Prepared Word documents and PowerPoint presentations.
- Conducted an annual survey of all parents using NCS software and scanning.
- Prepared the annual report card for all campuses and district to include an analysis of all data elements obtained from the student system.

- Responded to all requests for information from the student system.

1969 to 1989
Various school districts in Colorado and New York
Teacher of High School, Junior High School, and Elementary Mathematics

- Taught mathematics at many levels and to special needs students as well as gifted and talented students.
- Worked within a structured system of assessment in the State of New York that included end-of-year state exams.
- Provided leadership within departments of mathematics.
- Received NSF grant to study at the University of Arizona in image processing, as a real world application of mathematics.

Education

- **Ph.D.,** Educational Research and Development - New Mexico State University, Las Cruces
- **M.S.,** Elementary Education - Southampton College of Long Island University
- **B.S.,** Secondary Education and Mathematics - University of New York at New Paltz

PMO Director, Sharon R. Gaston
Professional Experience

2005 to present
Texas Education Agency (TEA)
Director, Project Management Office

- Provide advanced senior-level direction and guidance in strategic operations and planning for the Agency's software development organization. A 100-person organization that develops and maintains 50+ applications that fund, support and monitor the Texas Education System.
- Drive and oversee daily technology goals, objectives and processes in a very diverse development environment that includes: .NET, C#, Java, DB2, Sybase, SQL Server, Oracle, AIX, Websphere and current Microsoft web based architecture.
- Lead project managers to continuously drive improvements in process and best practices.
- Collaborate with CIO, Deputy-CIO, senior staff and customers to develop policies, procedures, priorities, standards, performance measures, business cases and budgets.
- Ensure compliance with all applicable local, state, and federal laws and regulations pertaining to technology.
- Align organization to best leverage the skills and abilities of project managers resulting in increased productivity and quality.

1997 to 2002
Thomson Corporation, Sheshunoff Information Services
Vice-President, TFM Technology

- Responsible for all aspects of technology organization; executed key technology projects and acted as driver for the development of a common architecture across a multi-site organization.
- Built a team of highly motivated and talented individuals that developed and delivered quality products on time and within budget.
- Effectively planned and delivered the first-ever online product line (BankSource), which provided financial institutions with the ability to perform online financial, peer and demographic analysis; acted as project/program manager, from conception to release.
- Partnered extensively with Product Management and other stakeholders to gather and verify customer requirements.
- Ensured key technology initiatives were managed to achieve their objectives within their schedule, budget constraints and quality goals.
- Managed and executed a budget of approximately $7M; directed 40 - 55 staff, including directors, managers, architects, software developers, technical writers and quality analysts.
- Selected to participate in Thomson's Technical Leadership Program, which focused on mentoring and training of potential CTOs.
- Acted as evangelist for the application of appropriate technology in TFM. Development environment included: Sun Solaris, Windows, C++, Perl, VB, Java, Java Script, Oracle, iPlanet Web Server, eMeta eRights and Segue SilkTest and SilkPerformer.

Director, Development Services

- Established industry-standard technology, software development lifecycle and methodologies across development organization.
- Promoted intra and inter-departmental communication, collaboration and cooperation to facilitate cross-departmental planning and problem solving; effectively realigned development services to leverage best talent.
- Introduced and implemented appropriate software development lifecycle across development services teams.
- Developed and implemented plan to streamline release processes while increasing reliability, repeatability and quality.
- Introduced automated test tools (Segue SilkTest and SilkPerformer) and training, as well as test development methodologies and automated testing drastically reduced manual test effort by >60%.

1996 to 1997
Tivoli/IBM Corporation
Manager, SW Production and Tools

- Interviewed, hired and managed an 8-person team of employees, co-ops and contractors responsible for providing and supporting production-level builds of software product releases, including new, maintenance and patches.
- Developed tool to support a multi-platform development environment; implemented for build and tools helpdesk.
- Planned and managed conversion of Tivoli's SW configuration management and bug tracking systems from CVS and Scopus to CMVC.
- Developed custom tools, evaluated and deployed commercial tools, and investigated and recommended productivity enhancement tools and technologies.

1992 to 1996
Tandem Computers
Manager, SW Engineering Tools and Services

- Recruited and managed a 10-person team of employees, co-ops and contractors
- Provided and supported software development tools, including software. configuration management, test management and document management as well as, build tools and services.
- Developed custom tools, evaluated and deployed commercial tools, and investigated and recommended productivity enhancement tools and technologies.

Program Manager

- As Software Program Manager for major UNIX software releases on Tandem's UNIX-based Integrity line, led team of cross-functional organizations, including operating system, communications software, 3rd-party software, publications, manufacturing and system quality assurance, software builds and release, etc. In a 100-person development team effort for major software releases.
- Developed, tracked and coordinated program/project schedules; assigned and tracked program/project action items and issues.
- Planned and ran project and program reviews; produced SW program documentation, and coordinated and tracked SW program resources.

- Presented quarterly status of software program/projects to executive staff.
- Developed and managed software project plan for next generation product line, supporting local and remote site development efforts, and project plan for continuing releases of an existing UNIX product line that received a quality award for least defects found in a deployed product

2003 to 2005
Stone Valley Group, LLC
Co-Owner – Curves Franchise

- Negotiated and executed all aspects of start-up operations, including locating and purchasing commercial real estate, negotiating construction contracts, and setting infrastructure and procedures in place.
- Oversaw incorporation, obtained permits and licensing.
- Interviewed, hired and managed independent contractors.
- Opened club and administered and executed all aspects of business, including sales and marketing, accounting, personnel administration, training, procurement, customer service and club operational policies and procedures.

Education

- M.S., Computer Systems Management – University of Maryland
- B.S., Electrical Engineering – Illinois Institute of Technology

Manager, Technical Support and Customer Service - Eduardo Esquivel
Professional Experience

2007 to present
Texas Education Agency

Manager for the Technical Support and Customer Service, Information Technology Services Division.

- Responsible for managing the outsourced Data Center Services Contract (DCS Contract) with IBM. The DCS Contract supports all mainframe and server services and applications for TEA. The total contract amount is about $7.5 million for FY09.
- Responsible for managing the Seat Management contract With Northrop Grumman, supporting over 1300 workstations ad laptops and valued at $1.2 million annually.
- Oversees the TEA network.
- Manages the Statewide Emergency Notification System (SENS) staff.

1995 to 2007
Department of Information Resources

Director of the Telecommunications Services Division

- Managed approximately 90 staff and $90 million in telecommunication contracts.

Director of Enterprise Operations Division

- Managed 26 professional staff.
- Oversaw the 2000 SSPIRM, the DIR Security Section, and creation of the electronic government portal now referred to as TexasOnline.
- Participated in the Telecommunications Planning Group.
- Oversaw various agencies IT reporting functions.

Manager of the Statewide Standards Section

- Supervised 12 staff in setting statewide IT standards and completing the Statewide Strategic Plan for Information Resources Management (SSPIRM, 1998).

Supervisor of the Network Information Center

- Managed 5 staff and oversaw the video network and network help desk.

1993 to 1995
Spectrum Consulting Group.

Senior Project Manager

- Worked on a data center consolidation project for the state of Michigan and a private hospital chain.

1990 to 1993
Department of Information Resources

Telecommunications analyst

- Assisted in setting state standards and overseeing agency projects.

1984 to 1990
Comptroller of Public Accounts (Texas)

Various IT roles.

Education

- B.S., Computer Science – Baylor University
- Certificate in Telecommunications from the University of Texas at Austin
- Board member of the National Smart Card Forum

PEIMS Business Analyst – Bryce F. Templeton
Professional Experience

1989 to present
Texas Education Agency

Systems Analyst – Enterprise Data Management – PEIMS unit, 2008 – present

- Oversees the PEIMS Information Task Force and Policy Committee on Public Education Information Advisory Committees.
- Develops data collection system changes in collaboration with the sponsoring program areas for presentation to the ITF and PCPEI committees.
- Provides school district, ESC, and TEA information support for the PEIMS Data Standards and the PEIMS reporting requirements.
- Updates PEIMS data code tables on the mainframe and the TEA public locations.
- Provides assistance with a variety of tasks related to the daily operations of the PEIMS division.
- Researches problems identified by end users to determine the cause and recommend a solution for correction.

Systems Analyst – Information Analysis, Accountability and Data Quality – PEIMS Division, 2005 – 2008

- Provided school district, ESC, TEA, and division information support for the Student Attendance Accounting Handbook and the PEIMS Data Standards.
- Updated PEIMS data documentation sources on the mainframe and the TEA public locations.
- Provided assistance with a variety of tasks related to the daily operations of the PEIMS division.

Systems Analyst – Information Analysis, Accountability and Data Quality, 2003 – 2005

- Served as a member of the PEIMS Ad Hoc Programming unit as a SAS Programmer responding to open records requests for PEIMS data and other educational data managed by the Texas Education Agency.
- Continued to provide support to the Safe Schools unit for the implementation of the web based Annual DAEP Evaluation System.
- Provided school district support through the Louisiana Student Records Helpdesk for the Louisiana Student Records system established after Hurricane Katrina. This function developed into providing school district support after Hurricane Rita also.

Systems Analyst – Safe Schools, 2000 – 2003

- Responsible for all data activities related to the Safe Schools program.
- Maintained the relevant portions of the PEIMS Data Standards and the Student Attendance Accounting Handbook.
- Provided telephone and general support answering all manner of student discipline questions related to the PEIMS 425 record and “student attendance” from school districts, education service centers, and the general public.

- Served as the SAS programmer for the Safe Schools program responding to all manner of student discipline data requests from other state agencies, the legislature, TEA departments, and the general public.
- Provided assistance, guidance, and monitoring of contractors building the current web-based versions of the Annual DAEP Evaluation, the Discipline Data Errors Analysis System, and the Risk Based Analysis System for the Safe Schools program. The PEIMS 425 Data Error Analysis System, and the Risk Based Analysis System are two-way information delivery systems that communicate with school districts and allow school districts and TEA Safe Schools unit to communicate student data related information via the web in a secure environment.
- Provided on-site training related to Texas Education Code Chapter 37 and PEIMS 425 record data reporting for school districts and education service centers.
- Analyzed the Safe Schools program PEIMS data for problems related to data quality and data content and implemented adjustments to the collection standards to remedy problems.
- Represented the Safe Schools program before the Information Task Force and the Policy Committee for Public Education Information when petitioning the committees for changes to the PEIMS data collection standards for the PEIMS 425 record.

Systems Analyst – PEIMS Data Planning, Information Systems, 1994 – 2000

- Responsible for the contents and annual publishing of the Student Attendance Accounting Handbook and conducted student attendance accounting training for school districts and education service centers.
- Assisted with the annual update of the PEIMS Data Standards and provided PEIMS data reporting training for school districts and education service centers.
- Provided telephone and general support answering all manner of questions related to PEIMS data and "student attendance" from school districts, education service centers, and the general public.
- Analyzed PEIMS data for data quality problems and recommended adjustments to the collection standards to remedy data quality problems.

Auditor – School Financial Audits, 1989 – 1994

- Conducted onsite attendance/financial audits of school districts, performance audits of education service centers, and attendance/financial desk audits of school districts.
- Participated as a team member on school district and education service center audits and school district complaint investigations.
- Served as a team leader on school district audits and complaint investigations.

1987 to 1989
Wimberley Ace Hardware
Store Manager

- Responsible for daily operations of a retail establishment with approximately 18 employees.
- Responsibilities included opening/closing of store, purchasing/ordering merchandise, merchandising products, sales of products, customer/community relations,

supervising/scheduling employee work, banking activities, and various other activities associated with a retail operation.

Education

- **BBA,** Accounting - Southwest Texas State University

Business Analyst – Susan K. Lambert Lindley
Professional Experience

2005 to present
NF Consulting (Client: Texas Education Agency)
Business Analyst

- Gathered requirements and designed workflow process improvement for educator certification and legacy data collection system migration projects.
- Facilitated Joint Application Design(JAD) meetings for multiple projects.
- Designed and improved workflow for Federal and State grant programs entitlement calculations.
- Automated processes between online eGrants application system, agency accounting system and Federal and State grant programs entitlement system.
- Streamlined processes for Federal and State grant programs entitlement calculations and Educator Certification.
- Developed and documented Use Cases for Federal and State grant programs entitlement calculations and Educator Certification.
- Faciltiated user acceptance testing meetings for .Net Application.
- Worked with Testing group on continuous integration procedures.
- Pioneered Proof of Concept Project for IBM Websphere Business Modeler and Integration Developer.
- Mentored fellow Business Analyst on information design, requirements tool and Adobe products.

2004 to 2005
Cabrera Consulting (Client: Texas Education Agency)
Business Analyst

- Gathered requirements for Federal and State grant programs entitlement calculations.
- Produced Software Requirements Documentation.
- Designed orchestration process improvement design for web-based grant program implementation.

2003
Freelance
Requirements Analyst and Information Design

- Conducted strategic analysis, content strategy and Information Design for multimedia company.
- Tutored clients in Web Design, Work flow diagramming, web programming and Flash.
- Provided information design analysis and project management for multiple clients.
- Assisted in office duties for Duchesne Academy and developed documentation for Real Estate packages.
- Developed interactive work process for email campaigns.
- Developed and maintained web solutions.
- Developed SAP ABAP FI/CO and BW, cultivating data warehousing skills, Interactive Reporting, SAP Script, Bex Explorer, Analyzer and Web Designed/ITS.
- Refined User experience skills and User Acceptance Training.

2002
Rational Systems LLC.
Requirements and Usability Specialist

- Developed and wrote UI standards, user scenarios for Oil and Gas Swing application development through formal user interviews, requirement assessment and Use Case workshops.
- Constructed all User Experience, Business Requirements and Process Design documentation and maintained documentation in Requisite Pro.
- Contributed to lifecycle development coordinating front-end and back-end development and solving usability issues and streamlining information flow.
- Utilized Mercury Test Director through logging, accessing and updating bug reports.
- Developed Reporting Requirements, data warehousing strategy, work flow and Use Case scenarios (UML).
- Developed Functionality Requirements (global, secondary and tertiary functionality).

2001
SBC
Associate Director of Small Medium Enterprise for eBusiness Development

- Managed/Developed B2B small business portal offering web services, CRM, hosting, directory operations and e-store functionality.
- Developed Business Plan, Implementation, Functional Specification strategy for Web Services.
- Developed User Experience strategy, Functional Design Requirements and UML diagrams pertaining to CRM applications.
- Wrote whitepaper on Web Services and single sign-on strategy.
- Developed technical standards, requirements for a Microsoft solution utilizing. Net, Passport, Commerce Server 2000 and Site Server.

2000 to 2001
Sapient
Internet Programmer

- Developed and maintained technical standards for learning management systems.
- Managed technical development specializing in Requirements Definition, Development of training modules, and scalability issues.
- Developed web based learning modules (technical production and content development) for sales teams and children's learning games utilizing Microsoft solutions.
- Conducted User Testing scenarios, Use Case development, Usability Testing for web based training modules and multi-tiered ATG solution.
- Facilitated Use Case; identifying all database schemas, UML design, information design, User Interface functionality, business requirements, marketing requirements and functionality.
- Constructed workflow diagrams and ERD's for web-based training modules, e-learning site and e-commerce.
- Researched Business Strategy factors on Rich Media, Digital Video, Video on Demand, ITV and Interactive Television.

- Website developed while at Human Code – www.leapfrog.com, www.smashcast.com.

1999 to 2000
TAC Worldwide (Client: IBM)
Graphic Designer/Software Development Strategist

- http://www.ibm.com/e-business/crm/index/html
- IBM e-commerce Web Self Service Start Now Starting Point. Solutions using Drumbeat 2000.
- Developed use case development, functionality requirements, business requirements, process, User Interface and focus for implementation of Customer Relations Management.
- Highlighted CRM workflow and process analysis.
- Conducted all user testing and user analysis.
- Designed all design elements using Adobe Photoshop, Illustrator, and Flash.
- Designed and tested installation tool through ten scenarios.

1999
Burnett Personnel (Client: Texas Banker's Association)
Web Designer

- www.texasbankers.com
- Worked with FrontPage, Access, QuarkXpress, Photoshop, Illustrator and Acrobat.
- Developed basic navigation, content and Information Architecture.
- Developed web administration for the web site.
- Built and utilized ASP for Member Directories and Bank. Directories (Access).
- Identified technical requirements, system analysis and design.
- Developed system architecture and analysis.

1995 to 1999
EMBO Productions
Founder/ Web Developer/Strategist

- Created/designed web pages, content and CD-Rom development.
- Identified business requirements and process for clients.
- Identified process refinement and programming sequence for all projects and software development.
- Developed technical requirements, such as system analysis.
- Utilized the following skills: HTML, JAVA, VB, ASP, PERL and SQL.
- Designed Web Pages for the University Of Southern California Athletic Department, USC main site and Career Center.
- Worked with JAVA, PERL, HTML, Macromedia, Shockwave, Adobe Photoshop, Java, Perl and C++.

EDUCATION

- B.S., School of Business Administration – University of Southern California.

PEIMS Analyst – Candice M. DeSantis
Professional Experience

2006 to 2008
Texas Education Agency

Systems Analyst IV, 2008 to present

- Provide technical support on the use of the Edit+ application as well as policy interpretation on how data is to be reported.
- Oversee the PEIMS data collection and verifies that all districts have submitted the required data.
- Develop requirements for PEIMS Edit+ application.
- Review systems requirements specification and physical design documents with the software vendor.
- Plan and conduct user acceptance testing.
- Coordinate with the software vendor to resolve issues.
- Provide training to ESC staff and software vendors on new functionality.

Systems Analyst III

- Performed business process analysis for the Public Education Information Management Systems (PEIMS) and applied quality assurance concepts for PEIMS rules and procedures documents.
- Maintained, monitored, and updated the PEIMS Data Documentation and was responsible for planning and implementing revisions on a scheduled basis as well as maintaining documentation on procedures to update Data Documentation manual and code tables.
- Used QMF and SQL to query PEIMS data in order to verify data for Data Documentation.
- Performed analysis of PEIMS data and applied quality assurance concepts for views and code tables.
- Documented each field of PEIMS views and works with database administrators, data modelers, programmers and users to obtain information for documentation and quality assurance.
- Worked with TEA business experts to plan and implement revisions to the PEIMS Data Standards and with appropriate TEA analysts to ensure that Data Standards edits (rules), examples, codes, record layouts, and data elements are documented accurately and that all data collection implications are considered during updates.
- Participated in planning and presenting training programs to TEA and support organization on the PEIMS Data Standards.
- Participated in the testing of new application development for PEIMS web applications.
- Produced test cases for and participates in the User Acceptance Testing of the Texas Records Exchange (TREx) program as well as the EDIT + software application.
- Utilized the Software Requirements Specifications to create test cases.
- Provided backup support for the PEIMS customer support when the primary is unavailable.

2000 to 2006

STG, Inc.-Operational Test Command-Contractor (Ft Hood, TX)

Assistant Database Administrator

- Responsible for access to various computer files, issued/changed passwords, maintained/changed employee information and ensuring its confidentiality.
- Installed and configured Operating systems, to include Windows 2000/XP, on development servers.
- Generated basic SQL tables, stored procedures and views.
- Copied and duplicated SQL databases between NT servers with database verification.
- Troubleshot client/server problems/procedures.
- Created monthly IT Metrics reports using Microsoft Access.
- Met with customers to gather system requirements and specifications for modification to Service Desk software.
- Analyzed software to determine if requirements could be satisfied.
- Performed development testing of Service Desk.

Technical Writer/Trainer

- Created and maintained Interactive Electronic Technical Manuals (Items).
- Responsible for converting existing Elms into a WEB compatible product to ensure that they are in compliance with Army Regulations.
- Created/maintained training materials.
- Provided customer support and assistance to include troubleshooting software problems in support of all ATEC Management Systems.
- Provided students with a working knowledge of how to perform and debug 'Adhoc queries' using the RAM2000 Access97 database.
- Performed duties as an Alpha and Beta tester supporting the new development of ATEC Management Systems.

1999

TECOM – Contractor (Ft Hood, TX)

Supply Clerk

- Spare parts ordering for equipment used to maintain Family Housing.
- Obtained competitive pricing on all parts ordered.
- Coordinated appropriate delivery of orders.
- Created purchase orders.
- Worked with accounts payable to receive invoices for payments.
- Inventory control and audit and receiving of spare parts.
- Provided training to new associates.

1995 to 1998

CompuCom Systems, Inc.

Buyer

- Warranty and non-warranty parts ordering for automation hardware.
- Focal point for issues relating to responsible product line/manufacturer.
- Investigated and initiated with management new sources for parts procurement assuring competitive pricing, acceptable quality standards and minimal return rates.
- Assisted in resolutions of incoming calls from the field.

- Provided training to new associates on responsible team.

Assistant Buyer
- Warranty parts ordering.
- Negotiated timely delivery for purchase orders.
- Supported follow-up activities to expedite the delivery of products.
- Assisted in the timely physical processing of all vendor rejected parts

RTV Analyst
- Inventory Control and Audit.
- Warranty processing & return authorization for parts.
- Reported planning & analysis.
- Daily contact with 50+ separate vendors.
- Attendance in meetings to improve efficiency of warranty claims & parts return process

1992 to 1995
United States Air Force, Inventory Management Specialist
Holloman AFB, NM
- Reviewed, researched, and processed incoming customer requests.
- Responsible for updating item records in database.
- Conducted warehouse validations and assisted inventory personnel in identifying and resolving discrepancies.
- Processed issue requests required to support the F-117A maintenance complex.
- Provided technical support and coordinated reconciliation's and inventories for nine supply points.

Education
- B.S., Computer Information Systems, Cum Laude – Tarleton State University
- A.A.S., Information Technology, Honors – Central Texas College

Project Manager – Paige Tung
Professional Experience

2004 to present
Texas Comptroller of Public Accounts
Project Manager, 2006 – present

- Timekeeping Project
  - Managed team of 12 IT, 4 trainers, 4 HR, and over 200 business team members to bring in an existing timekeeping system, retrofit it to the local environment, and make modifications for scalability.
  - Managed software development of modified system with hands-on in creation of architectural design, system design, report designs, test design, test cases and test execution cycles.
  - Created training strategy and offered various training methods including manuals, CBT and webinars to 200 trainers and 3000 employees.
  - Standardized agency activities and directed the defining of division-specific activities.
  - Managed the changes in agency policies to accommodate the use of an agency-wide timekeeping system.
  - Created the implementation plan for rolling out the new system and retiring existing systems.
- Legislation Projects
  - Implemented legislation for Local Revenue changes across all affected divisions through software, policy, and procedural changes
  - Implemented legislation for Amnesty period to waive interest and fees for qualified taxpayers that brought in $120 million in revenue
  - Implemented legislation for cigarette and tobacco wholesalers and distributors changes to report electronically the revenue and distribution of their products for audit purposes
- Employee Information on the Web
  - Managed team of 13 software engineers, customers, and technical support to develop and implement a web (Java) application to display earnings statements, leave summaries, and personal profile information in browsers
  - Planned, managed, and tracked tasks, milestones, risks, issues, and documentation
  - Conducted regular project meeting to communicate status, mitigate risks, and work issues
  - Created software requirements specifications
  - Created software design document
  - Created the test plan, test specification templates, test cases, and test results reports
  - Executed pre-acceptance tests prior to customer acceptance testing
  - Performed regression and load testing
- Enterprise Project Management (EPM) Implementation
  - Managed team of project managers and consultants to implement enterprise project management tool
  - Designed the architecture for the EPM solution
  - Tested the installation and configuration of MS Enterprise Project Management

- Created training materials for EPM Project Management and Project Web Access classes
- Trained project managers, business analysts, and team members

Business Continuity Planner, 2005 – 2006

- Developed and secured adoption by agency head for high-level, agency-wide business continuity and recovery policies and detailed standards and guidelines
- Designed and conducted business impact analysis
- Developed appropriate recovery strategies for various key processes
- Designed, planned, and conducted table top exercises for divisions and sections of the agency
- Planned and conducted semi-annual hot site testing
- Planned and conducted command center drills for agency executives
- Created executive reports on status and findings for business continuity and recovery preparedness
- Implemented SAN at the Disaster Recovery Operations Center

Service Desk Team Lead, 2004 – 2005

- Workstation Deployment Project
  - Developed process/workflow for deploying new workstations to users and returning old workstations to the vendor
  - Improved process for tracking leased equipment by analyzing current data, gathering user requirements, analyzing new system capabilities
  - Coordinated with SME Task force to resolve issues during a deployment so users get improved computer working environment with minimal downtime
- Customer Service Quality Assurance Program
  - Trained Help Desk and End-User Services on Information Technology Infrastructure Library (ITIL) s
  - Administered Computer Associates ServicePlus Service Desk system
  - Created project definition, implementation proposals, quality assurance plan, test plan, detailed task plan (MS Project) documents
  - Developed web-based issue and task tracking application
  - Created process and procedures approval process, Help Desk ticket process, problem management process, software installation process
  - Created process and procedures templates for standardization of documentation
  - Documented procedures including password resets, Help Desk operational procedures, Help Desk administrative procedures, asset management procedures
  - Created guidelines for call handling, assessing priority and impact, and categorizing incident calls

2002 to 2004
Texas Treasury Safekeeping Trust Company
Senior Systems Analyst

- Developed financial information systems
  - Performed requirements gathering with business users by conducting and facilitating meetings to produce an SRS

  - Performed project planning and feasibility studies to establish high-level view of project and to determine goals and objectives
  - Performed systems/software analysis by refining project goals, analyzing end-user information needs, and operation of intended application through UML use cases
  - Led team of software engineers through systems design by detailing features and operations through screen layouts, process diagrams, pseudo code and other verbal and written communication
  - Led team of software engineers through implementation, integration, and formal testing (functional, interoperability, load/stress, performance, acceptance)
  - Conducted acceptance testing with business users
  - Installed, deployed, and maintained application systems
- Provided advanced programming and systems analysis in support of investment (QED IMS-2000) and banking/financial applications of a treasury management system
- Developed web interface to investment and banking applications for customers to view accounts
- Schedule, test, install, and implement technical programs
- Write test plans and coordinate testing and verification of program performance
- Developed, implemented, and maintained Business Continuity/Disaster Recovery Plan for entire company. Led team of business unit leaders to perform business impact assessment, risk assessment, and risk management for critical business functions to resume business in event of a disaster.
- Implemented backup systems for securities trading, securities and funds custody and settlement, and accounting check disbursements and bond issuance
- Established information security policies and procedures in accordance with GAISP for company as Information Security Officer

1999 to 2001
Motorola, Inc.
Quality Assurance and Test Manager

- Lead team of 7 system and test engineers in test case/instruction development, execution, and test automation
- Coordinated with Project Management, Development, Support, and Documentation groups to deliver products on time and within quality goals
- Developed QA procedures, including inspections, reviews, test reporting, results analysis, and integrated quality assurance methods into software development process
- Evaluated and recommended requirements tracking tools, defect tracking tools, and test tools
- Lead testing of PXP2101 intelligent edge networking platform
- Wrote system test plan and system test report for the PXP2101 platform
- Partnered with multiple third-party vendors (hardware, software, OS, and subcontractors) to ensure they developed and supported their portions of the product
- Managed the defect tracking system to ensure that problems were addressed properly
- Wrote programs and scripts to monitor testing progress for reporting purposes and wrote scripts to automate test setup and test execution
- Developed, implemented, and maintained vendor acceptance test plan
- Developed training modules for new products

1997 to 1998
Decision Consultants, Inc.
AIX Support Development Engineer at IBM

- Designed and managed a variety of web-related projects using:
  - Web-based call management system
  - Web-based application for creating and managing problem reports
  - Web-based application to allow customers to order AIX fixes using C, HTML, and JavaScript
- Level 2.5 support transition group member responsible for handling customer support calls involving Java, network stations, web browsers and servers, and X-stations
- Developed testing process and procedures to be used by all projects within group

1995 to 1997
Ericsson Network Systems, Inc.
Software Development Engineer-Team Lead

- Team lead responsible for designing, developing, and maintaining software components of SS7 Common Channel Signaling (CCS) Subsystem within company SDLC model
- Implemented team-based design methodology in software development process which includes "1/3 presentations," design reviews, code inspections, and test instruction reviews
- Team lead for project implementing SCCP functions for Local Number Portability
- Produced requirements and function specifications and implementation proposals for project
- Moderated/facilitated documentation reviews and code inspections for team
- Technical writer and editor for SCCP and MTP operations and maintenance

1993 to 1995
Cooperative Computing, Inc.
Software Engineer

- Projects
  - RDB Sales History - worked with team to design, develop, test, and implement new application using Ingres ABF, SQL, and Report Writer
  - CCI Online - designed and developed internal productivity tool that converted company library into an online information retrieval system using C, Ingres RDB, and shell scripts
  - Automated Vendor Returns System - developed an automated system for returning parts to vendors
  - On-Screen Part Edit - developed standard technique for present and future on-screen edits
  - Implemented J-CON Store Systems

Education

- Graduate Level Courses, Telecommunications Networks, Data Communications – Southern Methodist University
- B.A., C.S. – University of Texas at Austin

Information Systems Sponsor – Susan E. Brown
Professional Experience

1987 to present
Texas Higher Education Coordinating Board

Assistant Commissioner, Planning and Accountability Division, 2005 – present

- Provided leadership and worked with the Texas Education Agency on the creation of the Education Research Centers in a manner that meets all FERPA regulations.
- Responsible for the initial development of the higher education Accountability System developed in 2004.
- Currently, the operations of the Educational Data Center which is responsible for receiving data from Texas institutions, reports to her.
- Also oversees a range of activities for the agency including development of the funding formulas under which Texas institutions receive a major portion of their state appropriations; review of facilities projects at universities, health-related institutions, and technical and state colleges.
- Is responsible for making updates to the state's higher education plan, *Closing the Gaps by 2015*.

Deputy Assistant Commissioner, Planning and Accountability Division, 2005 – 2005

- Worked on streamlining the processes of the newly formed Planning and Accountability Division.
- Provided staff support for the Board review and revision of the *Closing the Gaps* Goals and Targets.
- Provided data and support on an ad hoc basis for legislative, system, institutional and other requests.
- Provided analysis for fiscal notes in the planning area.
- Worked with staff to begin review of the Space Planning Model and Space Utilization Model for accuracy and effectiveness.
- Developed procedures for implementation of the "Research PC" which allows external researcher access to the Coordinating Board data without violating FERPA regulations.

Director of Planning, Planning Division, 2001 – 2005

- Provided leadership and support in the development and implementation of the statewide accountability system for the public universities, health-related institutions, and the state and technical colleges in response to Governor Perry's directive.
- Worked with institutional committees to develop group targets for the accountability system.
- Provided analysis of statewide data for the higher education plan, *Closing the Gaps by 2015*, using Excel and SAS.
- Provided data and developed presentations for the Commissioner and Assistant Commissioner on progress toward the goals and targets of *Closing the Gaps.*
- Provided data and statistical support for legislative and other requests by applying SAS to data collected by the Coordinating Board.
- Provided data and support on an ad hoc basis for systems, institutions, and other divisions.

- Prepared special reports as needed on statewide higher education planning and policy issues.
- Developed and maintained information on other states that the Coordinating Board uses for comparisons.
- Responsible for the agency Strategic Plan and the Higher Education Regional Report.
- Wrote fiscal note analysis for legislative bills concerning planning.
- Developed and updated the Participation and Success Forecast using SAS and Excel. Agency contact for the Texas State Data Center.

Assistant Director of Planning and Research, Research, Planning and Finance Division, 1990 – 2001

- **Planning:** Assisted in the development and updating of the Master Plan for Higher Education, the Coordinating Board Strategic Plan, and the Community College Strategic Plan.
- Assisted in the monitoring of progress made by the state toward achieving goals included in the Master Plan and Strategic Plan.
- Prepared special reports as needed on statewide higher education planning and policy issues.
- Analyzed statewide database information, developed charts and statistical tables. Developed and updated statewide enrollment forecasts.
- **Research**: Established and maintained a Management Information System for the Advanced Research Program and Advanced Technology Program grant proposals and awards.
- Recruited reviewers and provided staff support for peer review of proposals and prepared analyses on reports related to research projects.

Planning Assistant, Planning Division, 1988 – 1990

- Assisted in development of the Master Plan for Higher Education.
- Analyzed statewide database information using SPSS or other software packages.
- Developed special reports for statewide planning and policy issues.
- Produced enrollment projections for statewide higher education.
- Computerized data and tracking systems using dBASE IV.

Data Analyst III, Community and Technical Colleges Division, 1987 – 1988

- **Planning**: Consolidated and prepared data for statewide analysis of apprenticeship and contact hour disbursement for community and technical colleges.
- Designed the organization of comparative data on enrollment and degrees awarded for distribution to colleges.
- Assisted the Program Director with statewide planning procedures.
- **Programming**: Prepared special reports as needed on statewide basis.
- Developed tracking system for federal Carl Perkins Funds using Lotus 123.
- Designed tracking system for discretionary grant applications and approval with dBASE III Plus.
- Collected and analyzed statewide and institutional information on request utilizing Lotus 123, DBASE III Plus and Magna 8 for use by Program Directors and Assistant Commissioner.

- **Program Support**: Assimilated and maintained general academic, vocational-technical, adult and out-of-district course inventories for 69 community college and technical institute campuses.
- Organized and distributed course data reports by institution and program area upon request using AZ7 or Magna 8.

1980 to 1986
Welex, A Halliburton Company (Renamed Halliburton Logging Company)

Education

- B.B.A., Marketing – Texas A&M University, College Station

Technical Project Director – Darla Fent
Professional Experience

2004-present
Texas Higher Education Coordinating Board
Assistant Commissioner for Information Technology Services
- Implemented the Helms Student Loan System.
- Consolidation of the agency data center into a centralized state-wide datacenter.
- Expanded support for research data repositories.

1995–2004
Tarleton State University
Executive Director, Information Resources
- Consolidated technology support to improve quality and service.
- Implemented SunGuard's Plus (1995) and Banner (2003-2004) student information systems.
- Strategic planning for technology and coordination of implementation and management.
- Responsible for Texas A&M System and Texas state reporting.

1990-1995
Texas Woman's University
Team Leader/Project Manager
- Administrative Computing: Implemented Datatel's Colleague student information system.
- Academic Computing: Managed the Academic general-use and classroom computing Labs.
- Supported graduate and faculty research projects.
- Implemented a help desk for technology support.

1989-1990
Electronic Data Systems
Systems Engineer
- Developed a health care support system for physicians.
- Served on the open-systems architecture team.

1982-1989
Tarleton State University
Assistant Director of Computing Services
- Implemented the EDEN student information system as a beta site.
- Served on the vendor design team.

1979-1986
Swine Consulting Group
Contract Programmer (full time 1980-1982)
- Designed and developed a herd management system.

- Designed and developed a facility startup projection system for use in developing countries.

1974-1980
Texas Youth Commission
Programmer/Analyst to Project Manager

- Provided data for court interrogatories and legislative impact statements.
- Supervised contract programmers during development of an in-house student-tracking system.
- Served as the developers project manager during two major software development contracts

Education

- B.A., Math - Mary Hardin-Baylor
- B.S., English - Mary Hardin-Baylor
- M.B.A. - Tarleton State University
- Ph.D., Information Science - University of North Texas

EDC Project Director – Doug Parker
Professional Experience

1986–Present
Texas Higher Education Coordinating Board

Director, Educational Data Center, 2007 – present

- Directs the data collection activities of the Educational Data Center.
- Oversees the development of the statewide data standards and reporting policies for all Texas Higher Education institutions.
- Maintains a comprehensive data collection system for collecting necessary data and that the data is comprehended by the reporting officials and THECB staff.
- Coordinates data collected as closely as is possible to the due date and is certified for use in the shortest time possible after icollected.
- Coordinates development of the Educational Data Center (EDC) computer systems with systems development personnel.
- Coordinates special projects undertaken by the EDC for completion in a timely and professional manner.
- Coordinates EDC projects within division sections and with institutions.
- Trains data analysts and institutional organizations as requested.
- Plans, schedules and assigns data collection projects.
- Analyzes proposed computer applications and supervises data analysts and provides technical assistance to subordinate personnel.

Project Manager, Application Support, 2001 – 2007

- Supports the Educational Data Center. Responsible for directing application development staff to enhance existing systems and develop new systems to support the Educational Data Center.
- Work involved coordination of activities with Network Operations, other divisions within the agency, Texas higher education institutions and contracted vendors and service providers.
- Experience in project planning, requirements gathering and resource allocation

Programmer/Programmer Analyst, 1986 – 2001

- Progressively responsible positions in the Information Resources Division of the agency initially supporting the Student Services division.
- In 1989, became the sole programmer supporting the Educational Data Center. (EDC).
- Worked closely with the EDC Director and staff members to identify new processes that would increase the efficiency of the editing process.
- Modified existing programs, wrote new programs as new processes, and CBM reports were identified, tested and implemented the programs and processes to production.
- On call to correct interruptions in the daily edit processing.