Teacher Work Samples and Accountability Systems:
An In-Depth Study of Successful Implementation at Four Universities Participating in the Title II Renaissance Partnership for Improving Teacher Quality Project

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Kimberly S. Cowley, Susan Voelkel, Nicole L. Finch
Appalachia Educational Laboratory, Charleston, WV

David Holdzkom, AEL Consultant

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writing P.O. Box 1348, Charleston, WV 25325;
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EXECUTIVE SUMMARY

The Renaissance Partnership Project for Improving Teacher Quality was funded in September 1999 by a U.S. Department of Education Title II Teacher Quality Enhancement Grant. Now completed, the project aimed to develop accountability systems to measure and improve teacher candidates' ability to facilitate student learning and achievement. The project was a five-year initiative by 11 teacher preparation institutions in 10 states to improve the quality of their graduates and teachers in local partner schools by focusing attention on PK-12 student learning. All 11 institutions were members of the Renaissance Group, whose presidents, provosts, and deans have collaborated on issues of teacher preparation.

In 2003, AEL staff completed a formative evaluation of the activities of the Renaissance Partnership. That evaluation highlighted the fact that some of the 11 institutions were making more progress than others in meeting project objectives, particularly in developing and institutionalizing teacher work samples (TWS) and accountability systems. As a result, a follow-up evaluation was undertaken at the end of the five-year grant to illuminate the factors contributing to above-average progress in these two areas.

The purpose of this report is to provide a qualitative evaluation of the Title II Renaissance Partnership Project for Improving Teacher Quality, focusing on four institutions that demonstrated above-average progress in the use of teacher work samples, accountability systems, or both. Findings from the evaluation may be used to advance the efforts of other Renaissance institutions to finalize and institutionalize their teacher work samples and accountability systems. The primary audience is the Renaissance staff at Western Kentucky University (WKU) (i.e., the project director and originator of the request for an evaluation). Secondary audiences include U.S. Department of Education staff, staff from the 11 participating universities, and others interested in improving teacher quality and student learning.

AEL staff contracted with WKU Renaissance staff to carry out the evaluation using a case study approach of multiple-day site visits at selected institutions. The site visits served as the basis for data collection pertaining to the following questions: (1) To what extent have the teacher work samples and accountability systems of the Renaissance project been developed at the selected institutions? (2) What factors, activities, and processes have contributed most to progress toward institutionalizing teacher work samples and accountability systems at the selected institutions? (3) What recommendations, based on findings from selected institutions, would likely result in greater effectiveness and productivity of other Renaissance institutions in finalizing and institutionalizing their teacher work samples and accountability systems? (4) What can be learned from the implementation of teacher work samples and accountability systems at the selected institutions that will add to the knowledge base on improving teacher quality?

Of the 11 participating Renaissance institutions, WKU staff identified 6 that had demonstrated above-average progress in the use of teacher work samples, accountability systems, or both, and asked them to submit for review any relevant materials pertaining to these two project components. To guide staff discussion on site selection, AEL staff developed a simple rubric for rating the submitted materials on comprehensiveness, organization, and specific information provided. After rating the materials and consulting with WKU staff, AEL staff selected Emporia State University, Longwood University, the University of Northern Iowa, and Western Kentucky University as the four case study sites.

AEL evaluation staff developed four interview protocols for use with individuals (project coordinators and university administrators) and with groups of faculty, teacher candidates and recent graduates, and cooperating K-12 school and district personnel. The three group interview protocols each included 13-15 questions, and the individual interview protocol contained 23.

AEL staff conducted the four two-day site visits during fall 2004. Each visit included semistructured, in-depth interviews with multiple role groups having varied involvement with teacher work samples or the accountability system. In all, 65 individual and group interview sessions were carried out at the four sites with a total of 209 people, including 18 university administrators and project coordinators, 79 faculty members and technology staff, 85 teacher candidates and recent graduates, and 27 cooperating K-12 school and district personnel. In addition, demonstration of the electronic data management systems took place at three universities, university staff provided the AEL evaluators with copies of relevant materials, and AEL staff downloaded materials from the university Web sites.

Transcripts were created from typed or written notes and the taped recordings of the interview sessions. These transcripts subsequently were used as the basis of the case-study narratives included in this report. As themes emerged from the various interviews, AEL staff created a narrative telling each university's "story." The four site narratives and transcript materials were then used to produce an overall synthesis across the four sites. A number of themes emerged:

- Change is a tradition at these universities.
- Leaders take risks in support of their vision.
- Implementation of the TWS and the accountability systems represents a paradigmatic change.
- Fidelity of implementation must be balanced by flexibility.
- Sharing information in a variety of ways is a key to success.
- The fact that a decision is made is more important than how the decision is made.
- The TWS is emerging in other forms of teacher assessment; this development requires further consideration of the issues associated with high-stakes evaluation.

Conclusions

Extent of development of teacher work samples. The concept of teacher work samples as both a process and a product has become firmly embedded in the culture of each of the four universities. At present, all students in the teacher education programs at three of the universities are required to complete at least one teacher work sample; at the fourth university, work samples will become mandatory for all student teachers by fall 2005, though most student teachers are already meeting this requirement. Further, all four universities have added a condensed or modified teacher work sample requirement as a precursor to the full-blown TWS activity during student teaching. In addition, one university mentioned incorporating the TWS into several graduate programs. Underlying these developments are the successes of each university in reshaping curriculum, laying a solid foundation to support TWS in the future, and obtaining a "critical mass" of faculty willing and trained to include TWS in their courses. The concept of TWS seems to have been fully integrated into the unique environment of each university.

Extent of development of accountability systems. All four universities have strong administrative support and commitment for developing and using a data management system; further, faculty at most of the institutions have started interacting with these systems either through read-only access or by actual data entry. There is at least a half-time coordinator responsible for the data system at each institution. All four electronic systems are now operational, though some are more complete than others. The data management systems serve as interactive repositories of critical data points for all student teachers. Although these systems contain teacher work sample data, they are far more comprehensive and include such items as grade point averages, admissions information, demographic information, student teaching evaluations, critical performance data from individual courses, Praxis scores (where applicable), and, potentially, postgraduation data. As the systems have become more comprehensive and operational, faculty members have begun interacting with the systems by viewing data, entering data, conducting analyses, and providing feedback to developers. Regular, routine reporting is becoming standard within each university. The universities built systems that are Web based and include both custom and commercial software programs.

Contributing factors: TWS. Although each university followed its own path in implementing teacher work samples, the success of those implementations was promoted by a number of factors, each of which was observed at two or more institutions. First, at all four universities, a strong commitment by university leadership backed the efforts of involved individuals.

Second, the "right" individuals were identified to form a stable core for shaping and shepherding the burgeoning effort. This nuclear group was firmly committed, enthusiastic, respected, and able to bring others "on board." Having such a group also helped avoid the possibility of a sudden disruption to the project should any particular individual no longer be available to help facilitate its implementation.

A third factor contributing to TWS institutionalization at the four universities was the provision of awareness and training opportunities for various stakeholders. The universities employed a number of tactics to help faculty, students, and school personnel understand the need for performance evaluation of teacher candidates and how the TWS would meet that need. Such opportunities included orientation sessions on campus, national meetings of the Renaissance Partnership, and informal ice cream socials or pizza parties. These events brought interested individuals together to learn about the TWS and created a "buzz." More-formal workshops on TWS scoring and interrater reliability were also offered. Some institutions made formal training mandatory; others offered it as part of an incremental approach to achieving buy-in for the concept. Faculty attendance at Renaissance meetings was a particularly powerful means of persuasion, as faculty were exposed to a national cadre of TWS enthusiasts. In addition to these national meetings, the Renaissance grant paid for a projectwide Web site, an important resource for students and faculty.

Fourth, at two institutions, university-wide faculty councils were instrumental in making the TWS mandatory for all student teachers. The councils provided forums for faculty debate on the TWS and gave faculty an opportunity to vote on the mandate.

Finally, a possibly unforeseen contributing factor was the connection of teacher work samples to other initiatives. For example, upcoming NCATE accreditation visits helped spur the TWS implementation in at least three of the universities. Moreover, in three states, teacher certification requires that candidates present evidence similar to the teacher work sample; hence, completion of the university teacher work sample correlates with and provides preparation for the statewide assessments of beginning teachers. In one instance, a university program won the Christa McAuliffe Award for Excellence in Teacher Education, for which the requirements fit nicely with attributes of the TWS.

Contributing factors: accountability systems. Across the four universities, three key factors contributed to the institutionalization of accountability systems: external drivers, strong leadership and support, and additional resources. First, all four universities noted the need to develop data-based accountability systems as part of their NCATE accreditation visits; hence, this external force may have helped maintain pressure for continued progress of the accountability systems. Another external driver was the growing pressure on K-12 schools to implement data-driven instructional decision making as a means of making schools more accountable. The demand for teachers to be trained in this approach has naturally extended into teacher education programs and sparked concern for accountability at the postsecondary level. A second key contributing factor—administrative support—seemed to be abundant for system development, and most of the universities utilized a team approach to design, develop, and implement their accountability systems. Third, with regard to resources, the Renaissance grant was extremely important; its funding covered both staffing and technology requirements.

Improving teacher quality. Case studies of the four universities have revealed several ways in which teacher work samples and accountability systems are consistently improving teacher education and, thereby, improving teacher quality. First, the TWS

facilitates the shift from textbook-driven instruction, which focuses on "covering the material," to data-driven instruction, which focuses on teaching children the knowledge and skills appropriate to their current level while meeting state and local standards. The TWS provides an explicit, logical, sequential structure to guide student teachers as they develop the assessment and instructional decision-making skills needed in today's classrooms.

Second, the use of teacher work samples has helped faculty become more accountable for their own teaching and has increased their understanding of the value of performance evaluation. Faculty members' instructional successes and weaknesses become more evident through reviews of their students' completed work samples.

Third, all four universities have used their experiences with the TWS to modify their curricula, based on the observed needs of students in such areas as assessment and reflective writing. Such data-based adaptations and improvements to the teacher education program are an integral component of the accountability system.

Fourth, both the TWS and the accountability system have increased faculty conversations and cooperation within and across departments. They are helping faculties to develop a common vision of teacher education and a common language for discussing program improvements.

Looking to the future. The ultimate goal of the Renaissance Partnership institutions was to become accountable for the impact of their teacher graduates on P-12 student learning. While it is too early for student impact data to be available, the universities studied have completed the first steps necessary for such accountability. The TWS and the accountability data management systems are prerequisites for linking performance assessment with student learning. Their successful implementation has forged additional links in the causal chain leading to student impact. Continued research is needed to investigate the relationship between teacher-graduate performance data and P-12 learning.

Recommendations

TWS: outside support and resources. The successes of the four universities studied would have been much harder, if not impossible, to achieve without the financial support of the Renaissance grant and the synergistic information sharing that the Partnership project promoted among its participants. Institutions attempting to implement the TWS are advised to

- talk to or visit the universities in this report to take a more in-depth look at their development and use of the TWS
- tap into the Renaissance Web site for ideas and resources (http://fp.uni.edu.itq)
- obtain a grant or other funding, if possible

- connect with other TWS implementers and researchers through site visits to Renaissance universities or at national conferences such as those held by the American Educational Research Association (AERA) or the American Association of Colleges for Teacher Education (AACTE)

TWS: project team. In each of the four universities, the talents, the abilities, and even the dispositions of the people who guided the TWS implementation were critical to its success. These people were enthusiastic about the TWS, and they were good communicators who were respected by their peers. Before attempting to implement the TWS, institutions should

- identify the "right" people for the job—a committed project team with the requisite capabilities
- give the team both the power to do what it needs to do and the time to do it
- provide full administrative support

TWS: collaboration, involvement, and persuasion. Although the human relations aspect of change facilitation must be tailored to the unique characteristics of each institution and faculty, the four universities made some similar efforts to spread the word about the TWS, promote support for it, and involve all stakeholders in the innovation. Regardless of the origin of the decision to adopt the TWS, institutions would want to

- make TWS development and implementation a collaborative venture, involving a diverse range of stakeholders from the various faculties and cooperating K-12 school districts
- provide ample training on the TWS and its scoring for any interested stakeholders
- have a nonthreatening "grace" period during which faculty can try the TWS before it becomes mandatory
- create opportunities for informal discussion that allow faculty to share their experiences with the TWS, discover its value, and accept it
- work closely with partner schools and cooperating teachers to ensure fidelity of TWS implementation
- build and nurture collegial relationships across turf lines
- provide stipends, release time, or other perks for faculty involvement in TWS scoring or other activities
- anticipate initial resistance to the TWS and be prepared to counter obstacles
- take a change-agent perspective and understand that the TWS presents a paradigm shift in how faculty and others think about teaching

TWS: planning and development. Based on the many planning and implementation suggestions offered by interviewees at the four universities, a number of strategies are recommended:

- conduct a pilot test of the TWS before full implementation

- tailor the TWS to fit the culture and environment of the university, but take advantage of the experiences of other institutions
- give student teachers an introduction to the TWS that provides a comprehensive overview before they encounter its components in various courses
- make sure that each TWS component is covered in coursework
- embed shorter, adapted versions of the TWS or its components in field-based experiences prior to student teaching
- give student teachers adequate time to fully prepare the TWS without shortchanging the students in their classrooms
- ask recent graduates to share their TWS experiences with current student teachers
- plan for ongoing implementation and maintenance of the TWS, including ongoing expenses after start-up funding expires

Accountability system: planning. At the four universities studied, one individual or a team of developers devoted considerable time to planning the system. Institutions involved in developing an accountability system are advised to

- identify the institution's data needs and priorities as a first step in planning
- ensure that the system reflects the university's mission and standards
- visit or talk with other universities about their accountability data management systems
- take a holistic view and consider the logic of the system as a virtual entity before creating an electronic entity
- have clear goals and the required data in mind before beginning programming
- keep the system as simple as possible
- build flexibility into the system to allow future changes as needed
- plan ahead for ongoing maintenance of the system
- conduct a pilot test before full implementation

Accountability system: support and resources. Following the examples of the four universities studied, institutions that are developing an accountability system should

- provide ample administrative support
- locate and secure adequate funding for the necessary technology
- identify a core group of committed individuals and allocate the time for them to envision and create the system
- hire at least a half-time system coordinator
- provide training for faculty and other system users
- create opportunities for discussion among faculty and students about the need for, and relevance of, the system and how it might benefit them

INTRODUCTION

Project Description

The Renaissance Partnership Project for Improving Teacher Quality was funded in September 1999 by a U.S. Department of Education Title II Teacher Quality Enhancement Grant. Now completed, the project aimed to develop accountability systems to measure and improve teacher candidates' ability to facilitate student learning and achievement (Pankratz, n.d.).

The project was a five-year initiative by 11 teacher preparation institutions in 10 states to improve the quality of their graduates and teachers in local partner schools by focusing attention on PK-12 student learning (Pankratz, n.d.). All 11 institutions were members of the Renaissance Group, whose presidents, provosts, and deans have collaborated on issues of teacher preparation. The 11 institutions are listed in Table 1, along with their locations and partner schools.

Table 1: Renaissance Partnership Project Institutions

Institution	City and State	Partner Schools
California State University	Fresno, CA	Central Unified School District
Eastern Michigan University	Ypsilanti, MI	Ypsilanti Public Schools
Emporia State University	Emporia, KS	Olathe School District
Kentucky State University	Frankfort, KY	Franklin County Public Schools
Longwood University	Farmville, VA	Region 8 Superintendent Network (Prince Edward County Schools); Charlotte County Public Schools
Idaho State University	Pocatello, ID	League of Schools; Magic Valley School Partnership
Middle Tennessee State University	Murfreesboro, TN	Metro Nashville/Davidson School System; Rutherford County School System
Millersville University	Millersville, PA	Lancaster School District
Southeast Missouri State University	Cape Girardeau, MO	Charleston R-1 School District
University of Northern Iowa	Cedar Falls, IA	Waterloo Community Schools
Western Kentucky University	Bowling Green, KY	Bowling Green City School System; Warren County School System

The 11 institutions identified seven performance areas that, if improved, would significantly increase the ability of teacher candidates and school practitioners to facilitate learning of all PK-12 students (Pankratz, n.d.). These areas included

1. aligning instruction and assessment with state and local content standards

2. using the student's culture, context, and background to design instruction

3. using multiple assessments to plan, guide, and assess student learning

4. designing instruction for all students, including those with special needs

5. adapting instruction to achieve maximum student growth

6. analyzing and reporting learning growth of all students

7. reflecting on the teaching and learning process to plan future instruction and improve performance

These seven performance areas required a paradigm shift from teaching to learning, as well as new organizational structures and new systems of accountability (Pankratz, n.d.). Thus, seven project objectives became the focus of development activities and actions over the five-year initiative. The seven objectives included

1. developing accountability systems that regularly collect, analyze, and report performance data on teacher candidates and graduates

2. requiring teacher candidates to develop teacher work samples as evidence of their ability to facilitate PK-12 student learning

3. developing mentoring teams consisting of teacher educators, school practitioners, and arts and science faculty to assist teacher candidates in achieving learning results

4. making significant course and program improvements that address critical teaching performances and mentoring processes

5. developing partnerships with businesses and schools/districts to expand learning opportunities for teacher candidates and PK-12 students

6. initiating new structures and processes for networking of people, ideas, and resources, including the development of a Web site

7. participating in a coordinated research program that links teacher performance to PK-12 student learning

In 2003, AEL staff completed a formative evaluation of the activities of the Renaissance Partnership (Cowley, Finch, Meehan, & Holdzkom, 2003). That evaluation highlighted the fact that some of the 11 institutions were making more progress than others in meeting these objectives, particularly in developing and institutionalizing teacher work samples (TWS) and accountability systems. As a result, a follow-up evaluation was undertaken at the end of the five-year grant to illuminate the factors contributing to above-average progress in these two areas. Elements of the teacher work sample and the accountability system are briefly outlined below.

Teacher Work Sample

The TWS is composed of seven sequential teaching processes:

1. **Contextual factors** - The teacher uses information about the teaching/learning context and student individual differences to set learning goals and plan instruction and assessment.

2. **Learning goals** - The teacher sets significant, challenging, varied, and appropriate learning goals.

3. **Assessment plan** - The teacher uses multiple assessment modes and approaches aligned with learning goals to assess student learning before, during, and after instruction.

4. **Design for instruction** - The teacher designs instruction for specific learning goals, student characteristics and needs, and learning contexts.

5. **Instructional decision making** - The teacher uses regular and systematic evaluations of student learning to make instructional decisions.

6. **Analysis of student learning** - The teacher uses assessment data to profile student learning and communicate information about student progress and achievement.

7. **Reflection and self-evaluation** - The teacher reflects on his or her instruction and on student learning in order to improve teaching practice.

The Renaissance model for the TWS includes performance indicators for each of the seven teaching processes ("standards"), a performance prompt (set of teaching tasks) for the seven standards, a scoring rubric for judging teacher candidates' performance, and the teacher candidates' exhibits (20 pages of narrative plus attachments) that show evidence of teaching performance.

Accountability System

The development of an institutional accountability system that regularly collects, analyzes, and reports data on teacher candidates and graduates was modeled on a standard of the National Council for Accreditation of Teacher Education (NCATE). This standard contains the following five critical elements:

1. a **unitwide commitment** to accountability and data-based decision making

2. an **accountability system coordinator** with release time, designated responsibilities, and the authority to provide system leadership

3. an **ongoing collaborative process for developing and refining performance assessments** linked to PK-12 student learning

4. an **electronic data system** that can collect, process, and store data over time and provide performance results at various levels for a variety of audiences and purposes

5. a **formal process for regularly examining performance data** and making program improvements

Purpose and Audience

The purpose of this report is to provide a qualitative evaluation of the Title II Renaissance Partnership Project for Improving Teacher Quality, focusing on those institutions that demonstrated above-average progress in the use of teacher work samples, accountability systems, or both. Findings from the evaluation may be used to advance the efforts of other Renaissance institutions to finalize and institutionalize their teacher work samples and accountability systems. The primary audience is the Renaissance staff at Western Kentucky University (WKU) (i.e., the project director and originator of the request for a qualitative evaluation). Secondary audiences include U.S. Department of Education staff, staff from the 11 participating universities, and others interested in improving teacher quality and student learning.

Evaluation Plan

AEL staff contracted with WKU Renaissance staff to carry out the following qualitative evaluation, using a case study approach of site visits at selected institutions. This approach was selected because "case studies are the preferred strategy when 'how' or 'why' questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context" (Yin, 2003, p. 1). AEL staff adhered to the program evaluation standards put forth by the Joint Committee on Standards for Educational Evaluation (1994) (see Appendix A).

As the first step in the evaluation, WKU staff identified those 6 of the 11 participating institutions that had demonstrated above-average progress in the use of teacher work samples, accountability systems, or both, and asked them to submit for review any relevant materials pertaining to these two project components. AEL staff reviewed all submitted materials and, with WKU input, selected four institutions for multiple-day site visits. The resulting site visits served as the basis for data collection pertaining to the following questions:

- To what extent have the teacher work samples and accountability systems of the Renaissance project been developed at the selected institutions?

- What factors, activities, and processes have contributed most to progress toward institutionalizing teacher work samples and accountability systems at the selected institutions?

- What recommendations, based on findings from selected institutions, would likely result in greater effectiveness and productivity of other Renaissance institutions in finalizing and institutionalizing their teacher work samples and accountability systems?

- What can be learned from the implementation of teacher work samples and accountability systems at the selected institutions that will add to the knowledge base on improving teacher quality?

AEL staff conducted the evaluation at the four selected sites during fall 2004 using a case study approach that included semistructured, in-depth interviews with multiple role groups having varied involvement with teacher work samples or the accountability system. Individual and group interviews were completed with project coordinators, university administrators, faculty (both education faculty and those from content-related departments), teachers and school administrators in cooperating K-12 school districts, student teachers, other teacher candidates, recent graduates currently working as first-year teachers, and technology staff. As part of this approach, AEL staff also witnessed demonstrations of electronic accountability data management systems at three of the universities and reviewed relevant materials provided by university staff or on university Web sites.

METHODS

Site Selection

Of the 11 participating Renaissance institutions, WKU staff identified 6 that had demonstrated above-average progress in the use of teacher work samples (TWS), accountability systems, or both, and asked them to submit for review any relevant materials pertaining to these two project components. The six institutions included Eastern Michigan University, Emporia State University, Longwood University, Southeast Missouri State University, the University of Northern Iowa, and Western Kentucky University. To guide staff discussion on site selection, AEL staff developed a simple rubric for rating the submitted materials on comprehensiveness, organization, and specific information provided. See Appendix B for a copy of the rubric.

After rating the materials and consulting with WKU staff, AEL staff selected Emporia State University, Longwood University, the University of Northern Iowa, and Western Kentucky University as the four case study sites. AEL staff then made contact with the office of the dean of education at each institution and requested assistance with site visit planning.

Instruments

Interview protocols. AEL evaluation staff developed four interview protocols for use with individuals (project coordinators and university administrators) and with groups of faculty, teacher candidates and recent graduates, and cooperating K-12 school and district personnel. The three group interview protocols included 13-15 questions pertaining to

- experiences of faculty, students, and cooperating school personnel with the TWS, the accountability system, and mentoring arrangements

- strengths and weaknesses of the TWS methodology

- adequacy of preparation and training for the TWS

- level of teacher candidates' success with the TWS

- extent of institutionalization of the TWS and the accountability system

- factors promoting or inhibiting faculty support for and institutionalization of the two project components

- value of the TWS to teacher candidates and the university

- ways in which the TWS and the accountability system have improved teacher education and the quality of the institution's graduating teachers

- recommendations for improving and replicating the implementation of the TWS and the accountability system

The individual interview protocol contained 23 detailed questions on these topics. The protocols were reviewed and approved by WKU Renaissance staff prior to their use; the AEL Institutional Review Board also approved these instruments. See Appendix C for copies of the four interview protocols.

Data Collection

Each site visit consisted of three activities over a two-day period. The primary activity was interviews, and demonstrations of the electronic data management systems also took place at three universities. Additionally, university staff provided the AEL evaluators with copies of relevant materials, and AEL staff downloaded materials from the university Web sites.

Interviews. Two or three AEL staff members conducted the interviews at each of the four universities. Whenever possible, one staff member conducted the interview while another took notes. Backup tape recordings were made of almost all sessions. In all, 65 individual and group interview sessions were completed at the four sites. In a few cases, in which the time allotted for the interviews was insufficient or people were unable to attend, interviewees responded to questions by fax or e-mail. A total of 209 people were interviewed across the sites, including 18 university administrators and project coordinators, 79 faculty members and technology staff, 85 teacher candidates and recent graduates, and 27 cooperating K-12 school and district personnel. For further details on the individuals interviewed at each institution, see the data tables in the relevant sections of findings.

Demonstration of electronic data management systems. At three of the four sites, one of the project coordinators or technology staff demonstrated the electronic system for accountability data management to AEL staff, who took notes on the demonstration and acquired hard copies of various electronic features of interest. The demonstrations included such features as the screens used by faculty for online student evaluations and grading; other types of data entry; the screens that could be viewed by students, faculty, or administrators at varying levels of access; and the system's capacity to generate data on demand, standardized reports, and customized reports. At the remaining site, AEL staff and the assessment coordinator had an in-depth discussion of such features and system capabilities.

Miscellaneous data collection. Institutional documents and Web sites were consulted to clarify details and obtain information pertaining to institutional history, organization, and demography; the history of the Renaissance group; and timelines of project implementation.

Data Analysis

Interviews. Transcripts were created from the typed or written notes and the taped recordings of the interview sessions. These transcripts subsequently were used as the basis of the case-study narratives included in this report. As themes emerged from the various interviews, AEL staff created a narrative telling each university's "story." The four site narratives and transcript materials were then used to produce an overall synthesis across the four sites.

FINDINGS

The findings from the four Renaissance universities (Longwood University, the University of Northern Iowa, Emporia State University, and Western Kentucky University) are contained in the following stories. The stories are presented in the chronological order in which the site visits were conducted.

Longwood University:
Implementing Quality Measures

Longwood University is located in the town of Farmville in rural southwestern Virginia, 65 miles west of Richmond and 60 miles south of Charlottesville. Founded in 1839 as the Farmville Female Seminary, it was incorporated as the Farmville Female College in 1860. In April 1884, the Commonwealth of Virginia acquired the property and subsequently (in October of the same year) changed the name of the institution to the Normal School. Thus began a series of name changes that reflected the evolving mission of the school. In 1914, the institution became the State Normal School for Women; in 1924, it became the State Teachers College at Farmville; and in 1949, it was renamed yet again as Longwood College. In 1916, the college was first authorized to offer a four-year curriculum leading to the bachelor of science in education degree; other curricula and degrees were added in subsequent years. In 1954, graduate programs were authorized, and in 1976, the college became coeducational. Longwood College became Longwood University in 2002 (Longwood University, 2004b).

Throughout its long history, Longwood has prided itself on developing and maintaining a reputation for academic excellence, especially with regard to its historic core programs in teacher education. It is with pride that members of the Longwood community point out that virtually all teacher education students are offered employment upon graduation. Moreover, the Web site prominently displays the news that Longwood has been designated one of the 100 best-value colleges in the nation (Longwood University, n.d.). While its reputation is strong, Longwood has, in the past, primarily relied on anecdotal evidence offered by faculty members, grateful graduates, and graduates' employers to establish and perpetuate this reputation. It is only in recent years that Longwood staff have begun the difficult job of creating an accountability system that will collect hard data that demonstrate and document the excellence upon which Longwood's reputation rests.

Part of this accountability system for students in the College of Education and Human Services is the teacher work sample (TWS), which lies at the heart of the student teaching experience and must be completed by every teacher candidate. The TWS is supported in several ways, including courses that provide instruction in some of the skills needed to complete the TWS, and has resulted in changes in the teacher education program, especially in the curriculum for prospective elementary school teachers.

As a result of its participation in the Renaissance Partnership, Longwood University has made a number of changes in accountability systems, student support, curricula, and the practice teaching experiences of its students. This report describes some of the effects of participation in the Renaissance Partnership as revealed in a series of interviews conducted by AEL staff at the university in October 2004. Individual and group interviews were conducted with 50 people and focused on the development of the TWS and the accountability data management system. The table below summarizes the participants of these interviews.

Table 2: Role and Number of Individuals Interviewed at Longwood University

Title	Number
Deans/Administrators	4
Faculty	19
Student Teachers	5
Partnership Students	16
Cooperating Teachers	4
School Administrators	2

Innovations related to the TWS and the accountability system have been implemented at Longwood with varying degrees of impact. During the visit to Longwood by AEL staff, it became clear that stability of leadership was an issue that has affected the ability of the university community to implement these changes. In fact, all the university administrators who were interviewed had been in their positions for less than four years. Effectively, this means that these people assumed their current positions after the commitment to the Renaissance Partnership was made. Indeed, the current dean of the College of Education and Human Services (CEHS) had been in that position for less than six months and had previously been associate dean since July 2003. The current associate dean has been in that role since June 2004 but was active with the Renaissance Partnership prior to assuming her new post. In 2003, the college was preparing for NCATE accreditation, a labor-intensive effort to gain the accreditation of education programs at the institution. Thus, the college's primary focus was in an area that would benefit substantially from established institutional accountability systems. However, the reality was that the staff and faculty of the CEHS found themselves trying to prepare for the accreditation and build the accountability system simultaneously.

Teacher Work Sample

The teacher work sample is simultaneously a process and a product. It may be thought of as the culminating activity of the teacher education program at Longwood University, providing both a framework for planning and carrying out instruction during the student teaching semester and the documentation of that instruction and its impact. In brief, the TWS is a set of structured processes that results in a plan for a unit of instruction and a strategy for assessing the impact of that unit of instruction. The TWS demands a large amount of work on the part of the students. Not surprisingly, the students who were interviewed were quite proud of the work they had accomplished, both because it was a lot of work and because they could see that it led to good results for the students they were teaching.

It should be noted that in Virginia, prospective schoolteachers must earn a degree in a liberal arts discipline. At Longwood, students are not accepted into education courses until they complete their freshman year. Thus, the 1,070 students (out of the university's total enrollment of 3,640) who participate in teacher education add these courses to their regular liberal arts program. For those individuals planning to teach in secondary schools, pedagogical methods courses are taught by faculty from the College of Arts and Sciences. For those planning to teach in elementary schools, there is a more extensive preparation program, including a "Partnership" experience in one of four nearby school districts. The Partnership semester features both classroom instruction and extensive observation in public school classrooms, and it serves as a precursor to the actual student teaching experience.

The TWS is completed at least once by all teacher candidates who graduate from Longwood University. In the case of elementary and middle school education majors, two work samples are completed: one in the Partnership semester and one in the student teaching semester. Secondary education majors may complete only one TWS (during student teaching), because they do not participate in the Partnership semester. However, it is expected that the secondary methods course will pay some attention to the TWS to prepare students for it.

The sequence of TWS activities begins with considering the ecology in which the teacher candidate's unit of instruction will unfold. The student teacher describes contextual factors that seem relevant to the class that will be taught: gender and racial or ethnic makeup of the class; degree of poverty in the community and the class; and, perhaps, the past achievement of this group of students. For many of the student teachers interviewed, this examination of the context of schooling was especially enlightening. Farmville, the town in which Longwood is located, and the surrounding counties—where many Longwood students have their student teaching experience—have a sizeable African American population. In 1951, the entire student body of Robert R. Moton High School (the Black high school in Farmville) went on strike to protest inadequate conditions at the school. The NAACP filed suit on behalf of the students and their parents, and this suit was one of five that were settled by *Brown v. Board of Education* in 1954 (Brinson, 2004). The most recent NCES data (2002-03) indicate that the public

school enrollment of Prince Edward County (in which Farmville is located) is 60% African American and 39% White. In addition, all county public schools are Title I schools, and 60% of students are eligible for free or reduced-price lunch (National Center for Education Statistics, n.d.). In fall 2004, 89% of the students at Longwood University were White, and 7% were African American (Longwood University, 2004a). Many Longwood students conduct their student teaching in local schools and thus find themselves in classes where the students are quite different from themselves. For many Longwood students, the contextual component of the TWS helps them understand, in a new way, the communities in which their schools are located.

Once the context study is complete, the student teacher continues through the selection of appropriate objectives. These are specifically intended to align with state and district expectations. In Virginia, for example, the Standards of Learning (SOLs) specify learning objectives for every course at each grade level. Longwood students must take these state standards into account when designing their units of instruction. The TWS then moves into an activity calling for a synthesis of student needs, characteristics, and specific learning goals, and continues through evaluation of student learning to reflection on the instructional events and the outcomes for students. It is expected that assessment of classroom students will occur at each stage and will trigger reflection by the student teacher, who tries to understand the meaning of the assessment data and their implications for the next stage of instruction. Thus, the TWS represents a substantial body of work completed by the aspirant teacher. The final product is quite large (on the order of 20 to 30 pages) and demonstrates the skills and knowledge acquired by the teacher candidate, as well as the extent of his or her teaching success.

Although the TWS components (sometimes called "standards") are interdependent, it is possible to teach the associated knowledge and skills for each standard separately. Several methods instructors stated during the interviews that one of the benefits of the TWS is that it requires a rethinking of the curriculum in teacher education. If students are expected to complete the TWS, there must be identifiable activities or moments in their coursework that address the skills needed. At Longwood University, this led to a reconsideration of what would be taught. One methods instructor said it was clear that assessment strategies had not received enough attention before the TWS was instituted. Thus, curriculum changes had to be made if students were to complete the TWS.

Training in using the TWS was required not only for student teachers but also for university faculty, including education faculty and faculty in the College of Arts and Sciences who serve as methods instructors for students planning to teach in secondary schools. Training was made available both at training sessions convened at Longwood and at national meetings of the Renaissance Partnership. The Renaissance grant paid for faculty to attend those national meetings. As one administrator pointed out, "They [faculty] got to go away, and they sat there with . . . people from all across the country and found out we weren't alone. . . . Other people had the same frustrations and the same concerns and the same ideas. But they also learned new ideas, new ways of doing things, and I think they came back energized in a way that they wouldn't have been [by local

training].'' That energy became the catalyst for spreading the TWS through the faculty. In addition, several of the faculty interviewed indicated that the TWS has been an important topic of discussion at various faculty meetings, which kept faculty abreast of changes and expectations with regard to the TWS and its impact on their students.

Institutionalization of the TWS necessarily required some flexibility in the ways the various teacher education programs presented it to their students. For example, some professors in special education commented that they modified the teaching of the TWS processes to attend more specifically to classroom management and student behavior modification strategies, areas of particular importance for a special education teaching assignment. Also of concern was the fact that each special education student had an Individualized Education Plan, including goals and objectives for that particular student, which took priority over the larger group goals in a typical TWS. Similarly, the secondary methods faculty, who are drawn largely from the College of Arts and Sciences, modified the presentation of the TWS in their own classes. They did not modify the TWS, per se, but, because their time was more limited, they often were not able to provide as comprehensive an approach to the TWS as occurred during the Partnership semester for elementary and middle school teacher candidates. One innovation that addresses this lack of time and classroom exposure at the secondary level is Longwood's involvement in the SimSchool project. Developed with funding from the U.S. Department of Education, SimSchool provides a computer-generated classroom in which simulated students, based on hundreds of real students, react to a teacher's instruction and classroom management techniques. In some secondary methods classes at Longwood, teacher candidates completed a practice TWS in the SimSchool environment. It is important to note that faculty who described these modifications were supportive of the TWS. They stated that the TWS provided a solid foundation for the student teaching experience, but they felt that some modifications were necessary to meld the TWS processes with other skills that were particularly important for their students.

Some resistance to the TWS was mentioned by several of the professors interviewed, however. While they acknowledged that they themselves were enthusiastic about the TWS, they reported that at least some of their colleagues resisted endorsing the TWS and were reluctant to help their students complete the project. In part, this resistance may stem from the fact that the TWS came to Longwood through the elementary teacher preparation program and was then assimilated into the secondary methods courses, taught in the College of Arts and Sciences. Faculty suggested that some lack of buy-in among their colleagues might have stemmed from feelings that they had been given little choice in the matter of implementing "someone else's" program. On the other hand, both the education and arts and sciences faculties are represented on the Professional Educational Council (PEC), which governs the development of Longwood's assessment and accountability system. The PEC has been a major force in the institutionalization of the TWS, providing an arena for extensive faculty discussion of the TWS and, finally, voting to make it mandatory in every teacher education program at Longwood.

Faculty support for the TWS received another boost in 2004 when Longwood's Liberal Studies-Elementary Partnership Program won the Christa McAuliffe Award for Excellence in Teacher Education. Given by the American Association of State Colleges and Universities, the award identifies promising practices for measuring the impact of programs on teacher candidate knowledge and on K-12 pupil learning. Longwood's application for this award drew on the data generated during three years of implementation of the TWS and emphasized its contribution to and documentation of Longwood students' success in K-12 classrooms. The award helped shift the thinking of some Longwood faculty by giving them a better understanding of what is meant by *performance evaluation*.

During the years of the Renaissance Partnership project, some faculty members became involved with the TWS through a mentoring program intended to provide content expertise to teacher candidates. Faculty of the College of Arts and Sciences were designated as mentors, received training in their role and responsibilities, and were available to students preparing the modified TWS during their Partnership semester. In that way, the program sought to reinforce the cooperation between the College of Arts and Sciences and the CEHS, to provide support to students, and to ensure that high-quality standards were maintained, in terms of both content and pedagogy. Mentoring training was presented both at national meetings and local workshops and, reportedly, was "intensive—4 to 5 hours." Some faculty mentioned that program coordinators were readily available if questions arose after training, and a Web site and CDs provided additional information.

At Longwood, the mentoring experience was limited to students in the elementary or middle school preparation program during their Partnership semester. Initially, mentoring was mandatory for Partnership students, and attempts were made to assign all students to mentors. However, this was unsuccessful, at least in part, because of the large number of students assigned to each trained faculty member. Subsequently, mentors were matched only to students who asked to have one assigned before or during the Partnership semester. Mentors were not provided to students in the secondary education preparation program because their supervising faculty were members of the College of Arts and Sciences who already served as their advisors. At the time of the interviews, the mentoring program was deemed by one of the interviewees as "not there," due, in part, to the mentoring coordinator's departure and the lack of a replacement. However, both former mentors and student teachers felt that mentoring brought a valuable dimension—especially encouragement and assistance—to student field experiences.

Completing the TWS is no mean feat. The methods instructors viewed it as "a wagonload of work." Indeed, most of the cooperating teachers interviewed for this case study acknowledged that they themselves do not engage in such a detailed level of planning. The cooperating teachers stated that they have not taken the time, for example, to do the context studies, and they expressed some doubt as to whether "real" teachers would have the time to do this kind of work for every unit of instruction. It should be noted, of course, that the context analysis would not be needed for every unit of instruction, so the TWS would presumably take less time in actual practice than was

devoted to it by student teachers. However, it is difficult to imagine a more systematic way of aligning state and local goals and objectives, preinstructional assessment of students, careful planning of lessons to ensure that every student is involved, and assessment of learning after instruction. As one faculty member put it, "I tell my students to think of the teacher work sample as a trellis [illustrated in Figure 1]. It's a framework here to help you grow and develop your professional teaching skills, so you'll keep on growing."
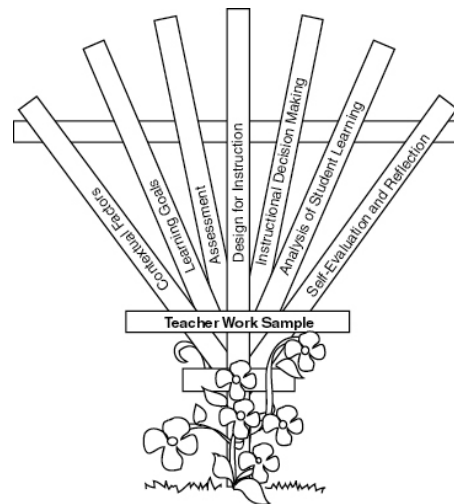
Figure 1: Illustration of the TWS as a Trellis

Interestingly, most of the professors interviewed indicated that they thought the area in which student teachers experienced the most growth was the application of assessment strategies. Several professors mentioned that courses had been revamped to include more attention to assessment issues as preparation for the TWS. Another faculty member pointed to the instructional decision making component as valuable in helping students realize that teaching a lesson in front of a class seldom goes according to script—that something unexpected always happens, and "when a teachable moment presents itself, you grab it and embrace it." Most of the student teachers, however, identified the context analysis as the most important part of the TWS. While they acknowledged the importance of all the TWS activities, understanding more about their students and the community in which their student- teaching experience unfolded seemed to be of greatest interest to them.

Accountability Data Management System

The electronic accountability database was first developed in 2002. The online system was designed to collect all information for teacher candidates in a single site. Such information included grade point averages (GPAs), online assessments of field experiences, assessments of TWS, and similar data. The operational manager who set up the system and kept it moving ahead, and who was designated as the institutional researcher, unfortunately became ill during the course of the development of the system. In his last year, he tried to load data that existed in other databases into the system while

simultaneously adding new information and new capabilities to the system. After his death, it took some time to find a replacement, during which time the system was largely neglected, although the person who eventually filled his position did make efforts to keep the system moving forward. Only in the past few months has the system been fully reactivated so that data reports are available and some analyses can be performed; however, the system is not fully functional. Currently, the accountability system is a combination of custom- and ready-made programs that enable the college administrators to collect, retrieve, and analyze different types of data.

In addition to collecting information related to GPA and assessments of students' performance on various experiences, the system is intended to track each student's progress and performance at critical decision points: admission to teacher candidacy, admission to field experience, and so on. Thus, by analyzing these data, administrators in the CEHS can track the percentages of students successfully meeting various milestones in their education careers. This database will be expanded in the future, when surveys of program graduates and employment surveys are distributed and integrated into the system.

It is anticipated that the system will yield reports that can be used by unit managers within the CEHS for program improvement and to prepare annual reports. Longwood expects that the accountability system will become increasingly valuable as it becomes more comprehensive. For example, each teacher candidate prepares a statement of his or her philosophy of education. Embedded within this statement is evidence of the individual's dispositions toward teaching, education, students, and so on. These dispositions can be identified from the statements and, in addition to being important evidence for NCATE targets, are helpful in identifying observable, measurable behaviors that can be developed further by improving programming for education students.

Throughout the process of developing of the accountability system, the partnership with other Renaissance institutions proved invaluable. When representatives from Longwood University met with staff from other universities, ideas were shared, stories exchanged, and information traded back and forth. In addition, participation in the Renaissance Partnership created an informal accountability structure. As some institutions took the lead on accountability systems development, other institutions were inspired to continue working and making progress on their own systems. The expectation that Longwood representatives would report publicly at Renaissance activities acted as a spur to continue, even when other activities required attention.

Longwood University has had to overcome several obstacles to get the accountability system up and running. First, there has been the two-pronged problem of personnel: not enough people to meet the demands of the work and relatively high turnover, both of staff with technical skill and staff with administrative authority. In some ways, participation in the Renaissance Partnership helped with both of these issues. The sharing of information helped Longwood staff benefit from the experience of other institutions, while meetings with administrators from other universities reinforced for Longwood administrators the importance of dedicating time and money to this effort.

Currently, the system is managed on a day-to-day basis by a coordinator who works with other administrators to ensure that the system is maintained and can produce the needed reports in a timely way.

In some ways, the presence of the coordinator obviates a second major problem: carving out the time required to prepare the system and get it operational amid the ongoing demands of the normal work of the CEHS and the university. At least for a while, much of the work of collecting, entering, and safeguarding data was duplicated, because the university and the college both had some systems—albeit not as sophisticated as the one being built here—for data collection and storage. Moreover, this effort was taking place at the same time as the NCATE accreditation efforts were going forward, thus creating more stress on the extant data systems than might otherwise be present.

Third, there has been some resistance to the accountability system among some faculty members. Many of the faculty interviewed for this project stated that some colleagues were resistant to the system. They often went on to say that they were interested in seeing the system developed, but they had no information about it and no experience with it. They did not yet, apparently, receive reports from the system, nor did they provide data for the system. This does not mean they would not be willing to help with or use the system, but as one professor in the College of Arts and Sciences said,

> They need to bring us into the loop if they actually want us to help evaluate. I don't know who all the system is working with. We are science people and we evaluate things all the time; we would be happy to help if it were brought to us. I don't remember ever seeing anything about it.

When invited to evaluate specific aspects of the accountability system, three CEHS administrators gave the system high marks (using a scale of 1 = *Beginning*, 2 = *Developing*, 3 = *At Standard*, and 4 = *Above Standard*) on the five elements of the Renaissance Partnership's rubric for institutional accountability system development, as shown in Figure 2. It seems clear, then, that these administrators, who have been responsible for creating, maintaining, and managing the accountability system, were satisfied with the system's current state, although they pointed out ways they thought the system could be improved. Certainly, the value of the accountability system, in terms of helping the institution prepare for the recent NCATE accreditation, has been established. While none of these administrators indicated that the accountability system was perfect or in final form, they all stated their support for the system and its continued development.
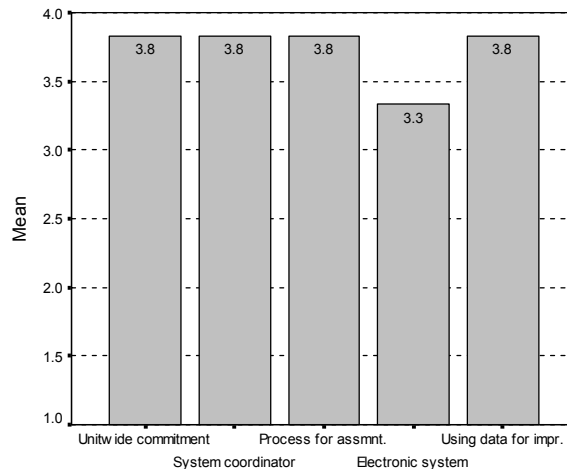
Figure 2: Interviewees' Ratings (*N* = 3) of the Accountability Data
Management System at Longwood University

Conclusion

Longwood University has devoted significant time and resources to the TWS and the new electronic accountability system, the specific foci of this report. Clearly, this commitment is linked to the tradition of excellence at Longwood University, an institution that prides itself on the quality of the education delivered to its students and on the caliber of students who graduate and are hired by schools in Virginia and beyond.

For generations of American teachers, student teaching has been the capstone event in their preparation for a career of service to children. Periodically, major efforts to improve student teaching are undertaken. The TWS represents a significant effort to bring together much of what university students learn as they prepare to be teachers. Influenced by recent research related to assessment strategies, goals alignment, and reflective practice, the TWS is a major improvement and a valuable addition to the student teaching experience. Certainly the faculty and students interviewed for this report are persuaded that the TWS is both more demanding and more rewarding than earlier student teaching experiences. This innovation is another example of the university's commitment to ensuring that its students internalize the skills and knowledge needed to become highly qualified teachers in America's classrooms.

In contrast, the development of the accountability system represents a commitment to a new endeavor for the College of Education and Human Services. For many years, the press to demonstrate accountability has generally been absent from higher education. Because Longwood's graduates were so successful, it perhaps seemed unnecessary to develop systems to actually document the nature of that success. However, with the expansion of computer-based technologies and the increasing emphasis on the use of data related to students' experiences, the development of accountability systems seems inevitable. Participation in the Renaissance Partnership provided both a spark and support for the development of the system at Longwood.

Although the path has not always been straight and smooth, the College of Education and Human Services has persevered and is now using the data generated by the system for the improvement of programs offered to students.

The University of Northern Iowa:
Educating for Reflective Practice

The University of Northern Iowa (UNI) is located in Cedar Falls, within the Cedar Falls-Waterloo metropolitan area, 75 miles south of the Minnesota border and 90 miles west of the Mississippi River. Established by the Iowa General Assembly in 1876 as the Iowa State Normal School and renamed the Iowa State Teachers College in 1909, the institution first gained national recognition in the field of teacher education during the first half of the 20th century. Its name was changed to the State College of Iowa in 1961, following the addition of new degree programs unrelated to teaching. The name was changed again to the University of Northern Iowa in 1967 on the recommendation of the Iowa Board of Regents, the university's governing body. Since its founding, the institution has been committed to excellence in teacher education. In 1967, the Iowa General Assembly designated teacher education as UNI's primary responsibility and as an all-university function (Peterson, 1998; UNI, n.d.).

Today, on UNI's 901-acre campus are approximately 800 full-time faculty and approximately 12,800 students. In addition, the Malcolm Price Laboratory School, a PK-12 school located on campus, provides classroom experiences for all teacher education students. Further, a network of 10 cooperating-school centers across Iowa and a national and international student teaching "center" offer sites for student teaching (UNI, 2004, 2005, n.d.).

UNI has participated in the Renaissance Partnership for Improving Teacher Quality since its inception. After selecting UNI as one of four Renaissance institutions that were above average in their implementation of the teacher work sample (TWS) and the accountability data management system, AEL staff traveled to Cedar Falls in November 2004. AEL staff conducted individual and group interviews with 56 people, at UNI and cooperating K-12 schools, who had been involved with one or both of those components. Information on interview participants is summarized below.

Table 3: Role and Number of Individuals Interviewed at UNI

Title	Number
Deans/Other UNI administrators	5
Project coordinators	3
Student teacher supervisors	17
Other faculty	10
Cooperating K-12 teachers	6
Student teachers	8
First-year teachers (UNI grads)	6
Undergraduate research assistant on TWS	1

The following pages synthesize the results of those interviews in an attempt to illuminate some of the factors leading to UNI's success with the TWS and the accountability data management system.

Teacher Work Sample

UNI's practitioner preparation program has a major theme of "preparing reflective, responsible decision makers in a global and diverse, democratic society" (UNI, n.d., Programs section, ¶2). As reflective decision makers, teachers must design learning experiences that have positive effects on student learning. By creating a TWS during the delivery of a multiweek unit of instruction, the student teacher demonstrates competence in seven sequential teaching processes and documents the impact of his or her instruction on student learning.

The early development of the TWS was a venture into the unknown, and the three people on UNI's original project team were an ideal combination to attempt it: a thinker, an organizer, and a doer. They went to an early Renaissance Partnership meeting in Oregon in January 2000, came back with the basic idea of the TWS, and decided to try it out. UNI volunteered to be one of the pioneers. The project team piloted the TWS with 38 student teachers in fall 2000 and took the results back to a Renaissance meeting. Following various revisions to the prompt and the rubrics, another set of UNI student teachers completed the TWS in spring 2001. According to project staff, "The Renaissance group has over and over again thanked UNI for bringing those first two harvests of semesters because we were putting ourselves out there, saying this is what we do, and, boy, that puts you in a very vulnerable position."

There was great synergy created from meeting every semester with the other Renaissance institutions and exchanging ideas. In addition to the project team, other UNI faculty were always included; 13 UNI people attended one Renaissance conference, an experience that promoted bonding and sparked enthusiasm for the TWS. On another occasion, all of the student teacher coordinators at UNI went to TWS training sponsored by the Renaissance Partnership in Kansas City.

The project developers decided early on not to force the TWS on UNI faculty but, rather, to win their support by demonstrating its value. When the first batch of teacher work samples had been completed and scored, approximately 100 faculty attended an ice cream social where they could browse through the samples. Sometimes "the lights came on," as faculty saw the evidence that student teachers had (or had not) learned and applied what faculty thought they had taught in their courses. At a later time, faculty were invited to a pizza party, where teacher educators from different departments explained how they integrated the TWS in their classes. Through meetings such as these, faculty became familiar with the TWS and its benefits, and word of mouth created a ripple effect among those who had not attended. To promote the TWS, the coordinator of student field experiences created a costume to illustrate TWS components, including a heart at the center symbolizing reflection, and wore it to TWS-related gatherings.

For many faculty, the breakthrough came when they participated in TWS scoring. Once involved, faculty could more readily see the authenticity of the TWS. They realized that it encapsulates what teachers do and demonstrates the decisions that student teachers make in the process. As one project staff member said, "When faculty . . . participate in scoring, they GET IT." Other faculty were invited and even pushed to help with the work of developing certain TWS components. Because of such strategies of incremental persuasion, TWS implementation spread through the faculty—slowly at first, then picking up speed and progressing very rapidly as faculty ownership and enthusiasm grew.

Similar efforts aimed to build the support of K-12 cooperating teachers for the TWS. UNI personnel found out what the cooperating teachers liked and didn't like about the TWS, aligned it with district standards, and modified it to meet the needs of districts and cooperating teachers. Some cooperating teachers attended training sessions on the TWS and helped with scoring. Seeing the scoring rubric helped them understand what constitutes a good TWS. They were then better able to advise their student teachers and help them make the TWS more relevant to their classroom placement. One cooperating teacher commented, "UNI has been very good about contacting people and getting their input. That's been a wonderful part of it because I feel like I belong . . . like I'm an extension of the university."

The original project plans included a mentoring component for students completing the TWS. The ideal was to have a faculty member in the content area and a teacher education faculty member for each student teacher, so that content and pedagogy would both be covered. But, with approximately 300 student teachers each semester, it

soon became apparent that such an arrangement would be impossibly labor intensive. And, as project staff pointed out, "How do you tell a nationally known biologist to help mentor a second-grade student teacher who's putting together a unit on butterflies?" UNI tried various approaches to mentoring, such as e-mail buddies, but ended up relying on the cooperating teachers and the student teacher supervisors to be the mentors. Some cooperating teachers have been very helpful, especially those who have been trained to score the TWS, but others have little knowledge of the TWS. In one school, a cooperating teacher served as a building-level mentor; student teachers came to her with questions that they might not have felt comfortable discussing with their own cooperating teacher. Some student teachers have been mentored by students who had already completed a TWS; others have found helpful information and TWS examples on faculty Web sites and the Renaissance Partnership Web site. (See http://fp.uni.edu.itq for project resources available to teacher candidates, cooperating teachers, and teacher educators.)

Although most of the 11 student teaching centers were using the TWS by fall 2004, a few centers were not. For decades, the student teacher project had focused on action research, and it has been hard for some faculty to let go of that. Nevertheless, in spring 2004, UNI's Council on Teacher Education voted to make the TWS mandatory for all student teachers by fall 2005. A university-wide committee that oversees program improvement, the council has established the TWS as a critical performance for student teachers in the new assessment system. Currently, a committee appointed by the council is working on the language associated with the TWS, trying to standardize the jargon used in different classes and field experiences, and thereby help students see the connections among them.

UNI's initial strategy was to establish the TWS as the core of student teaching, then back-track to infuse TWS components into all areas of the teacher education program. In the spring of 2002, a modified TWS was piloted with 23 teacher education students during their first short field experience. During this 25-hour "level II" experience, students observed teachers at the Malcolm Price Laboratory School, interacted with students there, taught two related lessons, and reflected on their experiences through completion of the modified TWS. The adapted version contained all seven components of a full TWS but was shorter and simpler in its requirements. The TWS is now embedded in level II. Extensive support and scaffolding are provided to students through a series of meetings with faculty and through a Web site that walks students through the process with explicit instructions, definitions, and examples for each section of the TWS.

As final preparation for student teaching, level III of UNI's teacher education program consists of methods courses delivered across the various colleges of the university. Project staff have been skillful in selling the TWS in ways that were palatable to methods faculty, who especially value their academic freedom. There has been real concern about not infringing on faculty rights. However, infusion of TWS elements into methods courses has been uneven. Part of the difficulty may be the need to adapt the TWS for specialized areas such as art and early childhood.

Among the recent developments are the use of the TWS in the graduate program for school psychology and its planned implementation in the graduate program for educational leadership. Several faculty members have conducted and published research on the TWS. Two of these individuals were invited to Chile, where they presented a TWS workshop to professors from 14 Chilean universities. Faculty have also presented and conducted workshops on the TWS at other U.S. universities and at national conferences. Interested faculty from other institutions have been invited to help score the TWS and thereby gain a better understanding of its holistic nature.

To sum up, the TWS is now an integral part of the "bookends" of the UNI teacher education program—the level II experience and student teaching—(illustrated in Figure 3) and is spreading throughout the other programmatic areas. The student teachers in fall 2004 were the first group to experience the TWS at levels II and III and in student teaching. One university administrator reported that "UNI is very close to institutionalization of the TWS, and the fidelity of implementation is quite strong for such a large institution." Some faculty have raised the question of whether the TWS should go through the curriculum process to embed it formally in the program, and this may be done before the next accreditation visit.
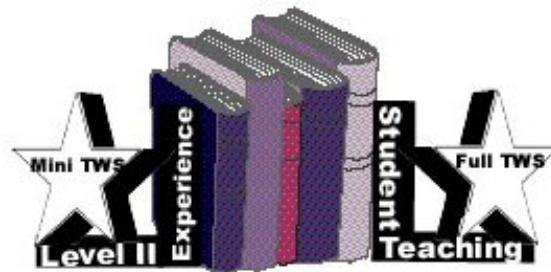
Figure 3: Illustration of the TWS as Bookends

Two major obstacles involving faculty attitudes were overcome on the way to this point. Many faculty did not see the need for change. They felt that they had a wonderful program and no one was criticizing it, so why change? The change also implied a paradigm shift: the effectiveness of a teacher is judged on the basis of student performance.

A number of factors contributed to the institutionalization of the TWS at UNI. To begin with, at the heart of UNI's mission is the notion of "educating for reflective practice." Displayed in various ways around the College of Education, this phrase succinctly expresses the institution's philosophy and commitment to teacher reflection and lifelong learning. UNI also has a tradition of action research, of making theory-practice connections. Thus, the TWS naturally fit the culture at UNI, and it provided a more systematic approach to teacher preparation than existed before. In addition, the TWS is not complicated, so many faculty saw its merits immediately.

Leadership was also an important factor, both the global support at the administrative level and the work of the project staff who shepherded the implementation of the TWS on a daily basis. UNI was fortunate to have this effort spearheaded by people who were respected, enthusiastic, and capable of communicating their knowledge and

enthusiasm to others. Another factor in the institutionalization of the TWS was the involvement of key research people from diverse fields. These faculty were inside the development process and made modifications to satisfy their concerns about reliability and validity. Their involvement gave credibility to the TWS and allayed faculty worries about being criticized on those points by their peers. Finally, the UNI student population was receptive to this reform. According to one university administrator, "UNI students in teacher education are generally thoughtful, with a strong work ethic and a desire to make a difference with children. They . . . are capable of understanding what reflective practice is, in a real sense."

The TWS has imparted many benefits to teacher candidates. Perhaps most important, it creates a frame of mind, a way of thinking about teaching. Students are very busy during student teaching; they tend to focus on what they have to do each minute. But the TWS spurs them to reflect on what they did and on the consequences of their actions in the classroom. As one cooperating teacher pointed out, student teachers who have finished the TWS "won't go into teaching thinking that they'll make mobiles or cut and paste all day. Teaching second graders isn't about math, it's about using data to find out what works for your class." First-year teachers stated that they hadn't realized the value of the TWS while they were creating it, but now, as teachers, they understood the importance of data-driven decision making. The TWS is a valid and reliable documentation of the student's work; it becomes part of the student's portfolio and can be shown to principals during job interviews. To achieve full teaching licensure after a 2-year induction period, graduates who teach in Iowa must demonstrate to their principal that they can work with and write about the eight Iowa teaching standards. UNI graduates who have completed the TWS are well positioned to meet this requirement. The Iowa teaching standards parallel elements of the TWS, and even for those areas that aren't parallel, there's still the idea of providing performance-based evidence. Also, after the experience of producing a reflective document of 20-30 pages, students may feel more confident about going on to graduate school.

Accountability Data Management System

Several forces came together to promote the development of the accountability data management system at UNI. Faculty and administrators from UNI were involved in the early Renaissance meetings, even before the project was funded. Although the TWS was the first focus of the Renaissance project participants, it soon became apparent at UNI that the accountability system, which was also a major project component, would tie in naturally with the demands of upcoming accreditation visits by the state and the National Council for Accreditation of Teacher Education (NCATE). Like most institutions, UNI had collected plenty of data over the years, but the data were on several computers or in paper form in various offices and were seldom read or used for evaluation purposes. For the state and NCATE accreditation visits, UNI had to show progress toward getting the data management system in place. The grant money and assistance from the Renaissance project were essential to developing the system.

The accountability data management system was well thought out and very carefully designed before it was built. The developers visited other institutions and examined their systems. They continuously asked each other, What do we need? Why do we need it? What will we use the data for? This was a deliberate effort to keep a focus on the critical data–to keep it simple and produce quality assessments on a limited number of standards. For a time things moved slowly, as the College of Education went through major changes in leadership. The developers used this time to build faculty support by identifying the faculty's desires and needs relative to the data management system and then incorporating those elements into the system design.

As of fall 2004, all the pieces were in place to have a fully developed accountability data management system. Unitwide commitment was strong, and a full-time system coordinator had been hired to monitor and shape the system. The teacher work samples from the spring were being entered into the online system, and those from the fall were to be entered two days after being scored, with immediate availability for students and faculty. Evaluation forms for the various field experiences were online, and faculty were beginning to complete them electronically. Professional development sessions on the electronic system are planned for spring 2005 and, after that, all faculty will enter data online from their courses. The system developers were considering adding follow-up results on graduates—new teachers in the initial 2-year mentoring period that leads to full licensure.

Four interviewees, all project coordinators or administrators, gave high ratings (using a scale of 1 = *Beginning*, 2 = *Developing*, 3 = *At Standard*, and 4 = *Above Standard*) on the five elements of the Renaissance Partnership's rubric for institutional accountability system development, as shown in Figure 4.
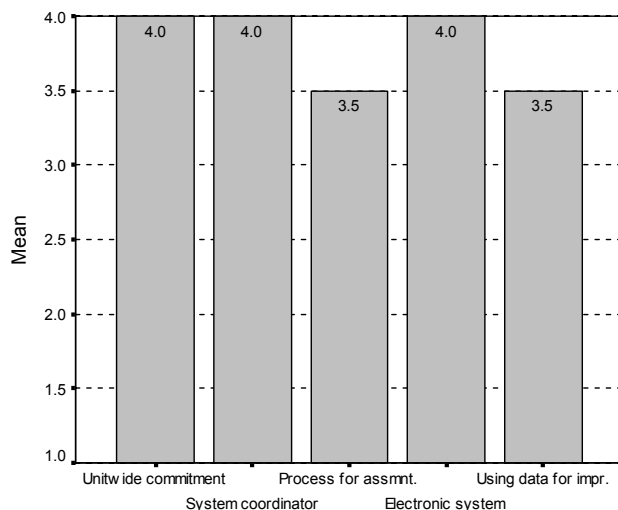

Figure 4: Interviewees' Ratings ($N = 4$) of the Accountability Data Management System at UNI

UNI's online system monitors student progress and outcomes by tracking important decision points in the student's college career and afterward. The UNI system was custom developed on an Oracle platform and is Web based. Web access is important because UNI has student teachers placed in sites around the world. Student teachers now can see their data as easily in Okinawa as in Cedar Falls. The system is housed on the university's mainframe, with the university taking responsibility for security and maintenance. It communicates with the registrar's records, which are updated daily. The system has an interface for aggregating data and creating regular reports. The aggregation feature allows administrators and evaluators to look at results for individuals, the whole teacher education program, or any subgroup they identify. Categories within the various rubrics for student evaluation are aligned with the eight Iowa teaching standards and, eventually, such multilevel scrutiny will be possible relative to individual standards. (For a demonstration of the student view of the online system, see http://access.uni.edu/cgi-bin/portal/portHandler.cgi.)

Conclusion

The TWS has improved teacher education at UNI in numerous ways. Student teachers' TWS scores make evident the strengths and weaknesses of the teacher preparation program in general and provide a rationale for making changes in coursework to address any weaknesses. Early TWS results produced the realizations that students needed explicit instruction in such areas as reflective writing and creating graphs and tables with computer software. These areas were then emphasized in the appropriate courses. The TWS has raised faculty awareness of authentic assessment and the need to take students beyond just creating multiple-choice tests. Faculty are reflecting more on their own instruction and are moving toward data-driven decision making. Consequently, some professors have pursued their own professional development in these areas, both to improve their own practice and to be better able to help their students improve their practice.

Iowa is perhaps the only state that does not assess teaching performance on the basis of a test score such as Praxis II. The state has thus far resisted pressures to do so because it has in place very rigorous teaching standards that focus on teachers' classroom performance and their students' learning, and that call for developing evidence in much the same way as the TWS. Through the TWS, UNI's student teachers are getting a taste of performance-based assessment and data-driven decision making early in their careers.

The accountability data management system has provided a means of integrating the TWS with other forms of assessment, some of which were rewritten to reflect the seven TWS teaching processes. In turn, the TWS has engaged faculty members in assessment results in a way that numbers alone never could. It has enabled faculty to look at students they'd worked with and actually view a slice of their student teaching.

The system also gives faculty and administrators a common overall view of programmatic outcomes. It is building communication among faculty, which in turn

builds continuity across the teacher education program. Students' field experiences are more uniform and are integrated into the program as a whole.

Finally, the data in the system in general, and the TWS results in particular, have the potential to fuel research on improving practice. The accountability system has implications for developing performance-based evaluations in other university programs that are facing demands for linking such assessments in the content areas to national standards.

Emporia State University:
Developing Critical Thinkers, Creative Planners, and Effective Practitioners

Emporia State University (ESU) is located in the city of Emporia in the heart of the famous Bluestem Region of the Flint Hills in northeastern Kansas. ESU is considered an outstanding location for a university because of its proximity and easy access to the three major metropolitan areas of Kansas—Wichita, Topeka, and Kansas City.

In March 1863, the Kansas Legislature passed the enabling act to establish the Kansas State Normal School. In February 1923, the name of the school was changed to the Kansas State Teachers College, and in July 1974, the name was changed to Emporia Kansas State College. On April 21, 1977, the college became Emporia State University. Since 1863, more than 150,000 students have studied at ESU and have gone on to careers in business and industry, education, the professional fields, and many other areas (ESU, n.d., a, ¶1-3). Today there are over 5,600 students at ESU.

ESU is the home of The Teachers College in Kansas. According to the school's Web site, "The Teachers College offers a comprehensive and challenging education program for those talented students who want to guide tomorrow's leaders and who seek a career that offers personal satisfaction and continuous growth" (ESU, n.d. c, ¶1,). ESU prides itself on being an educational leader with university-wide involvement in teacher education. An education major at ESU has the opportunity to experience an award-winning teacher education program with classes taught by nationally recognized professors.

There are several methods of assessment for ESU students in the education program. Students are evaluated during their junior year to determine whether they can continue in the program. This evaluation is composed of the student's score on the Praxis I, GPA in the core program, cumulative GPA, and GPA in the major. Before students enter the student teaching component of the program, they must have five letters of recommendation from faculty. The TWS is used as an accountability assessment during the student teaching semester (ESU, 2003).

In the fall of 2004, ESU was selected by AEL as one of four Renaissance Partnership universities that were above average in their implementation of the TWS component and/or the accountability data management system. In November 2004, two AEL evaluation staff traveled to ESU and conducted individual and group interviews with 73 people involved with the TWS or the accountability data management system. See Table 4 below for more information on the interviewees.

Table 4: Role and Number of Individuals Interviewed at ESU

Title	Number
Project Coordinators	3
Elementary Education Professors	2
Secondary Methods Professors	6
Technology Staff	1
Elementary Mentor Teachers (Cooperating Teachers)	3
Elementary Administrators	3
Student Teacher Supervisors (Faculty)	4
TWS Scorers (Faculty)	5
Current Secondary Students	23
Current Elementary Interns (Student Teachers)	12
Middle and Secondary Interns/Graduates	7
Middle and Secondary Cooperating Teachers	4

Teacher Work Sample

The purpose of the TWS is to assess student teachers' abilities to teach effectively, develop purposeful student assessments, and reflect on their experiences (ESU & The Renaissance Partnership for Improving Teacher Quality Project, n.d., p. 3). ESU requires all students in the teacher education program to complete a TWS. In fall 2004, the university was in its seventh semester of collecting TWS data. An abbreviated version of the TWS is completed by students in the secondary education program during their methods courses and by students in the elementary education program during a field experience at a professional development school. The students are then required to complete a "full blown" TWS during their student teaching experience, when they are classified as interns. Students receive a TWS grade that is separate from their student teaching grade.

Although ESU has been a participant in the Renaissance Partnership from the beginning, ESU's prompt and rubric do not follow the same model used by the remainder of the group. The differences between the two are small but significant. The ESU TWS has six components (one less than the Renaissance Partnership TWS):

1. Contextual Information and Learning Environment Adaptations

2. Unit Learning Goals and Objectives

3. Assessment Plan

4. Instructional Design and Implementation

5. Analysis of Learning Results

6. Reflection on Teaching and Learning

The Renaissance Partnership included a separate component for Instructional Decision Making, which ESU chose to incorporate in the Instructional Design component. With an impending NCATE visit, ESU had a more urgent need to implement the TWS, so this version was tested before the other universities had agreed on a final version.

ESU has continued to revise its model of the TWS each semester. The State of Kansas has used the ESU model, with minor changes, to develop a statewide assessment for new teachers. All new teachers in Kansas will be required to successfully complete the Kansas Performance Assessment within their first four years of teaching in order to receive a professional license.

At ESU it has been a group effort to develop and institutionalize the TWS into the curriculum. Being a part of the Renaissance Partnership grant ensured the funds to implement the TWS. The TWS was first implemented at the professional development schools with the elementary education students. After three semesters of collecting data and making revisions to the TWS, it was implemented with all students in the education program.

Although there have been leadership changes at ESU over the course of the development of the TWS, the commitment of leadership has not wavered. Leadership in The Teachers College has been a big proponent of using a more comprehensive assessment in the program. One faculty member stated, "The commitment by the upper-level administration has been most important."

Faculty commitment has also been a contributing factor to the successful institutionalization of the TWS. While not all of the faculty have bought into the TWS, there has been a high level of support and willingness to adapt. One faculty member said, "One of the things I liked about the TWS when I came here is that it sets an example of what quality teaching should be. It is more than just an assessment."

Faculty were invited to an orientation session to introduce them to the TWS. Some faculty members attended Renaissance Partnership meetings at the University of Northern Iowa and in St. Louis. ESU initially offered TWS trainings twice a year and additional trainings before each scoring session. These opportunities helped the faculty to see the big picture and gave them a deeper understanding of the process. They also saw that the TWS addresses a university need by holding faculty accountable for what their students were learning.

Some faculty resistance arose from the additional time and work created by the TWS and the belief that the previous system was working. Over time, most of that resistance has diminished. A project coordinator spoke of one faculty member who said he was set in his ways and did not feel that there was anything better. Now this teacher says the TWS is the best thing that ever happened in terms of teacher preparation. Faculty members mentioned the recent NCATE visit as a persuasive factor in the acceptance and implementation of the TWS at ESU. Faculty saw how the TWS correlated with NCATE

expectations and how the TWS data documented that appropriate things were being done during student teaching.

Faculty also said that although The Teachers College introduced the TWS, all program areas had been involved from the beginning, and this eliminated the perception that the TWS was being pushed on them. The assessment and TWS coordinators held regular meetings with all departments, keeping them updated on the progress and development of the TWS. It was first introduced to elementary education students and then incorporated into the methods courses for all students. This allowed faculty and students to slowly become familiar with the terminology and the process. One professor said the biggest contributing factor to TWS implementation was the recognition across the campus that some type of performance assessment was needed. He added that the TWS is a more comprehensive assessment of student teachers than what had previously been in place.

The majority of faculty at ESU are involved in some way with the TWS. All ESU faculty have received training in the TWS, and training has been consistent since the TWS was implemented. Faculty are involved with supervising student teachers, scoring the completed TWS, working with the professional development schools, and teaching the components of the TWS methodology. One faculty member said, "It [the TWS] has become the culture here." Faculty are instructed to guide students but not to assist them in the creation of their TWS. Initially, the TWS coordinator ran a telephone hotline that could be used by faculty and students to obtain information or clarification. ESU has also developed an area on its Web site to store information about the TWS that can be accessed by faculty and students.

Cooperating teachers, those who work in the local public schools, have also been trained in the TWS. ESU trains any teacher willing to participate and has currently trained more than 600 area teachers. Some of those teachers had never worked with an intern. Initially the trainings were half-day sessions, and the cooperating teachers received a small stipend for participating. ESU has now developed an online training course for cooperating teachers, mentor teachers, and even student teachers. This will eliminate the half-day session, but ESU will continue to provide refresher trainings at the beginning of each semester.

Cooperating teachers see the value of the TWS because it has raised the bar for students. One teacher added, "This is similar to the type of accountability and documentation we want to have to see student growth." Another shared that at first, some of the veteran teachers were intimidated, but they gradually saw how they could learn from the interns and apply the TWS process to their classrooms.

Students at ESU are introduced to the TWS at different stages of their student career. Some students are introduced to the TWS at the sophomore level in their Introduction to Education class. One instructor noted that the TWS constitutes the "building blocks" for learning (illustrated in Figure 5) that lead to the teaching experience. Other students are not introduced until their junior year in their methods

courses. All students complete a practice TWS based on hypothetical data during their methods classes. However, one instructor noted that not all students are receiving the same instruction in the content methods courses. The content methods classes are taught in the College of Arts and Sciences, where the instructors have varying levels of involvement with the TWS. The institutional coordinator was aware of this problem and saw it as an area that needs immediate improvement, so that all students have consistent knowledge and exposure to the TWS.
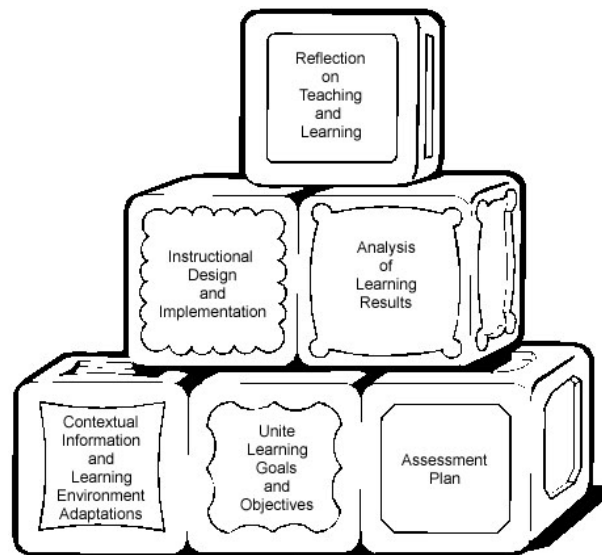

Figure 5: Illustration of the TWS as Building Blocks

Students indicated that they felt adequately prepared to complete the TWS. They said it is difficult to grasp all the concepts until one is actually in the classroom. Many students said the TWS had been introduced to them one component at a time, and that made it easier to understand and apply.

Although there was no official mentoring component at ESU, there were plenty of opportunities for students to receive mentoring. According to one project coordinator, "The mentoring is available [but] not all of them take advantage of it." The cooperating teachers seemed to provide the majority of the mentoring. They were in constant communication with the student teachers and were available to answer questions and provide feedback, often giving up their planning period to consult with students. The students interviewed said they felt like they had several individuals who could help guide them in completing the TWS. The majority said they would go first to their cooperating teacher and then to their professors, but many also consulted with other students who had already completed their TWS.

Generally students seemed to be doing well on the TWS. Overall, ESU students were averaging a score of 83 out of 100 possible points for their TWS grade. ESU would like to see that number reach 90 in the future. ESU's grading scale is different from that of the Renaissance Partnership, which uses a 4-point scale. The students see the TWS as

extra work but acknowledge that it helps them organize their thoughts and focus on teaching and student impact. Recent graduates of the program who are now teaching said they appreciated the experience much more once they were actually teaching. While they said they do not complete all of the steps of the TWS, they do think about those steps as they prepare their lessons and assess their students.

Students seemed to be struggling with areas that were not emphasized in their course work. "They have a really difficult time making alignment between objectives, teaching content going on, and assessments," said one project coordinator. The students appeared comfortable with the teaching aspect but struggled when trying to create sound assessments. Students also struggled with the reflection component. Most faculty saw this as the easiest component of the TWS but acknowledged that students either rush through this step, because it is the last one, or struggle with switching from data-driven to judgmental language. Some students indicated there was no one component that was difficult, but having the time to complete the TWS was the biggest challenge. Many students attending ESU work a part-time job during their student teaching semester and therefore time management is more of a challenge.

Both administrators and students viewed calculating the gain score as a strong element of the TWS. Student teachers look at their students' pretest scores at the beginning of their student teaching and then at the posttest scores after they have taught the unit, to calculate how much students have improved. For students who stay in Kansas and teach, the TWS also prepares them to complete the Kansas Performance Assessment. With the NCLB and state assessments, new graduates are going to be held accountable for their students' learning. ESU feels that they are ahead of other teacher preparation programs in Kansas, where students have no experience with the TWS but are required to complete the Kansas Performance Assessment.

One of the main obstacles to implementing the TWS has been cost. During the first five years, the grant covered most of those costs. The major cost that remains is scoring the TWS. Administrative staff were looking for ways to cover the costs so progress can continue can be made. Another obstacle encountered at ESU has been time—time for the students to complete the TWS and for faculty to score the TWS and provide feedback to students. Administrators felt that as the TWS becomes part of the normal culture, it will become more routine and less cumbersome.

The TWS data are used both for student teacher performance assessment and for looking at each area in the program so that improvements can be made in the curriculum. ESU staff created a matrix of all the skills required in the TWS. They then used the matrix and a list of the education courses to identify where each skill was taught and if there was duplication across the program. Copies are returned to faculty to review and decide if they are doing as well as they thought they were, based on how their students scored. Students receive constructive feedback as well as their raw scores on the TWS and are encouraged to include the completed TWS in their portfolios.

Accountability Data Management System

The need for an accountability data management system was evident and quickly followed the implementation of the TWS at ESU. Although it was a requirement of the Renaissance Partnership, it was also needed for the forthcoming visit by NCATE. The university was collecting most of the data in some way, but specific data pertaining to student teachers were not accessible in one place. The Renaissance Partnership grant provided ESU the money to develop and refine its current system.

The data management system at ESU is very comprehensive. It has developed over several years and was modeled after the Western Kentucky University system. The current system, which has been functional for about a year, allows administration, faculty, and students to view students' scores on the TWS factors, as well as other information, such as Praxis scores, GPA, classes completed, admissions information, and general demographic information. The system also includes the teaching standards required by the state of Kansas; faculty will eventually be able to enter how each student is doing on the standards.

A member of the technology staff created the software used to run this Web-based system, which is supported by the university system and backed up once a week. The system was first used to generate reports during the NCATE visit. It enabled NCATE to see what kinds of data were being tracked and the accessibility of those data. The institutional coordinator said NCATE was very impressed with the system.

At present, most of the TWS data are hand entered into the system. Other information collected by the university assessment office is downloaded into this system each week. Currently, faculty can enter very little of the data for their students; most data are forwarded to staff in The Teachers College for entry. The detailed scores for the TWS are entered into a separate database that supports more comprehensive analysis by individual items, factors, gain score, mastery index, and total score (ESU, n.d., b). The scores on each factor of the TWS are then uploaded into the accountability data management system.

ESU collects data on the interns while they are in the field. The cooperating teachers are required to submit student teacher assessment forms periodically throughout the semester. Recently, ESU has created that form online and is now urging those teachers to complete and submit the form online so the data are automatically uploaded to the system.

Although the system has been functional for about a year, administrators have just started training faculty and students to access it. The majority of the faculty say they have logged into the system to view the progress of their students. Faculty also have periodically received reports of the data from department heads or from the institutional coordinator. Because the system is Web based, students with passwords can access their information from any computer. Many of the students indicated they had logged into the system and were successful in accessing their information.

During an interview, two of the project coordinators rated their progress on the five elements of the Renaissance Partnership's rubric for institutional accountability system development (using a scale of 1 = *Beginning*, 2 = *Developing*, 3 = *At Standard*, and 4 = *Above Standard*). See Figure 6 for a graphic portrayal of the results. The project coordinators viewed the system as an ongoing effort. Although they were satisfied with the progress they had made, they were unsure of the continued availability of a system coordinator now that the Renaissance Partnership project's funding has ended.
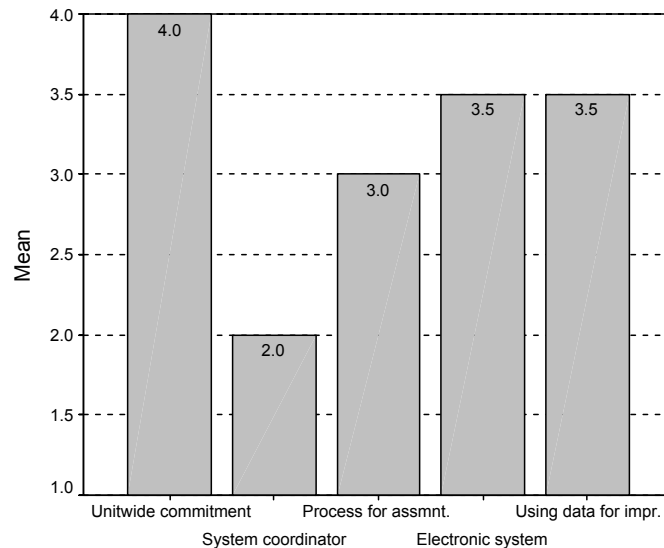
Figure 6: Interviewees' Ratings (*N* = 2) of the Accountability Data Management System at ESU

Conclusion

Looking back on a new intervention allows those involved to think about things they may have done differently or to make suggestions for others who want to duplicate the intervention. One project coordinator thought they could have looked more closely at how the TWS effectively measures the areas they are trying to measure. Both administration and faculty see the importance of including individuals from all areas of the university, as well as public school teachers and administrators, from the beginning of the project. One faculty member suggested having the TWS model finalized before implementing it with all students. She said it was very frustrating in the beginning because the requirements kept changing. The cooperating teachers stressed the importance of working closely with the public school system. Students suggested sharing multiple examples of the TWS so they know what to expect.

The TWS and the accountability data management system are improving teacher education at ESU. Communication has increased, not only among students, faculty, and administration, but also across the different disciplines involved with the teacher

education program. Student teachers are better prepared to complete the state-required licensing. Faculty have reflected on their own instruction and made changes to several courses in the teacher education program. Administration is better equipped to track student teachers' progress and assess whether they are meeting the requirements. ESU is committed to continuing its efforts to produce high-quality teachers who want to guide their students toward success.

Western Kentucky University:
Preparing Professionals Who Impact Learning

Western Kentucky University (WKU) sits atop a hill overlooking the city of Bowling Green, approximately 110 miles south of Louisville and 25 miles north of the Tennessee border. The Kentucky General Assembly established Western Kentucky State Normal School in 1906 as one of the first two state-supported schools for teacher training in Kentucky. The school became Western Kentucky State Normal School and Teachers College in 1922, when it was authorized to grant 4-year degrees. It was renamed Western Kentucky State College in 1948 and Western Kentucky University in 1966 (Western Kentucky University, n.d.).

With a total enrollment of approximately 18,000 students, WKU employs 650 full-time and 477 part-time faculty members. WKU's physical facility is composed of a main campus with 200 acres and 53 buildings, four satellite campuses, and a University farm (Western Kentucky University, 2004).

WKU was the lead institution in the Renaissance Partnership's 1999 Teacher Quality Enhancement proposal. After selecting WKU as one of four Renaissance institutions that were above average in their implementation of the teacher work sample (TWS) and the accountability data management system, AEL staff traveled to Bowling Green in November 2004. There they conducted individual and group interviews with a total of 30 people from WKU and the cooperating K-12 schools who had been involved with one or both of those components. Information on interview participants is summarized below.

Table 5: Role and Number of Individuals Interviewed at WKU

Title	Number
Dean & project coordinators	3
Educational Tech director & manager	2
Other faculty	13
Cooperating K-12 teachers	5
Student teachers	4
First-year teachers (WKU grads)	3

The following pages synthesize the results of those interviews and discuss factors leading to WKU's success with the TWS and the accountability data management system.

Teacher Work Sample

WKU personnel have been involved with the Renaissance Group since before the development of the 1999 Teacher Quality Enhancement proposal. One faculty member was an early advocate of the notion that teacher preparation programs must be held accountable for how well their graduates impact student learning. He and other WKU faculty participated in the Renaissance meetings that explored potential strategies for performance-based assessment of teacher candidates and for the development of accountability data management systems at Renaissance institutions. WKU was designated the lead institution in the 1999 proposal, and the project director was housed in the office of the dean of WKU's College of Education and Behavioral Sciences. The present dean of education, who was institutional coordinator for the project at WKU, had oversight of the overall project budget for the 11 participating Renaissance institutions.

During 2000, project representatives from WKU met with those of other Renaissance institutions to wrestle with the details of developing the TWS prompts and rubrics. WKU was one of several institutions that piloted the initial version of the TWS. Seven WKU student teachers completed the TWS in fall 2000, and the results contributed to the revision of the TWS at a Renaissance work session in January 2001. In terms of implementation, WKU then "jumped in with both feet," according to one faculty member. The TWS was completed by 50 WKU student teachers in spring 2001 and by all student teachers in elementary education in fall 2001.

By fall 2003, all WKU student teachers were required to complete a TWS. In addition, students in elementary education (the largest of WKU's teacher preparation programs) now complete a mini-TWS in their field experience prior to student teaching, and students in other areas are taught about the components of the TWS in their methods classes and related field experiences. Faculty and students report that the mini-TWS provides a very structured and scaffolded experience. The TWS components and scoring rubrics are explained thoroughly. Students turn in their work on each component separately. This work is graded and returned to students, who correct it and later resubmit all of it as their final mini-TWS. Several student teachers commented that the detailed instruction on each component during the mini-TWS prepared them well for writing the full TWS.

During the first two years of TWS implementation, several formal mentoring schemes were attempted, but none was fully successful. At times there was confusion when the mentor advised one thing and the teacher educator who was instructing the student teaching seminar and grading the TWS advised another. Some cooperating teachers have taken on the role of mentor. Faculty may suggest which components the cooperating teacher can best help with, and students are encouraged to ask for help in the classroom. The cooperating teacher also checks how well student plans align with the class curriculum. Other sources of support for students working on the TWS are advice from and collaboration with other current and former students; feedback from professors; formal support in the seminar required during student teaching; and an abundance of

TWS examples provided by professors, cooperating teachers, and the Renaissance Web site.

Once TWS implementation was under way in 2001, the Renaissance institutions met each semester in St. Louis to report their progress and collaborate on further development of project components and support materials. Most of WKU's teacher education faculty attended at least one of these meetings, which raised faculty awareness of the enthusiasm for the TWS that existed in other institutions. This was an important factor in promoting the TWS to faculty.

At first, faculty support for the TWS was limited. Within the constraints of the grant process, there was no time to secure everyone's input. Decisions were made at the top, and TWS implementation was mandated. Some faculty objected to this top-down approach and felt that the TWS was a lot of work without extra credit or pay for doing it.

Countering this early resistance were a highly motivated and capable project team and a small body of enthusiastic faculty who recognized the potential of the TWS. In addition to the St. Louis meetings, the grant money financed many opportunities to train faculty and cooperating teachers, including introduction to the TWS and its components, scoring the TWS, and interrater reliability workshops. At times, training participants received stipends, as did faculty who scored the TWS. According to project staff, "the Renaissance [grant] has provided the best professional development we've ever had." Some faculty meetings focused on the TWS components as performance-based indicators of teacher-candidate skills. In one faculty work session that focused on aligning coursework and critical performances with Kentucky teaching standards, faculty created a matrix and could see the alignment between the TWS and Kentucky standards. As a result of this exposure, faculty gradually realized the value of the TWS, and then the buy-in started. One faculty member commented, "It just took time to show it was beneficial to students. Now there is 100% buy-in."

Teacher candidates have benefited from the TWS in a number of ways. First, the TWS clearly shows them what teachers should do in the classroom and helps them to truly understand the teaching/learning process. They are forced to think about the standards, use the standards to plan assessment and instruction, and reflect on classroom outcomes. They begin to develop a holistic view of instruction. One faculty member indicated, "They've been taught assessment in assessment class; they've been taught methods; but the TWS has them look at the instructional process from beginning to end." Second, principals and superintendents recognize that WKU graduates have skills in data management and understand the connection between assessment and instruction. "The TWS is making the WKU graduate very different and much more likely to be hired," said one faculty member. Third, the TWS experience is excellent preparation for the Kentucky Teacher Internship Program, required of all new teachers. In 2004-05, Kentucky piloted a 2-year internship program for which the intern's portfolio must include a TWS. In addition, the TWS correlates well with the portfolio standards for National Board Certification of teachers.

The TWS has also been beneficial at the institutional level. WKU has become nationally known for the quality of its teacher candidates. WKU graduates can perform in the classroom—can help kids learn—and WKU has the data to prove it. The TWS has built bridges among the faculties and colleges of the university (illustrated in Figure 7). The faculty as a whole is less fragmented; it has a similar language and focus on what needs to be done and how to do it. The TWS provides both a plan and a vehicle for improving teacher education at WKU. Faculty themselves have become better teachers as they model what their student teachers should do in the classroom.

Figure 7: Illustration of the TWS as a Bridge

Accountability Data Management System

A major component of the Renaissance Partnership grant, the development of an institutional accountability system was modeled on a standard of the National Council for Accreditation of Teacher Education (NCATE). Using a rubric related to the NCATE standard, two interviewees generally rated WKU high (on a scale of 1 = *Beginning*, 2 = *Developing*, 3 = *At Standard*, and 4 = *Above Standard*) on five aspects of system development, as shown in Figure 8.
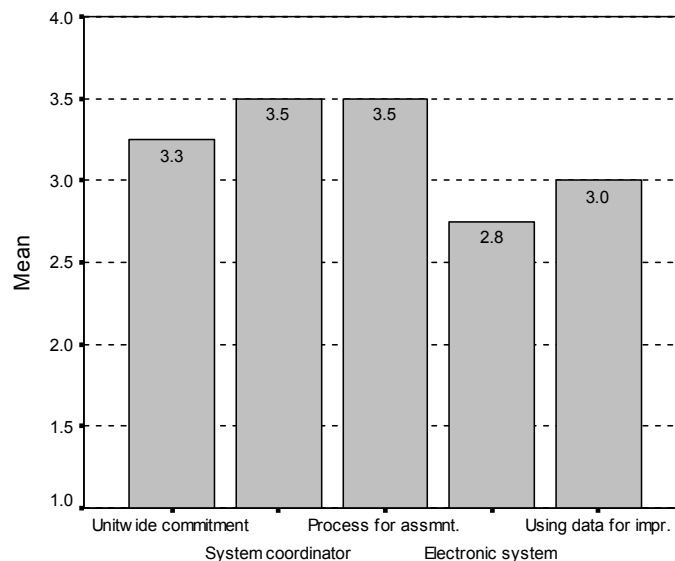
Figure 8: Interviewees' Ratings (*N* = 2) of the Accountability Data Management System at WKU

WKU's accountability data management system aims to track teacher-education students from admission until they exit the program and to include follow-up data on graduates as teachers as well. A faculty member acts as half-time system coordinator. The electronic data management system has six parts:

1. demographic information

2. admissions

3. electronic portfolio (critical performances, TWS)

4. fieldwork placement and observation records

5. student teaching (evaluation, TWS, dispositions observation form)

6. postgraduation data (certification, Praxis scores, graduate surveys)

This Web-based database access system runs on a Linux server and interfaces with the university's Banner system. The data management system has its own servers, a feature that gives it flexibility but also leads to some duplication of data that are tracked on the university system. With regard to security, there are different levels of access.

As of fall 2004, only some faculty were using the system. They were completing "bubble sheets" for TWS evaluation, and a graduate student was entering those forms into the system. Students were required to upload their critical performances for each course; most faculty printed these out, scored the paper copies, then uploaded the final scores. Among the more technologically advanced faculty, one assistant professor scored online, kept all her students' work for a year, and burned a CD of the best work for each semester. She often uses these exemplary work samples as examples for other classes. About 90% of faculty were in at least minimal compliance with the system—ensuring that their students uploaded their critical performances into the system and that their scores were entered. But, in terms of data management, many faculty practices had not changed much.

The system keeps a portfolio of students' work throughout their college career. If any critical performances were revised, all versions are in the portfolio. Students may view their portfolios and request that selected items be burned on a CD. However, few of the student teachers interviewed were aware of the system or its capabilities.

The usable data in the system were ACT scores, scores on the Praxis I Pre-Professional Skills Test (PPST), the students' electronic portfolios, and the critical performances (including the TWS). Only the overall TWS score of 1-4 was in the system; all the very detailed scoring of TWS components was not yet included. The university collects data on student progress at approximately 100 points overall, but these are not consistent across programs. One pending task of the assessment coordinator is to choose consistently collected data that represent well-defined progress points.

As of fall 2004, some reports were being generated regularly by the system, and others were in development. Faculty could view information on the students in their classes, but only the assessment coordinator could view all the data on an individual student. A potential function of the system could be advisory—letting students know if there are problems in their overall progress. Further development is also needed in the area of streamlining the critical performances and aligning their rubrics with the language of Kentucky's teaching standards.

Several factors have contributed to the development and institutionalization of the accountability system. First, the requirements for NCATE accreditation form a backdrop to this reform, as does the growing emphasis on accountability and data-driven decision making in the public schools. Second, university and college administrators were highly supportive and pushed to get everyone on board, and the core project team was committed to making the system a success. Third, the necessary resources were available. The Renaissance grant provided money for technology and opportunities for information sharing and collaborative problem solving across the participating institutions. The college administration shifted available technology funds toward the accountability system and hired a half-time system coordinator.

At first there was resistance—some faculty ignored the system or were barely compliant. The data system makes faculty work and student outcomes public and may have been seen as an infringement of faculty rights. One university administrator commented, "Academic freedom went out the door when performance-based accountability came in." Gradually that resistance has been worn down through faculty training and exposure to the merits of a data management system. At a faculty retreat in fall 2003, faculty looked at program data holistically, as a unit, for the first time. This experience was an eye-opener, as the data had not been easily accessible before. In other instances, some faculty changed their minds about the system when they saw that it validated their work or when it revealed misalignments between critical performances and state teaching standards.

Another source of faculty resistance—lack of technology expertise—has been addressed by the assessment coordinator. Some faculty didn't know what could be done with the technology or what questions could be asked. The assessment coordinator has made them comfortable with asking questions about the system.

Conclusion

Together the TWS and the accountability data management system are improving teacher education at WKU. Traditionally, most of higher education has been course-driven. Faculty teach what they want to teach, what they've taught for years, and what they think students should know. But they have no way of documenting that they're teaching the right things. The TWS is standards-based, and WKU students completing a TWS must address the standards. The TWS outcomes and the other data in the

accountability system provide a means of documenting an institution's impact on its students and thereby making higher education accountable.

Outcomes of the TWS and other critical performances are being used to inform programmatic changes. For example, early work samples showed that students needed more help with assessment and data analysis, and these areas now receive greater emphasis. Also, students are now being taught in advance the types of writing they'll need for the TWS—both writing as a reflective practitioner and more analytical writing.

Formerly, student teachers planned lessons from the textbook. Now they're learning to link objectives and assessment and then select activities based on their assessment. As one faculty member said, "The word I would use to describe the TWS is 'rigorous,'. . . [and] that is what it takes to produce teachers that can go out into high-stakes accountability systems and do what they need to do in their classrooms."

OVERALL SYNTHESIS ACROSS THE FOUR CASE STUDIES

Looking across the four cases presented, a number of themes emerge, as well as a few cautionary notes. In this section, we consider some of these issues.

Change is a tradition at these universities. The historic notes that introduce each of the cases demonstrate that these institutions have changed their names no fewer than four times throughout their histories. These name changes have been instituted, it appears, as symbols of the changes in the universities' missions. Originally established to provide a fairly limited education for a minority of the population, the seminaries evolved into normal schools in the latter part of the 19th century. This evolution reflected a larger, national change in the perception of what constituted appropriate teacher education. Later, these institutions became colleges, a change that reflected their broadening educational missions, and then universities, usually with a further expansion of disciplines and the inclusion of graduate studies. Thus, as the needs of the society and the culture of education have changed, these universities changed to accommodate the larger changes. The introduction of the Teacher Work Samples (TWS) and the accountability systems represents, then, the latest in a series of changes that reflect larger changes in the technology, values, and knowledge of the education profession.

Leaders take risks in support of their vision. Each of these universities enjoys a reputation for excellence, especially in the preparation of teachers. It would have been easy for the leaders of these universities and colleges of education to avoid changes intended to improve their programs. Indeed, some of the resistance came from some faculty members who asked, "Why are we fixing what isn't broken?" Thus, a certain level of risk is involved when a leadership group decides to radically change the system of educating future teachers or to undertake a new way of creating accountability. Moreover, these changes require dedicating time, talent, and money to what is essentially an unproven course of action. In an era of ever-shrinking budgets, such risk taking also holds the potential of great loss. The potential losses of faculty support, jobs, and public confidence are risks that leaders must consider before undertaking any major changes. Yet, as these cases demonstrate, the leaders of these institutions were willing to take large risks to create a better way of operating, a better way of educating future teachers.

Implementation of the TWS and the accountability systems represents a paradigmatic change. Exacerbating the risk factor is the fact that these changes represent a real paradigmatic change in the education profession. For most of modern history, educators and universities have been evaluated by the quality of inputs. That is, colleges are judged by the qualifications of faculty, the size of libraries, the breadth of course offerings, and the number of students enrolled. Faculty are evaluated by the number and quality of their publications and research activities, and by their stature in their profession, which is often represented by prizes and awards. Increasingly, however, there have been pressures to judge the quality of universities by the outcomes; that is, what the university produces. The TWS is a manifestation of this paradigm shift. The quality of a teacher, the TWS argues, is measured by the ability of that teacher's students

to learn what is presented. That is, teacher quality is best judged by the learning demonstrated by a teacher's students. By supporting such a system, the leaders of these four institutions endorsed the idea of focusing on the outcomes, not the inputs. Of course, this paradigmatic shift has made the change process more difficult for the institutions and for the faculties who carry out the missions of these universities. Nevertheless, this paradigmatic change is seen within these institutions—as in some parts of the education profession—as a key element to the continuing value the profession brings to its social mission.

Fidelity of implementation must be balanced by flexibility. A fundamental premise of science is that replication of an experiment should lead to a duplication of results. This premise, which translates as fidelity of implementation of innovative research-based practices, sometimes clashes with another value: maximizing local flexibility so the innovation corresponds to local realities. It is clear from the cases presented above that no single model of the TWS or an accountability system was implemented on all four campuses. It is not clear from these cases that the quality of the implementation was compromised by local decisions during the installation of these programs. However, it is also not clear what the limits of such local flexibility are. At what point do local decisions result in implementation of something that is no longer the TWS? While these cases are intended to present faithful implementation of these innovations, it remains to be seen how much flexibility can be incorporated in future implementations. An important aspect of this fidelity/flexibility discussion rests on the understanding of the purposes of the innovation, especially the TWS.

Sharing information in a variety of ways is a key to success. Each of these cases demonstrates the importance of information sharing in the installation of an innovation and, in addition, the importance of the timing and method of information sharing. A broad definition of information sharing includes workshops, training, conversations, writing, coursework, mentoring, and similar activities. While the quality of these individual strategies is important, so is their timing. Who needs what information at what point in the implementation and which tactic is best for providing that information are decisions that are illustrated in each of these cases. Each of the individuals and groups whose contribution to the TWS process or the establishment of the accountability system was necessary for success probably needed different kinds of information at different points. The ability of the leaders and implementers of these systems to meet these information needs lies at the heart of the success of the implementations. This ability also represents the primary challenge, once the TWS or accountability system has actually been created. Because the successful implementation of these systems depends on the willingness of many people to support them, it is clear that strong leadership is a necessary, but not sufficient, condition. It is the ability to re-create the vision of the leadership group that enables their collaborators to improve methods of work that are the motivators of this entire process.

The fact that a decision is made is more important than how the decision is made. This theme is offered tentatively, but provocatively. It has become virtually canonical that "buy-in" to a decision is contingent on participation in decision making. In three of these four cases, careful attention to getting buy-in from faculty was evident. In the fourth case, however, some of the basic decisions were made in a "top down" fashion. The net effect, though, of both these decision-making methods was a successful implementation. Certainly, the most commonly offered explanation for faculty resistance in these cases was a lack of buy-in related to lack of participation in decision making, or the feeling that the TWS was being imposed on other parts of the university by colleges of education. While the norms of collegiality are important to universities and are not taken lightly, the fact remains that in at least one university, a different model of decision making is presented. That case, as successful as it was, deviates from the general understanding of "good" decision making. In addition, none of the interviewees talked about involving the students in the decision-making process, yet students clearly have an interest in the outcomes of the decisions. Similarly, there is no indication in any of the cases that the cooperating teachers were involved in decisions about the TWS. These studies illustrate the need to re-examine our beliefs about decision making and collegiality.

The TWS is emerging in other forms of teacher assessment. One outcome mentioned in three of the cases is the expansion of the TWS to evaluation outside the university. Most teachers who will be licensed in the states where the four cases are located will not have had the training and support that are key features of the TWS as described in the cases. The application of the TWS for high-stakes purposes (such as licensure) has not been tested. The necessary conditions for implementation of the TWS have not been specified. It is possible that the expansion of the TWS for this new purpose may result in some people being denied licensure who might otherwise be fine teachers. It is also possible that the TWS is the perfect process/tool for certification of teachers. At this time, we cannot confirm either of these two statements. Before the TWS is expanded for this new purpose, consideration should be given to a number of issues associated with high-stakes evaluation.

CONCLUSIONS

The following conclusions are presented under the framework of three of the four evaluation questions: the extent to which teacher work samples and accountability systems were developed, the factors contributing most toward institutionalization of these components, and the ways in which teacher work samples and accountability systems are improving teacher education and teacher quality at the four universities studied. A final paragraph looks toward the ultimate goal of impact on student learning.

Extent of Development

Teacher work sample. The concept of teacher work samples as both a process and a product has become firmly embedded in the culture of each of the four universities. At present, all students in the teacher education programs at three of the universities are required to complete at least one teacher work sample; at the fourth university, work samples will become mandatory for all student teachers by fall 2005, though most student teachers are already meeting this requirement. Further, all four universities have added a condensed or modified teacher work sample requirement as a precursor to the full-blown TWS activity during student teaching. In addition, one university mentioned incorporating the TWS into several graduate programs. Underlying these developments are the successes of each university in reshaping curriculum, laying a solid foundation to support TWS in the future, and obtaining a "critical mass" of faculty willing and trained to include TWS in their courses. The concept of TWS seems to have been fully integrated into the unique environment of each university.

Accountability system. All four universities have strong administrative support and commitment for developing and using a data management system; further, faculty at most of the institutions have started interacting with these systems either through read-only access or by actual data entry. There is at least a half-time coordinator responsible for the data system at each institution. All four electronic systems are now operational, though some are more complete than others. The data management systems serve as interactive repositories of critical data points for all student teachers. Although these systems contain teacher work sample data, they are far more comprehensive and include such items as grade point averages, admissions information, demographic information, student teaching evaluations, critical performance data from individual courses, Praxis scores (where applicable), and, potentially, postgraduation data. As the systems have become more comprehensive and operational, faculty members have begun interacting with the systems by viewing data, entering data, conducting analyses, and providing feedback to developers. Regular, routine reporting is becoming standard within each university. The universities have built systems that are Web based and include both custom and commercial software programs.

Contributing Factors

Teacher work samples. Although each university followed its own path in implementing teacher work samples, the success of those implementations was promoted by a number of factors, each of which was observed at two or more institutions. First, at all four universities, a strong commitment by university leadership backed the efforts of involved individuals.

Second, the "right" individuals were identified to form a stable core for shaping and shepherding the burgeoning effort. This nuclear group was firmly committed, enthusiastic, respected, and able to bring others "on board." Having such a group also helped avoid the possibility of a sudden disruption to the project should any particular individual no longer be available to help facilitate its implementation.

A third factor contributing to TWS institutionalization at all the universities was the provision of awareness and training opportunities for various stakeholders. The universities employed a number of tactics to help faculty, students, and school personnel understand the need for performance evaluation of teacher candidates and how the TWS would meet that need. Such opportunities included orientation sessions on campus, national meetings of the Renaissance Partnership, and informal ice cream socials or pizza parties. These events brought interested individuals together to learn about the TWS and created a "buzz." More-formal workshops on TWS scoring and interrater reliability were also offered. Some institutions made formal training mandatory; others offered it as part of an incremental approach to achieving buy-in for the concept. Faculty attendance at Renaissance meetings was a particularly powerful means of persuasion, as faculty were exposed to a national cadre of TWS enthusiasts. In addition to these national meetings, the Renaissance grant paid for a projectwide Web site, an important resource for students and faculty.

Fourth, at two institutions, university-wide faculty councils were instrumental in making the TWS mandatory for all student teachers. The councils provided forums for faculty debate on the TWS and gave faculty an opportunity to vote on the mandate.

Finally, a possibly unforeseen contributing factor was the connection of teacher work samples to other initiatives. For example, upcoming NCATE accreditation visits helped spur the TWS implementation in at least three of the universities. Moreover, in three states, teacher certification requires that candidates present evidence similar to the teacher work sample; hence, completion of the university teacher work sample correlates with and provides preparation for the statewide assessments for beginning teachers. In one instance, a university program won the Christa McAuliffe Award for Excellence in Teacher Education, for which the requirements fit nicely with attributes of the TWS.

Accountability system. Across the four universities, three key factors contributed to the institutionalization of accountability systems: external drivers, strong leadership and support, and additional resources. First, all four universities noted the need to develop data-based accountability systems as part of their NCATE accreditation visits;

hence, this external force may have helped maintain pressure for continued progress of the accountability systems. Another external driver was the growing pressure on K-12 schools to implement data-driven instructional decision making as a means of making schools more accountable. The demand for teachers to be trained in this approach has naturally extended into teacher education programs and sparked concern for accountability at the postsecondary level. A second key contributing factor—administrative support—seemed to be abundant for system development, and most of the universities utilized a team approach to design, develop, and implement their accountability systems. Third, with regard to resources, the Renaissance grant was extremely important; its funding covered both staffing and technology requirements.

Improving Teacher Quality

Case studies of the four universities have revealed several ways in which teacher work samples and accountability systems are consistently improving teacher education and, thereby, improving teacher quality. First, the TWS facilitates the shift from textbook-driven instruction, which focuses on "covering the material," to data-driven instruction, which focuses on teaching children the knowledge and skills appropriate to their current level while meeting state and local standards. The TWS provides an explicit, logical, sequential structure to guide student teachers as they develop the assessment and instructional decision-making skills needed in today's classrooms.

Second, the use of teacher work samples has helped faculty become more accountable for their own teaching and has increased their understanding of the value of performance evaluation. Faculty members' instructional successes and weaknesses become more evident through reviews of their students' completed work samples.

Third, all four universities have used their experiences with the TWS to modify their curricula, based on the observed needs of students in such areas as assessment and reflective writing. Such data-based adaptations and improvements to the teacher education program are an integral component of the accountability system.

Fourth, both the TWS and the accountability system have increased faculty conversations and cooperation within and across departments. They are helping faculties to develop a common vision of teacher education and a common language for discussing program improvements.

Looking to the Future

The ultimate goal of the Renaissance Partnership institutions was to become accountable for the impact of their teacher graduates on P-12 student learning. While it is too early for student impact data to be available, the universities studied have completed the first steps necessary for such accountability. The TWS and the accountability data management systems are prerequisites for linking performance assessment with student

learning. Their successful implementation has forged additional links in the causal chain leading to student impact. Continued research is needed to investigate the relationship between teacher-candidate performance data and P-12 learning.

RECOMMENDATIONS

The following recommendations are presented under the framework of the remaining evaluation question: recommendations that would likely result in greater effectiveness and productivity of other institutions implementing and institutionalizing the teacher work sample and an accountability system.

Teacher Work Sample

Recommendations related to the implementation and institutionalization of the TWS are presented in four areas: outside support and resources; the project team; collaboration, involvement, and persuasion; and planning and development.

Outside support and resources. The successes of the four universities studied would have been much harder, if not impossible, to achieve without the financial support of the Renaissance grant and the synergistic information sharing that the Partnership project promoted among its participants. Institutions attempting to implement the TWS are advised to

- talk to or visit the universities in this report to take a more in-depth look at their development and use of the TWS

- tap into the Renaissance Web site for ideas and resources (http://fp.uni.edu.itq)

- obtain a grant or other funding, if possible

- connect with other TWS implementers and researchers site visits to Renaissance universities or at national conferences such as those held by the American Educational Research Association (AERA) or the American Association of Colleges for Teacher Education (AACTE)

Project team. In each of the four universities, the talents, the abilities, and even the dispositions of the people who guided the TWS implementation were critical to its success. These people were enthusiastic about the TWS, and they were good communicators who were respected by their peers. Before attempting to implement the TWS, institutions should

- identify the "right" people for the job—a committed project team with the requisite capabilities

- give the team both the power to do what it needs to do and the time to do it

- provide full administrative support

Collaboration, involvement, and persuasion. Although the human relations aspect of change facilitation must be tailored to the unique characteristics of each institution and faculty, the four universities in this study made some similar efforts to spread the word about the TWS, promote support for it, and involve all stakeholders in the innovation. Regardless of the origin of the decision to adopt the TWS, institutions would want to

- make TWS development and implementation a collaborative venture, involving a diverse range of stakeholders from the various faculties and cooperating K-12 school districts

- provide ample training on the TWS and its scoring for any interested stakeholders

- have a nonthreatening "grace" period during which faculty can try the TWS before it becomes mandatory

- create opportunities for informal discussion that allow faculty to share their experiences with the TWS, discover its value, and accept it

- work closely with partner schools and cooperating teachers to ensure fidelity of TWS implementation

- build and nurture collegial relationships across turf lines

- provide stipends, release time, or other perks for faculty involvement in TWS scoring or other activities

- anticipate initial resistance to the TWS and be prepared to counter obstacles

- take a change-agent perspective and understand that the TWS presents a paradigm shift in how faculty and others think about teaching

Planning and development. Based on the many planning and implementation suggestions offered by interviewees at the four universities, a number of strategies are recommended:

- conduct a pilot test of the TWS before full implementation

- tailor the TWS to fit the culture and environment of the university, but take advantage of the experiences of other institutions

- give student teachers an introduction to the TWS that provides a comprehensive overview before they encounter its components in various courses

- make sure that each TWS component is covered in coursework

- embed shorter, adapted versions of the TWS or its components in field-based experiences prior to student teaching

- give student teachers adequate time to fully prepare the TWS without shortchanging the students in their classrooms

- ask recent graduates to share their TWS experiences with current student teachers

- plan for ongoing implementation and maintenance of the TWS, including ongoing expenses after start-up funding expires

Accountability System

Recommendations related to the implementation and institutionalization of the accountability data management system are presented in the areas of planning and support and resources.

Planning. At the four universities studied, one individual or a team of developers devoted considerable time to planning the system. Institutions involved in developing an accountability system are advised to

- identify the institution's data needs and priorities as a first step in planning

- ensure that the system reflects the university's mission and standards

- visit or talk with other universities about their accountability data management systems

- take a holistic view and consider the logic of the system as a virtual entity before creating an electronic entity

- have clear goals and the required data in mind before beginning programming

- keep the system as simple as possible

- build flexibility into the system to allow future changes as needed

- plan ahead for ongoing maintenance of the system

- conduct a pilot test before full implementation

Support and resources. Following the examples of the four universities studied, institutions that are developing an accountability system should

- provide ample administrative support

- locate and secure adequate funding for the necessary technology

- identify a core group of committed individuals and allocate the time for them to envision and create the system

- hire at least a half-time system coordinator

- provide training for faculty and other system users

- create opportunities for discussion among faculty and students about the need for, and relevance of, the system and how it might benefit them

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APPENDIXES

APPENDIX A:

Completed Evaluation Standards Checklist

Program Evaluation Standards Checklist

To interpret the information provided on this form, the reader needs to refer to the full text of the standards as they appear in Joint Committee on Standards for Educational Evaluation, *The Program Evaluation Standards* (1994), Thousand Oaks, CA, Sage. The Standards were consulted and used as indicated in the table below (check as appropriate):

Descriptor		The Standard was addressed	The Standard was partially addressed	The Standard was not addressed	The Standard was not applicable
U1	Stakeholder Identification	✓			
U2	Evaluation Credibility	✓			
U3	Information Scope and Selection	✓			
U4	Values Identification	✓			
U5	Report Clarity	✓			
U6	Report Timeliness and Dissemination	✓			
U7	Evaluation Impact	✓			
F1	Practical Procedures	✓			
F2	Political Viability	✓			
F3	Cost Effectiveness	✓			
P1	Service Orientation	✓			
P2	Formal Agreements	✓			
P3	Rights of Human Subjects	✓			
P4	Human Interactions	✓			
P5	Complete and Fair Assessment	✓			
P6	Disclosure of Findings	✓			
P7	Conflict of Interest	✓			
P8	Fiscal Responsibility	✓			
A1	Program Documentation	✓			
A2	Context Analysis	✓			
A3	Described Purposes and Procedures	✓			
A4	Defensible Information Sources	✓			
A5	Valid Information	✓			
A6	Reliable Information	✓			
A7	Systematic Information	✓			
A8	Analysis of Quantitative Information				✓
A9	Analysis of Qualitative Information	✓			
A10	Justified Conclusions	✓			
A11	Impartial Reporting	✓			
A12	Metaevaluation	✓			

The Program Evaluation Standards (1994, Sage) guided the development of this (check one):

_____ request for evaluation plan/design/proposal
_____ evaluation plan/design/proposal
_____ evaluation contract
__✓__ evaluation report

Name __Kimberly S. Cowley__ Date _April 27, 2005___ _____
(signature)

Position or Title _Research and Evaluation Specialist___

Agency _Appalachia Educational Laboratory, PO Box 1348, Charleston, WV 25325

Relation to Document ___Co-author_____
(e.g., author of document, evaluation team leader, external auditor, internal auditor)

APPENDIX B:

Rubric for Rating University Materials

AEL Rating Form for Renaissance Documents

Indicate the extent to which the document:	*Not at all*				*To a great extent*
describes progress made on project goals	1	2	3	4	5
identifies factors helping project success	1	2	3	4	5
identifies problems hindering project success	1	2	3	4	5
identifies possible solutions to problem areas	1	2	3	4	5
identifies recommendations for enhancing project effectiveness and productivity	1	2	3	4	5
shows an increase in student learning in low-performing schools	1	2	3	4	5
describes development of exemplary practices for teacher educators	1	2	3	4	5

Indicate the quality of:	*Very Poor*				*Excellent*
the comprehensiveness of the document	1	2	3	4	5
the organization of the document	1	2	3	4	5
the presentation of the document	1	2	3	4	5

APPENDIX C:

Interview Protocols

AEL Renaissance Follow-Up Evaluation
Questions for Individual Interviews

Introduction: This interview is concerned with the development and institutionalization of the Teacher Work Sample and the accountability data management system at your university. Since many coordinators and other project staff have experience in both of these areas, interview questions cover both areas. Please indicate if any question is outside your experience.

How long have you been involved in the Renaissance Project? How have you been involved? What percentage of your time do you devote to the project?

To what extent has the Teacher Work Sample been implemented at your university?

- How much staff time is spent on the TWS (FTEs), and what are the staff roles?
- Which faculty are involved, and what are their roles?
- Approximately, what number and what percentage of teacher candidates now complete the TWS? (break down by level or specialty)
- Is the TWS part of field experiences other than student teaching?
- Do all teacher candidates who are completing the TWS receive mentoring?

In general, how successful are the teacher candidates in meeting the seven teaching-process standards covered by the TWS?

Are the completed teacher work samples used for additional purposes other than evaluating the performance of individual teacher candidates?

What are the strongest elements of TWS implementation at your university? What remains to be done?

Has the TWS been a good experience for teachers and students and helped students learn? Why or why not?

What factors have contributed most to the development and institutionalization of TWS at your university?

What were significant obstacles to the development and institutionalization of TWS, and how were they overcome?

How did the university administration and Renaissance Project staff promote faculty enthusiasm and support for TWS?

What do you see as the benefits of TWS to teacher candidates? to the university?

In what ways has TWS improved teacher education at your university? What elements of the TWS are improvements over what was done in the past and over what else is currently being

done? What impact has TWS had on the quality of teachers graduating from your university? Looking back on the development of the TWS, what additional processes or actions would have made the TWS more effective or efficient, i.e., what else should have been done?

To what extent has your institution's accountability data management system been developed? [Refer to the five elements of system development based on NCATE Standard 2 and outlined in the project's rubric, and bring extra copies of the rubric to discuss with interviewees.] Use rubric to rate elements of system development: *Institutional commitment to accountability, Status of system coordinator's position, Decision-making process for system development, Status of electronic data system, Data use in program improvement*

What are the strongest elements in your system? Which elements need further development/improvement?

How is TWS incorporated into the accountability data management system? What other forms of data on candidate performance are in the system?

Are data collected on all teacher candidates? Are follow-up data collected on all graduates during their first year of teaching? Who provides the data?

What types of reports are generated by the system? How often are they generated? Who receives them, and what are they used for?

With regard to the technical aspects of the data management system, how often is it updated? Is all of it available online to all faculty? What provisions have been made for backup and security?

What factors have contributed most to the development and institutionalization of the accountability data management system at your university?

What were significant obstacles to the development and institutionalization of the system, and how were they overcome?

How did the university administration and Renaissance Project staff promote faculty acceptance of and involvement in the system?

In what ways has the accountability data management system improved teacher education at your university? What elements of the system are improvements over what was done in the past and over what else is currently being done?

Looking back on the development of the accountability system, what additional processes or actions would have made the system more effective or efficient? What else should have been done?

Overall, in thinking about replicating this project at other institutions, what changes do you recommend? What should be added, increased, or decreased, compared with what was done by your university?

Introduction: This interview is part of a site visit examining the development of the Teacher Work Sample and the accountability data management system at your university. Since you are first-hand participants, particularly in the Teacher Work Sample (TWS), we would like to hear about your experiences and opinions.

Under what circumstances did you write the TWS? In other words, did you write the TWS only during your student teaching or was it part of other field experiences?

What types of preparation and training were provided in advance of writing the TWS? Were they adequate?

How adequate was your training in the seven teaching processes/components addressed in the TWS?

- contextual factors
- learning goals
- assessment
- instructional design
- instructional decision making
- analysis of student learning
- self-evaluation and reflection

Did anyone help you design your TWS?

Who were your mentors?

How much mentoring did they provide, and what was the nature of it? Was it adequate?

Has the TWS been a good experience for teachers and students and helped students learn? Why or why not?

How useful or valuable was the TWS experience as preparation for teaching?

What are the major strengths of the TWS methodology?

What are the major weaknesses of the TWS methodology?

How has TWS improved teacher education at your university?

What types of data were collected on your teaching performance during your various field experiences?

Does the accountability data management system provide any benefits to you?

In thinking about replicating this project at other institutions, what changes do you recommend? What should be added, increased, or decreased, compared with what was done by your university?

AEL Renaissance Follow-Up Evaluation
Questions for Group Interviews:
Faculty Members

Introduction: This interview is part of a site visit examining the development of the Teacher Work Sample and the accountability data management system at your university. We may have different types of faculty in this group, and some questions may be more relevant to certain faculty than others.

How many in the group are College of Education faculty?

How many years have you been on the faculty of this university?

What types of training have you received relevant to working with the Teacher Work Sample or mentoring teacher candidates?

How have the university administration and Renaissance Project staff promoted faculty enthusiasm and support for TWS?

Generally, did the student teachers you've worked with successfully implement or address the seven TWS teaching processes/components? Were they more successful with some components than others? [The components are contextual factors, learning goals, assessment, instructional design, instructional decision making, analysis of student learning, and self-evaluation and reflection.]

With regard to the seven teaching standards related to the TWS teaching processes, what proportion of teacher candidates are meeting the standards as a whole? [Ask for explanation of the outcome.]

What is the status and role of the assessment coordinator at your university?

What types of teacher-candidate information are provided by the assessment coordinator? Is the information timely and comprehensive?

How have the university administration and Renaissance Project staff promoted faculty acceptance of and involvement in the accountability data management system?

Have you mentored any student teachers in conjunction with the TWS? How much mentoring did you provide, and what was the nature of it?

Has the TWS been a good experience for teachers and students and helped students learn? Why or why not?

How useful or valuable is the TWS experience and its seven-process framework as preparation for teaching?

What are the major strengths of the TWS methodology?

What are the major weaknesses of the TWS methodology?

How has TWS improved teacher education at your university? ? What elements of the TWS are improvements over what was done in the past and over what else is currently being done? If you were involved in teacher education before the advent of TWS, what impact has TWS had on the quality of teachers graduating from this university?

Looking back on the development of the TWS, what additional processes or actions would have made the TWS more effective or efficient, i.e., what else should have been done?

Looking back on the development of the accountability data management system, what additional processes or actions would have made the system more effective or efficient, i.e., what else should have been done?

Overall, in thinking about replicating this project at other institutions, what changes do you recommend? What should be added, increased, or decreased, compared with what was done by your university?

Introduction: This interview is part of a site visit examining the development of the Teacher Work Sample (TWS) and the accountability data management system at _____. Since you are closely involved with teacher candidates as they conduct the teaching unit related to the TWS, we would like to hear about your experiences and opinions.

For how many years have you been supervising student teachers? How many in the group supervised student teachers before the introduction of TWS?

How many teacher candidates have you supervised as they conducted the TWS teaching unit?

What types of teacher-candidate information did you receive from the university? Was the information timely and comprehensive?

Were the student teachers that you supervised adequately prepared to conduct the TWS teaching unit?

Generally, did the student teachers under your supervision successfully implement or address the seven TWS teaching processes/components? Were they more successful with some components than others? [The components are contextual factors, learning goals, assessment, instructional design, instructional decision making, analysis of student learning, and self-evaluation and reflection.]

With regard to the seven teaching standards related to the TWS teaching processes, what proportion of teacher candidates are meeting the standards as a whole?

Have you mentored any student teachers in conjunction with the TWS? How much mentoring did you provide, and what was the nature of it?

Has the TWS been a good experience for teachers and students and helped students learn? Why or why not?

How useful or valuable is the TWS experience as preparation for teaching?

What are the major strengths of the TWS methodology?

What are the major weaknesses of the TWS methodology?

How has TWS improved teacher education at _____? What elements of the TWS are improvements over what was done in the past and over what else is currently being done? If you supervised student teachers before the advent of TWS, what impact has TWS had on the quality of teachers graduating from _____?

Looking back, what additional processes or actions would have made the TWS more effective or efficient, i.e., what else should have been done?

In thinking about replicating this project at other institutions, what changes do you recommend? What should be added, increased, or decreased, compared with what was done by _____?