

Virginia's Teacher Quality Data System: The Teacher Education and Licensure System (TEAL II)

Background and Need for the Data System

Established in 2000 by the Board of Education (BOE) and the State Council of Higher Education for Virginia (SCHEV), the Joint Task Force on the K-12 Teaching Profession in Virginia was directed to develop recommendations for enhancing the teaching profession. Cochaired by a member of the BOE and SCHEV and with broad participation from all education constituencies, the Joint Task Force presented a draft report to the full membership of the BOE and SCHEV in June 2001.

The Joint Task Force recommended the establishment of a permanent advisory body consisting of policymakers and constituent groups to develop and implement a comprehensive state plan to ensure a highly qualified teacher in every classroom. Based on this recommendation, the Committee to Enhance the K-12 Teaching Profession in Virginia was constituted. Its groundbreaking report, *Stepping up to the Plate... Virginia's Commitment to a Quality Teacher in Every Classroom* (<http://www.pen.k12.va.us/VDOE/newvdoe/teached.html>), lay the foundation for a \$13.5 million Teacher Quality Enhancement Grant from the U.S. Department of Education, awarded in September 2002. The grant provided the money needed to achieve one of the committee's first priorities: "The development of a data-collection system to provide credible and reliable information on teacher and teaching quality indicators."

In *Stepping up to the Plate* the Committee to Enhance the K-12 Teaching Profession in Virginia identified the following six activities for the new system:

1. Collect data on the qualifications of Virginia instructional personnel.
2. Collect data that will enable schools and divisions to better understand how to affect teacher retention and effectiveness.
3. Access data on the supply of potential teachers.
4. Collect data that will enable institutions of higher education and schools and divisions more effectively to predict and respond to potential shortage areas.
5. Collect data that will support research efforts to enhance teacher education programs and to explore the links between teacher effectiveness and student achievement.
6. Require teachers to provide accurate, timely, and current information.

The new data collection would be designed to address five acknowledged problems cited by the committee:

1. Fragmented agency responsibility for data collection;

2. Lack of personal identifiers, which are needed to track teachers throughout their careers;
3. Different schedules of data collection;
4. Nonstandardized data definitions and lack of uniform reporting by divisions; and
5. No link between teacher preparation databases and those used by the Department of Education.

The report also called for the creation of a new Center for Research on the Teaching Profession to advance the research agenda on teaching quality (TQ). Although the center was not funded by the grant and has not been established, a research committee of primarily college faculty and program administrators has been formed to advise the process.

Process for Bringing It All Together

Responsibility for implementing the commitments of the grant was assigned to Dr. Thomas Elliott, Assistant Superintendent of the Division of Teacher Education and Licensure in the Virginia Department of Education (VDOE). The first step taken was the creation of a Request for Proposals (RFP) to build a new system for data collection related to teacher licensure, employment, and assignment—three areas that heretofore had been fragmented and incomplete. By the end of July 2003, the new system—formerly known as the Teacher Education and Licensure system (TEAL I)—was installed and operational. Since then, some enhancements have been added and some phased data collections have been completed. The new system permits the teacher licensure office to computerize transactions related to licensure awards and renewals and to exchange data on teacher employment and assignments with local education agencies in the state. By any measure, the new TEAL I system has been a success.

Following the successful implementation of TEAL I, Dr. Elliott's office sought input from a wide array of stakeholders in the state concerning the design and content of the second phase of the new TQ data system. Most influential in this process was an ad hoc Task Force to Explore the Design of Phase II that included representatives from local education agencies (superintendents and human resource personnel); faculty and administrators from schools of education; members of professional associations; and staff from the VDOE, SCHEV, and the Virginia Department of Community Colleges. In addition to the ad hoc task force, a research committee of faculty researchers and school deans from the Virginia Association of Colleges of Teacher Education (VACTE) were also involved in advising about the new system. Meetings of the various groups were held in the fall of 2003 and a consultant—the Southeast Center for Teaching Quality—was hired to prepare a draft RFP for the new system. The draft was submitted later that fall. In the spring of 2004 the draft was circulated to members of the ad hoc task force. A meeting was held in May in order to solicit their suggestions for modifying the proposal.

The new system—known as TEAL II—was designed to be a comprehensive state-level database for conducting research on matters related to TQ. It was designed as a relational database or a data warehouse in which data would be collected from multiple databases, including TEAL I, college and university program data, SCHEV data on enrollments and degrees, Virginia Employment Commission data on employees participating in the unemployment insurance program, and data from survey databases especially created by TEAL II. Longitudinal in design, data would be refreshed at least once annually. The unit of data collection was to be the individual teacher or teacher trainee. Data would be added to the individual record for a period of at least 10 years. A contract to construct TEAL II was awarded to SCHEV in the fall of 2004. A TEAL II Steering Committee was established in the fall and met a second time in January 2005 to review the data tables that would comprise the relational database.

Stakeholder Involvement

The individuals and organizations involved in planning TEAL II were representative of many interests. VDOE agency staff from offices such as Supply and Demand of Instructional Personnel in Virginia, College and University Program Approval, and Teacher Salaries all sought to have data relevant to their responsibilities. Administrators from teacher preparation programs sought data on outcomes of their program completers that would help them with state and NCATE accreditation. SCHEV sought data that would permit personnel to identify more accurately students enrolled in teacher preparation programs in order to strengthen teacher supply data. College faculty sought data on success of their students once they began teaching. State officials sought better data on teacher turnover and the role of various professional development programs in reducing turnover. Similarly, all stakeholders expressed an interest in data that would help to explain and analyze teachers' career decisions at different stages of their career. Legislative staff sought information on the relative value of alternative programs of teacher preparation.

Discussions by these groups produced a set of questions that, although not exhaustive by any means, was fairly complete and comprehensive and helped to define the data elements and sources that would be used to populate TEAL II. The following eight questions were identified in the TEAL II draft:

1. How many persons are admitted to teacher education programs in Virginia; how many complete them; and how many completers then seek a teacher's license, either from Virginia or elsewhere? What program features and other variables appear to influence these numbers?
2. How many of those who obtain a teacher's license in Virginia obtain teaching jobs in a Virginia public school in the year following completion? What program features and other variables appear to influence these numbers? What factors influence where completers choose to teach?
3. How many program completers do not seek to teach in a Virginia public school but instead teach in a private school in Virginia, take a nonteaching job in Virginia, or

continue their education at a Virginia college or university? For those who continue on in college, how many enroll in coursework or programs outside of education? What variables appear to influence their decisions?

4. How many program completers who enter teaching in the public schools leave their teaching positions in their first year or in subsequent years? How many of these leavers are transfers to another teaching job in Virginia, and how many leave teaching in Virginia altogether? What variables appear to explain their decisions? Do induction programs for new teachers and/or professional development activities for experienced teachers reduce teacher attrition?
5. How many newly trained teachers are teaching classes in which they are not “in-field”? How many newly trained teachers fail to meet the “highly qualified teacher” requirements of the No Child Left Behind Act (NCLB)?
6. How many teachers from each program are effective in getting students to learn? Do individual teacher self-assessments, employer assessments, and student test scores provide adequate and consistent indicators of teaching effectiveness and student achievement?
7. How many experienced teachers leave teaching in Virginia’s public schools each year? How do factors such as school setting, student performance and poverty levels, teaching course loads and course assignments, professional development opportunities, school working conditions, salary levels, and personal or family goals affect their decisions?
8. In which teaching fields, schools, and geographic areas are teacher shortages most severe and most persistent? What are the most promising sources of teacher supply to address these shortages?

These questions guided the design of TEAL II, which included all of the data elements needed to answer them. They led to the definition of key indicators associated with the questions and to the specification of key variables that would be available to analyze them. Put differently, the stakeholders defined what they wanted to be able to learn from TEAL II, and the scope of the system was structured accordingly.

Implementation

The TEAL II database is organized around a personal identifier for individual teachers. The identifier used to add and merge data is the Social Security number (SSN), but it is converted to an assigned identifier that is used in the version of the database made available to the public. The only exception to this procedure is made for individual colleges and universities that can receive data back with SSNs of their own students. The system will inform students how the SSN will be used and protected.

The base record of the teacher will originate from the teacher preparation program, which will have primary responsibility for identifying its students. Assembling the base record

begins by gathering data from applicants at the time they are admitted. Annual updates on the enrollment status and work completed by students are provided as well. When the student completes the program, the final set of data elements will be added to his or her record. Because many of data elements collected during this period will have been sent to SCHEV (the state coordinating board for higher education in Virginia) as part of its ongoing data collection activities, the state will be able to populate the TEAL II database largely from extracts of the SCHEV databases. This is the primary reason that SCHEV holds the contract for building TEAL II. Another reason is that SCHEV is already authorized to receive employment data from the Virginia Employment Commission, data that will permit TEAL II to track teachers who take jobs outside of the public schools in the state. A third reason why SCHEV is best suited to build TEAL II is that it already has historical data needed to populate the database for back years, an advantage that will permit TEAL II to produce data on rates of program attrition and program completion from the outset.

The contract for implementing TEAL II also calls for the development of a standardized survey of program completers one year after they finish and a parallel survey of school principals to be administered at the same time. One purpose of the surveys is to gather data on the effectiveness of new teachers—from the teacher and the principal—as complements to the value-added test data that will become available when Standards of Learning (SOL) scores are added to the VDOE database (due in 2006). Another purpose of the surveys is to gather information about the nature and value of mentoring programs from the perspectives of the new teacher and the school that offers the mentoring. Perhaps the most important purpose of the survey is to gather data from new teachers and principals about the perceived quality of the teacher preparation program. The TEAL II Steering Committee will assist SCHEV in developing the survey instrument and establishing a common survey protocol. Work on this phase of the project has not yet begun.

Costs

Given the outdated technology and limited capacity of the old licensure system, TEAL I was a necessary first step to building TEAL II. Therefore, its cost, or part of its cost, should be added to the cost of the TEAL II system. In the case of both TEAL I and TEAL II, the cost includes the one-time start-up and development costs as well as the ongoing costs of maintaining the systems. The maintenance costs of TEAL II are estimated because the system is in the process of being developed. Development costs are based on contract costs. The use of in-house staff to assist in extracting data, testing and editing, and converting to the new system are not included in the case of the TEAL I development costs but are generally included in the development costs of TEAL II. Therefore, the costs given below in Table 1 provide a fairly complete tally of costs.

Table 1
System Costs of TEAL I and TEAL II

System	Development	Maintenance
TEAL I	\$ million	\$
TEAL II	\$1.624 million	\$200,000 (estimated)
Total		

Progress and Setbacks in Completing TEAL II

Approximately 9 months were required to plan the design and content of the TEAL II system and another 3 months to select a contractor and sign the contract. It will take approximately 2 ½ years to complete the development work, including the design and administration of surveys. Including the time that it took to develop and install TEAL I, the total time required to build a new and comprehensive TQ database will have been approximately 3 years. This is a significant amount of work to do in such a short period.

The establishment of a steering committee to oversee development is an essential step in ensuring that the details of implementation are consistent with the conceptual design of the system. The TEAL II Steering Committee includes the major contributors to the design of the system. They have met twice in the first eight months of 2005 after the newly hired project director had a chance to become familiar with the requirements of the system. A delay in hiring the project director was the major cause of the delay in developing the system. Apart from this delay, there have been no significant setbacks in moving forward. The schedule for the TEAL II Steering Committee at the end of 2005 called for it to meet monthly in order to make up for lost ground. A pilot of the new data system is to be completed by the end of 2006.

Despite this progress there remain a myriad of issues to be settled. First among these is the issue of who will have access to the database and on what terms. It is clear that individually identifiable data will be protected, but guidelines for data suppression and minimum cell counts have not yet been drafted. Who will be eligible to use the data and whether they will be charged for use also have also not been decided. Criteria for approving users have not been established. Finally, the question of what tables and reports will be generated on a routine basis has not been addressed. Most of these issues are scheduled to be addressed by the Steering Committee in the latter half of 2006.

Perhaps most pressing in the long run will be the issue of who ultimately will own the data and who will be responsible for system growth and maintenance. At present, the management of the data system is the responsibility of the State Council of Higher Education for Virginia.