Western Oregon University

Documentation of the Teachers for a New Era Learning Network

July 2009

INTRODUCTION

The Academy for Educational Development (AED) sent a research team to Western Oregon University (WOU) on November 17-18, 2008, to conduct interviews with individuals who play important roles in the university's teacher preparation program. These interviews, along with additional materials provided by WOU and identified by the AED research team, provide the basis for this case study.

WOU was one of 30 universities selected to take part in the Teachers for a New Era (TNE) Learning Network, an initiative supported from 2005-2009 by a grant from the Annenberg Foundation, with additional support from Carnegie Corporation of New York. The basic purpose of the Learning Network was to encourage a broader circle of universities to adopt the three principles of TNE as the guiding directions for their work. Originally published in the *Prospectus* for TNE in 2001, the three design principles are: 1) decisions driven by evidence; 2) engagement with arts and sciences; and 3) teaching as an academically taught clinical practice profession. WOU, like many of the other Learning Network institutions, had already demonstrated considerable progress along these lines at the time of its selection.

This case study is one of nine prepared by AED to document evidence of institutional change in teacher preparation at nine of the 30 universities that took part in the Teachers for A New Era (TNE) Learning Network. AED selected the nine universities based upon a variety of factors, including their degree of engagement in the Learning Network and their willingness to participate in a series of case studies that explored progress toward site-specific program objectives related to one or more of the TNE design principles.

Institutional change, for the purposes of this study, means change that goes beyond adjusting course curricula, or degree requirements, or even holding meetings across university departments. It means change that transforms a teacher education program's organizational structure, culture, external relationships, and ways of assessing the outcomes of its work. Such change is often based on research evidence, involves sustained partnerships with school districts and personnel, establishes cross-college and cross-departmental pathways for work and communication, increases the quality and

length of time that candidates spend in school settings, and assesses its teacher candidates on their effectiveness in the classroom. Institutional change is not simply change for the sake of change; it is a mission-driven effort to refocus the activities of the teacher education program on the effectiveness of their graduates in helping pupils learn.

Based upon the nine case studies, the AED research team has prepared a cross-case study that documents and analyzes findings with bearing on four broad research questions:

1. Is there evidence of institutional change along the lines of the TNE design principles in the preparation of teachers at these institutions?
2. In what categories of change does this evidence appear?
3. Around which indicators do these appear?
4. What aspects of the Learning Network, if any, are reported to have triggered or enhanced the occurrence of change or supported its continuation?

The nine case studies will be made available to the Annenberg Foundation and to Carnegie Corporation of New York. The cross-case analysis will be published as part of a major publication, also funded by the Annenberg Foundation, which will serve as a final report and recommend next steps for the TNE Learning Network.

DETERMINING THE FOCUS FOR THIS CASE STUDY

University-based teacher preparation is a complex enterprise with many elements and many players, and this is especially true for universities attempting fundamental change. To provide a manageable focus for these case studies, AED staff asked the TNE Learning Network universities to select one program objective by which they would wish to document their progress. AED asked that this objective (1) reflect an important aspect of teacher preparation at their institution, (2) address one or more of the TNE design principles, and (3) logically connect to pupil success. The universities were also asked to specify indicators that the change sought was occurring.

The authors of the WOU statement selected an objective that addresses two of the TNE principles— "decisions driven by evidence" and "teaching as an academically taught clinical practice profession." This ambitious objective targeted both candidate and pupil performance as WOU sought to:

> Improve the ability of both secondary and primary level teachers to demonstrate improved knowledge, planning skills, and the ability to effectively impact student learning in the areas of science and math.

In addition, WOU identified a performance indicator that could be used to track progress. This indicator is **institutionalized use of additional science and math guidelines, curriculum resources, observation protocols, prompts, and scoring criteria drawn from the National Science Teachers Association and National Council of Teachers of Mathematics to enhance the Teacher Work Sample Methodology (TWSM) required of candidates at WOU.**

Conceptual development of what has come to be known as TWSM began almost 40 years ago at WOU as a way of connecting teaching and learning. The Teacher Work Sample (TWS) is a collection of evidence developed by students to demonstrate their teaching proficiency."

> As its name implies, teacher work sampling focuses on a sample of a teacher's work. As [WOU uses] the term, it also focuses on a sample of pupils' work. What makes the methodology unique is that it provides a meaningful way of connecting the two samples.[1]

By selecting a performance objective that builds on the development and evolution of TWSM at WOU, campus leaders of the Learning Network initiative explicitly recognized the many ways in which TWSM permeates almost all aspects of the institution's teacher preparation programs. As the dean of education observed, WOU is unique in having maintained a focus on TWS rather than shifting from one trend to another. "We recognized the considerable value in staying with one line of work," she added.

This case study documents the university's efforts to increase teacher candidates' knowledge and skills—and to measure the candidates' ability to produce demonstrable learning gains in the pupils they teach. Because this work occurs within the context of WOU's groundbreaking work in the development of TWSM, the case study also highlights the evolution of that methodology and the ways in which it has attracted substantial interest across the country.

HISTORY OF INNOVATION

Established in 1856 as Monmouth University, WOU is the oldest institution in the Oregon university system. The first principal of the education department was hired in 1861, and the institution was renamed Christian College in 1865. The college established a normal department in 1881 to increase enrollment and generate revenue—and began to pave the way for future public funding as a teacher training institution. A year later, Christian College became a public institution and its name was changed to Oregon State Normal School (OSNS). That same year, OSNS received its first public funds—$22,832 for general operating expenses.

In 1899, OSNS added a third year of instruction to its curriculum and introduced an early precursor of what are today known as remedial or development courses. A half year of "sub-normal" courses was added with the explicit purpose of helping less-prepared students meet college expectations. This innovation may have been in response to a legislative change that eliminated automatic teacher certification for normal school graduate and required graduates to a pass a licensing exam before being certified to teach in the state.

The first decade of the 20th century was a period of extreme financial instability for Oregon's normal schools. In 1909, OSNS and two other normal schools were forced to close due to a lack of funds. A ballot initiative the following year re-established a normal school in Monmouth and created a permanent funding stream through a levy on taxable property. OSNS re-opened in 1911 as the Oregon Normal School—the name it maintained until 1938, when the institution was first accredited by the American Association of Teachers Colleges and re-named as the Oregon College of Education. One

1) Schalock, H.D. & Myton, D. (2002). Connecting teaching and learning: An introduction to teacher work sample methodology. In *Connecting teaching and learning: A handbook for teacher educators on teacher work sample methodology*. Washington, DC: AACTE Publications.

highlight of the ONS phase was the presidency of Joseph Landers, who sought to increase graduation and certification requirements before resigning in 1932 amid controversy around "progressive education" training for teachers.

By the 1950s, OCE had begun to expand its curricular offerings, adding a masters degree in elementary education and undergraduate majors in humanities, social sciences, and science-mathematics. In the 1980s, the institution moved further beyond its normal school roots. It was renamed Western Oregon State College in 1981, and the first dean of the college of liberal arts and sciences (LAS) was hired in 1986. Slightly more than a decade later, the institution completed its long journey to university status when it was rechristened Western Oregon University in 1997.

Today, WOU is a comprehensive, regional institution with an enrollment of slightly fewer than 6000 students more than 50 percent of whom are first-generation college students. Despite its relatively small size, WOU produces a significant number of teachers—approximately 275 annually. WOU's mission statement emphasizes the centrality of personalized education in the institutional culture. The faculty to student ratio is 18:1, with average class sizes of 24-25 students in the lower division. "Access and affordability are key considerations for WOU administrators," noted Provost Kent Neely. With its Tuition Promise program, WOU is the only university west of the Mississippi that offers students a guaranteed four-year tuition rate (i.e., the same tuition rate for four consecutive years). With its explicit emphasis on targeted outreach to bi-lingual students, WOU is now the most diverse campus proportionally in the Oregon university system. The goals of the university's Bi-lingual Fellows Support Program are recruitment, retention, and recognition—and these goals are achieved through services that include academic support and advising, test preparation and assistance, career development activities, and a specialized listserv.

There are three divisions within the college of education at WOU: 1) teacher education; 2) special education; and 2) health and physical education. The teacher education program is by far the largest with programs at baccalaureate and masters levels, while special education degrees are offered only at the graduate levels. Both the undergraduate teacher education program and the master of arts in teaching (MAT) are intensive four-term (quarter) programs. Additional graduate programs include a master of science in education for practicing teachers and two variations of an MAT for individuals who already hold baccalaureate degrees. Both of these variations focus on preparation of high school teachers, with an option of adding a middle-level endorsement. An American sign language program is deaf education that was previously offered in the special education division is now being reconfigured, and WOU is one of only six institutions in the country to offer a graduate program in rehabilitative counseling for the deaf. Teacher preparation programs within the college of education have approximately 45 full-time faculty and staff.

Development and Evolution of TWSM
The history of innovation in teacher education at WOU is inextricably linked with the TWSM and its godfather, the late Del Schalock, who devoted most of his career to researching the connections among teacher education, teaching, and pupil learning.

The precursors of TWSM were launched almost 40 years ago at WOU as a way of connecting teaching and learning. Developed for use as both a pedagogical device and an assessment tool, the TWS is

basically a package of materials developed or collected by a teacher education student to demonstrate teaching proficiency, including evidence of pupil learning. However, TWSM has since emerged as the centerpiece of WOU's teacher education programs, the focus of more than three decades of research at WOU and beyond, a licensing requirement for Oregon teachers, and a strategy adopted by teacher education programs across the country to assess teacher candidates' abilities to foster learning gains in k-12 pupils. At WOU, TWSM has provided both the conceptual framework and the research base for development of a culture of evidence.

In the words of Schalock, "teacher work sampling had humble beginnings and a long period of gestation." Initial work on the precursors to TWS began shortly after Shalock joined the Center for the Study of Teaching at Oregon College of Education (now the Teaching Research Institute at Western Oregon University) in 1960 and embarked on a research path that led through competency-based teacher education, performance-based certification, and ultimately the emergence of the TWSM. The rationale for including evidence of a candidate's ability to foster pupil learning as a condition for licensure—a primary goal of TWSM—was introduced by Schalock in a 1979 publication on teacher selection. From 1979 to 1986, WOU pursued an outcome-based approach to preparation and licensure that included TWS components and assumed a leadership role in a range of research and development activities that focused on connecting teacher preparation, teaching, and K-12 learning. Relatively few findings were published during this period since most of the data generated were used for refinement of instructional programs and/or data collection, analysis, and reporting methodologies. Even so, one of the papers reporting early findings was rejected by the *Journal of Teacher Education* in 1983 for being "…too researchy."

After the 1986 revision of Oregon's standards for teacher licensure mandated use of TWSM, WOU faculty launched a new cycle of program design and research. From the late 1980s through 1995, data were collected from nearly 1000 student teachers and approximately 12,000 K-12 pupils. A recursive cycle of analysis, curricular and program changes, and data collection took root as faculty used emerging evidence as a basis for further refinement of the TWSM.

Funding from the Atlantic Philanthropies in 1994 supported further revision and validation of the TWSM, development of replication materials, and creation of a National Advisory Panel to guide this work, which was named the Teacher Effectiveness Project (TEP). At the end of the grant period in 1998, the National Advisory Panel determined that TWSM, as implemented at WOU, was sufficiently "robust, valid, and reliable" to be included as one measure that could be used to justify a high stakes teacher licensure decision, assuming five "necessary and sufficient" conditions were met. These conditions range from validity of performance tasks and scoring rubrics to program structure and content. The TEP also developed a national network of educators who used and tested TWSM in a variety of settings. (This network included the Renaissance Partnership for Improving Teacher Quality, which was led by Western Kentucky University, another Learning Network institution.)

In the late 1990s, the TEP working group collaborated with COE administrators and faculty on a comprehensive redesign of WOU's teacher preparation programs and development of an assessment framework. This redesign work provided a foundation for subsequent work with the Oregon Association of Colleges of Teacher Education on development of a common frame of reference for TWSM in the state's public and private teacher education programs.

TWSM attained greater prominence as states' teacher licensing agencies attempted to meet the quality assurance standards included in Title II of the 1998 Higher Education Act and program standards adopted in 2000 by the National Council for Accreditation of Teacher Education (NCATE). Colorado mandated use of TWSM in 2000 and Louisiana, Kansas, Kentucky, and Oklahoman subsequently followed suit. Further endorsement came shortly thereafter when the National Association of Colleges for Teacher Education endorsed the methodology as a "useful and defensible vehicle for connecting teaching, teacher preparation, and K-12 learning."[2]

Teaching Research Institute

The Teaching Research Institute (TRI) led development of the TWSM and worked in tandem with the COE to ensure its integration into teacher education programs at WOU. Originally known as the Center for the Study of Teaching, the TRI was established in the 1960s the research and development arm of the Oregon University system's chancellor's office. In 1989, the TRI found a new institutional home in the provost's office at WOU, where work on working on testing, revision, and dissemination of TWSM continued until Del Shalock's death in 2006.

The dean of WOU's COE is well aware of the role the TRI has played in boosting the institution's reputation and visibility—and appreciative of the research base the TRI created for TWSM. "Very few places our size have the capacity to do large-scale sustained research," she noted. The provost attributed the emergence of TWSM to a coincidence of timing, place, and people. "Del's successes with the COE were one of those serendipitous things that happened based on who was in place at the time," he said. "TWSM is now embedded in COE as TRI moves forward on other research agendas."

EVIDENCE OF INSTITUTIONAL CHANGE IN TEACHER PREPARATION

With more than a 150 year of experience in preparing teachers for OR schools, WOU has a rich and distinguished record of innovation and institutional change. Since its earliest incarnation as a normal school, WOU has developed and sustained a national reputation for its commitment to the preparation of high-quality teachers and its responsiveness to the needs of the region. As indicated above, this reputation is inextricably linked to the work of the TRI and the development, dissemination, and evolution of the TWSM.

New chapters of WOU's history of innovation and institutional change are now being written with a new generation of faculty and a pronounced focus on building a culture of evidence. While past accomplishments have provided a solid foundation on which to build, WOU is now focused on drawing more explicit connections among teacher education, teaching, and pupil learning. As one example, WOU created the Center for Connecting Teacher Preparation and Student Learning to keep the domain name and web address acquired for Del Schalock's last work with the Coalition for Connecting Teaching, Teacher Preparation, and K-12 Student Learning which emphasizes the WOU's history of work on what Marilyn Cochran-Smith has called the inference chain.[3]

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2) Schalock, H.D. & Schalock, M. (2008). Teacher work sample methodology at Western Oregon University. Unpublished manuscript.

3) Cochran-Smith, M. (2005). Studying teacher education: What we know and need to know. *Journal of Teacher Education*, 56 (4), 301-306.

Revisions to Coursework

Data collected from TWS have triggered a number of course and program revisions at WOU and at least one comprehensive overhaul of teacher education programs in the late 1990s based on TWS definitions, components, criteria, and measures developed as a result of an externally funded validation process and input from a panel of external reviewers. In the latter instance, TRI staff collaborated with college of education faculty on the development of an "assessment framework for mapping the progress of pre-service teachers at specified benchmarks as they progressed through a re-designed, 'proficiency-based' preparation program." WOU faculty members reported that a critical aspect of this effort was "mapping the multiple potential sources of evidence for assessing prospective teachers' progress through the program."

Many of the more recent coursework revisions have reflected changes to state statutes and regulations. For example, Oregon added literacy integration to TWS requirements in 2004, and WOU faculty developed a continuum of literacy integration in TWS as well as an assessment rubric and scoring guide. One faculty member noted that evidence of literacy integration has traditionally been readily visible in TWS produced by elementary education candidates but more difficult to demonstrate at the secondary level. A social studies methods teacher described the process used to revise the TWS scoring guide within the discipline to capture literacy integration; she noted that students in their first semester of TWS exposure were asked to identify and focus explicitly on integrating literacy into social studies while students in the second semester focused on helping pupils take notes and organize information to produce coherent writing.

Clinical Practice

TWSM influences all aspects of the WOU's teacher preparation programs and provides the overarching structure for student teaching experiences. Developed by WOU faculty for use as both a pedagogical device and an assessment tool, TWSM is described by WOU faculty as "a process by which teacher candidates are explicitly taught and expected to demonstrate proficiency linking pre-instructional assessment and related instructional planning, differentiated instruction, post-instructional assessment, analysis of student learning, and reflection on the outcomes of teaching." Mandated by the Oregon Teacher Standards and Practices Commission (TSPC) in 1986 as one of the required means of documenting the effectiveness of teacher preparation programs and teacher candidates' ability to foster student learning, TWSM is now an integral component of all teacher education programs in Oregon. However, WOU remains the epicenter of research and program development related to TWSM—and TWSM permeates the culture of WOU's school of education.

At WOU, the TWS is a written, standards-based assessment. Each teacher education student is expected to implement two TWS successfully prior to initial licensure, and one of the TWS is linked to the candidate's final student teaching experience. However, major concepts associated with TWSM are introduced much earlier in the institution's various teacher preparation programs. Typically, TWSM is introduced in a mandatory assessment course, but one of the faculty members who teaches the course suggested that it might be desirable to split the current course into two. Another faculty member described TWSM as the special education department's "approach to evidence-based practice, with each student documenting that "I taught what I planned, and pupils learned'." Even faculty who don't bear direct responsibility for instruction around TWSM recognize that they contribute to student understanding of the concept because "data show the importance of modeling sound pedagogy at the university level."

A graduate assistant reported that she was first exposed in high school to TWSM when her mother went through one WOU's licensure programs and compared TWSM to childbirth—but noted that she now understands how it helped improve her teaching. She explained finding the "nitty-gritty of lesson plans superfluous at first" but later realized "you can't just go in the classroom and teach." Another graduate assistant observed that she "hadn't thought about the need to understand the context of the district and the community" until she sat through classes on TWSM. One current elementary education candidate confessed that she hadn't thought about how "central goals and objectives are to good teaching" until she encountered TWSM, and another described how TWSM highlighted the importance of assessment and how it needs to align with goals and objectives.

A number of faculty members confirmed the multiple ways in which TWSM shapes WOU candidates' student teaching experiences and enhances their subsequent performance as novice teachers. One faculty member explained that the TWSM gives students a basis for "looking at learning from multiple perspectives; it helps to move students beyond having something look good to understanding why and how to make changes based on mistakes and lessons learned." She said that she continues to be "fascinated by the ways in which TWS helps students make connections between teaching and learning."

Another noted that "TWS keeps information pupil-centered when candidates try to connect teaching and learning in their classrooms;" she also indicated that the process of continuous learning embodied in TWSM "helps to prepare candidates for what we expect of teachers." A third observed that TWSM makes sense in a standards-based system and "creates the disposition that candidates are always thinking about what pupils need to learn and be able to do." Reflecting on her observations of the development of TWSM, she said that students are now taking "many more risks to demonstrate the evolution of their thinking." These contemporary findings echo data from the late 1990s that showed the TWSM process instilled a sustainable sense of personal and professional accountability for K-12 pupil learning.

WOU is also exploring opportunities to "build traction around partnerships" to enhance candidates' clinical experiences, and the dean of the college of education has advocated for state funding to give faculty release time to develop and nurture partnerships. In one recent pilot, WOU students and their professor went to school together. The professor and the school's reading specialist co-taught classes for the students, who then had immediate opportunities to try what they were taught in classroom settings.

In another instance, WOU received an experimental waiver from state's independent licensure board, the TSPC, to produce an initial cohort of 14 elementary teachers. The pilot program was operated program in cooperation with the Salem Kaiser school district, and all teacher education courses were taught in district schools. Based on this experience, WOU created an "elongated" (three-term) post-baccalaureate elementary education program in which some courses are taught in schools or on-line while others feature extensive embedded field experiences.

Discipline-Specific Work Samples
Work on discipline-specific TWS began more than five years ago at WOU, but the pace of development has varied by discipline. As described below, the TNE Learning Network provided modest funding to support development of a science TWS. However, faculty members were quick to note that the passion

of one individual and the context in which she operated accelerated the work in that area. As a faculty colleague observed, the science methods professor "was able to move forward because she owned both the instructional and the research agenda."

Development of the science TWS was led by a science methods professor who said that she saw the need for science and math TWS "after years of reading generic TWS." She took the booklet that outlines requirements for each of the two mandatory TWS and aligned these guidelines with science content that could be scored a 0 to 3 scale. An initial comparison between candidates who had been given science guidelines in their coursework and those who had not revealed dramatic differences between the two groups. For example, candidates exhibited "limited consideration for science safety when a prompt for it wasn't included in the generic TWS."

The science methods professor also noted that introduction of science TWS led to changes in her methods instruction, one of which focused on the importance of maintaining the language of the profession. She said that she is now using *Science Curriculum Topic Study* (which includes standards and research-based study of specific topics) to help students frame lesson plans on specific topics and develop pre- and post- assessment items. She also requires each student to complete a paper on pupils' science misconceptions in the area in which s/he will complete a TWS. In addition, she has experimented with having students videotape their TWS is now thinking about asking all students to reflect on the same strategies.

Work on other discipline-specific TWS is in various stages of development. COE faculty and administrators reported that social studies and math are moving along, but cited the need to recruit faculty to lead the efforts in language arts and physical education. The science methods professor, who also served as teacher education at the time, said she "wanted to give new methods instructors the chance to get more familiar with scoring TWS before asking them to develop content specific TWS." A major question that remains to be answered is how to adapt generic TWS for elementary education depending on content of the unit.

Building a Culture of Evidence
The dean of WOU's school of education reports that WOU has developed a renewed emphasis on moving beyond the first stages of a culture of evidence, which she describes as "connecting everything back to data and using data to make decisions." When WOU first became involved in the Learning Network, the institution was focused on creating a structure around evidence and decision-making. In contrast, she reports that WOU is now moving to a second stage that entails "trying to figure out which data are most useful." Her goal is to place greater emphasis on data that are most useful for assessments and/or program improvement—and abandon those that do not help to differentiate among candidates. For example, WOU eliminated its portfolio requirement for teacher education candidates because many of the requirements were duplicated through use of TWSM.

Reflecting on WOU's ambitious efforts to "improve the ability of both secondary and primary teachers to demonstrate improved knowledge, planning skills, and the ability to impact pupil learning," the COE dean emphasized the importance of including top-level leadership as well as arts and sciences faculty who play critical roles in teacher education in building a cultures of evidence. Her perspective

was echoed by a key faculty researcher who said "I think we need to convene a university-wide group that's focused on further development of our culture of evidence." Presumably this group was make use of recommendations emerging from the COE's annual data analysis and review event in which faculty administrators examine disaggregated results from various assessment. Another source of information might be the consortium of school personnel that meets three times a year to review data (e.g., employer satisfaction surveys and assessments) disaggregated by program and flags anything that falls below the 80 percent level of performance as needing more intensive scrutiny.

In addition to thinking more strategically about data collection and use, WOU is introducing a new generation of faculty to the research possibilities resulting from TWSM and creating a new relational database to support its evolving culture of evidence. As one faculty member observed, "work samples are rich repositories," but WOU is just beginning to aggregate P-12 pupil learning data (including outcomes, assessment practices, and rough categorizations of learning contexts). Aggregation of teaching practices and differentiation will follow. The database is being designed to ensure that data are entered in a common and consistent format to allow faculty and researchers to look across outcomes of teacher candidates at a specific level who worked with certain types of students. In addition, the database is expected to allow WOU to move from "brute force method of analysis" in which faculty members review multiple TWS to identify common themes to more sophisticated analyses. The WOU Evaluation and Training Committee is currently exploring several study options, including in-depth examinations of impact of formal training and/or blind vs. non-blind scoring on inter-rater reliability of TWS scores. Other possible areas for research include examination of the validity of the inference chain (i.e., connecting teacher education to teacher performance and pupil learning) and questions related to "generalizability" and reliability of the TWSM.

ASPECTS OF THE LEARNING NETWORK THAT TRIGGERED, ENHANCED, OR SUPPORTED INSTITUTIONAL CHANGE

WOU's selection as a Learning Network member provided highly visible recognition of the quality of its teacher preparation programs and created new opportunities for faculty to interact with an expanded circle of reform-minded institutions. Even though the Learning Network brought only limited resources to the campus, participation was seen as highly valuable for a number of reasons. As one administrator observed, "selection for and affiliation with the TNE Learning Network helped galvanize faculty recognition of the work being done at WOU."

Annual Meetings

WOU sent teams that included both education and arts and sciences faculty to the annual Learning Network meetings and used the opportunity to participate in these meetings as a way of engaging a wider circle of people in efforts to transform teacher education. Administrators from both the school of education and the college of arts and sciences noted the benefits of attending the annual LN meetings. They explained that the meetings provided opportunities to learn what other institutions are doing and to explore problems they have in common. According to the dean of the COE, the convenings were particularly helpful to faculty who "get the big picture" because they provided opportunities to share successful strategies and learn from their peers at other institutions. She also indicated that the Learning Network helped WOU focus on creating a structure around evidence and decision-making.

Mini-grant

WOU received a mini-grant in 2006 to focus on two goals related to the use and refinement of TWSM. One goal was to develop, pilot, and test subject-specific TWS requirements; the other was to produce a publication that included the history of TWSM, a summary of empirical evidence, and case studies on research, practice, and policies. While the mini-grant funding was insufficient to support either effort in its entirety, it provided a timely supplement to existing resources and enabled the institution to proceed with two high-priority projects.

The LN mini-grant was widely acknowledged as helping WOU with the development of subject-specific TWS, in part because the mini-grant provided release time for a few key faculty members. The lead faculty member for the development of the science TWS readily acknowledged that the mini-grant didn't cover much of her time, but added that she had the advantage of not teaching in the summer. Nonetheless, she reported that "you've got to be a little crazy to take on the work I did."

Although originally envisioned as a two-volume follow-up to *Connecting Teaching and Learning: A Handbook for Teacher Educators*, plans for the TWSM publication were scaled back after the death of lead author Del Schalock in 2006. The current draft now includes an introductory section that reviews the 40-year history of TWSM at WOU as well as a series of case studies that focus on TWSM research, policy, and practice. One faculty member associated with the project noted that "getting a shared history on paper is necessary for us to continue to endorse the values on which our teacher preparation programs are designed." The volume is now being viewed as the prequel to WOU's current work, with text that may "help new faculty see where their research interests intersect with our history and values."

University Commitment to Teacher Education

"As part of its evolution from a normal school to a comprehensive state university, WOU has strong interconnections between education and arts and sciences," the dean of liberal arts and sciences (LAS) observed. While conceding that "cross-college initiatives aren't yet as strong as the dean of education and I would like," the dean of LAS noted many instances in which faculty members are collaborating. He also noted that cross-college relationships have improved significantly since the "turf wars" encountered by the founding LAS dean who sought to develop disciplinary degree tracks in an environment in which A&S faculty were traditionally hired "just to teach content." In a recent mission alignment activity involving all of the state's seven public institutions, teacher preparation was identified by both the president and the provost as the highest ranking focus for both program and mission innovation at WOU.

"Publications and research in pedagogy aren't seen as second-class citizens at WOU," the WOU provost stated proudly. His words were echoed by the LAS dean, who is exploring ways to reward faculty who want to be engaged in the science of pedagogy in their content areas and "looking to build a strong footprint of pedagogically focused faculty and curricula in natural sciences and math to support general education and work with the COE."

The LAS dean cited four or five tenured math faculty who are "robustly engaged" in math pedagogy, a physics professor who routinely works with science methods faculty on grants, and a new assistant

professor in biology who brings extensive experience in pedagogy. "In the sciences, the infrastructure for cutting-edge research is rooted in science education in the absence of graduate programs," the dean explained. "Faculty research often involves undergraduates, many of whom are likely to go into teaching." He also noted that "the other area in which we have constant engagement with COE is in writing, through the English and linguistics departments."

Sharing of faculty is a key feature of cross-college collaboration at WOU. The LAS dean reported that his college "sometimes swaps faculty" with the COE. As examples, he noted that a member of the COE's health and physical education faculty is currently on loan to his college to teach a dance course and that linguistics faculty have been loaned to LAS in the past. He also reported that a new COE faculty member in math methods started working on grants with LAS math faculty even before arriving on campus.

One current example of COE/LAS collaboration emerges from the state's standardized testing program for K-12 pupils. The Oregon Department of Education has piloted prompts for 4th grade writing in a select number of schools and trained teacher education candidates to score the pupil writing. At WOU, financial support for this work was provided jointly by LAS and COE. Training and scoring of pupil writing samples were built into syllabi in both colleges. The participating WOU students will get certification as writing prompt specialists.

The WOU provost highlighted advising as an area in which changes in university policy could provide additional support to teacher education. He noted that the director of teacher education is trying to get advising responsibility for COE students back from the campus-wide advising center. He voiced support for this effort, noting the "prospective teachers need greater continuity of advising from teacher education faculty." The provost also noted that "putting advising in COE would allow focus on sequencing as well as nature of the profession."

Recognition of WOU

Recognition of the high quality of WOU's teacher education programs spans its origins as a normal school to its current status as a comprehensive regional masters' university. Among the earlier accolades was a 1974 award for excellence in elementary education from the American Association for Colleges of Teacher Education. A belated recognition of WOU's unique contributions to teacher education came in a keynote address by Lee Shulman, then president of the Carnegie Foundation for Advancement of Teaching, at the 2008 annual conference of the American Association of Colleges for Teacher Education. Reflecting on regrets from each decade of his illustrious career, Shulman acknowledged that he had been slow to recognize of TWSM in the 1980s:

> We teachers have a moral obligation, as well as a professional one, to
> make a difference in student learning. And if we can't do that, no amount of planning,
> cognition, or reflection is worth it. We ignored some possibilities. All during this period
> for example, there was some astoundingly interesting work going on in Monmouth,
> Oregon, led by a man named Del Shalock. And although work samples have kind of
> creeped into our world, they should have been the thing we were most excited about as we
> were rejecting the standardized tests in the 80s. If we had taken that kind of work seriously
> and more of us had built on it, instead of saying 'oh god, it's in Oregon, or whatever.

Within Oregon, WOU is known as a "great teacher college with graduates in districts across the state," according to the LAS dean. The provost pointed with pride to awards given to alumni of WOU's teacher preparation programs. As an example, he noted that six of the nine educators recognized the previous week at the state's crystal apple award ceremony were graduates of WOU. As indicated previously, WOU has also been recognized for statewide leadership in the development, implementation, evaluation, and revision of TWSM.

EVIDENCE OF CHANGE AND NEXT STEPS

Efforts to Increase the Math and Science Knowledge of WOU Teacher Candidates

WOU's decision to focus on increasing the science and math knowledge of prospective teachers was, in some ways, a reflection of recently approved changes to high school diploma requirements. These changes, which require higher levels of math and science along with a shift away from seat time, will also require changes in teacher preparation. As noted previously, another factor was growing faculty recognition of the limitations of generic TWS.

Since the science TWS debuted in the 2007/08 academic year and the math TWS is still in development, evidence of increased candidate knowledge is limited. As noted by the faculty member who led development of the science TWS, "one of the next steps is to explore what TWS can show us about our candidates as science teachers—and what they are doing for/to the pupils in their classrooms." She also indicated that she was in converting the TWS submitted by her students to CDs and sorting by grade, subject, and content.

Several COE faculty identified opportunities for increased LAS collaboration on discipline-specific TWSM. One faculty member suggested summer institutes that provide LAS faculty "with stipends to focus on the pedagogies in their disciplines." Another suggested that teacher education bring in LAS and mentor teachers to work on scoring TWS. She also noted that "it makes a difference who scores the TWS."

WOU administrators and faculty recognize the critical importance of linking TWS with candidates' knowledge and performance. "We need to balance pedagogical and assessment functions of TWS so we can begin to aggregate data," one faculty researcher observed. "The quality of the work sample data turns on the quality of assessments," he continued. The provost indicated that he wants to "find ways to "incentivize' faculty to build on the strengths of WOU's prior TWSM work.

Measuring the Impact of WOU Candidates on Pupil Learning in Math and Science

Although TWS provide evidence of the learning of individual pupils, WOU is still struggling to aggregate pupil outcome data. Although several small studies have been produced, WOU has yet to develop a system for aggregating TWS data. A faculty member who has assumed a leadership role in TWSM research stressed the need to do work on aggregation of pupil learning data from TWS. "It's important," he said, "because other studies are starting to emerge to connect teacher preparation and teaching." He identified three specific foci for the next generation of TWSM research at WOU: 1) P-12 learning outcomes as mediated by classroom practices; 2) program effects (e.g., how changes in teacher education programs affect classroom practices and pupil learning); and 3) identification of what matters most about the candidates as teachers. Building the system he envisions will require

K-12 student IDs and demographic information (e.g., designation as English-language learner or gifted and talented) as well as information about the outcomes sought by student teachers.

The new relational database described earlier is expected to facilitate aggregation and further research, and one new faculty member reported that one focus of his current work is connecting pupil outcomes with candidate learning. He indicated interest in exploring connections between pupil learning and the current TWS prompts that ask candidates to report by type and complexity of outcomes. Another

Regardless of the progress made on the WOU campus on aggregation and analysis of pupil learning growth data, efforts to connect TWSM outcomes with standardized test results are likely to face continuing obstacles. "Can we get what we need to answer important questions?" one faculty member asked. The COE dean said that there are significant challenges to getting access to standardized pupil data due to "fears at the state level of using pupils' standardized test scores to feed into pay for performance systems." Although some faculty believe that creation of stronger partnership with the TSPC and the Oregon Department of Education will pave the way to data access, others are focusing their energies on making better use of vast TWS data already available on the WOU campus. They are particularly interested in "describing the range of P-12 pupil learning and whether it can be captured based on differences in candidates and settings."

Sustaining Change and Moving Forward

WOU is uniquely situated to continue its work on the development of subject-specific of TWS and their subsequent use for assessment of both candidate and pupil learning. Further development of the new relational database will enable the next generation of WOU faculty to explore new lines of inquiry pertaining to TWSM and other efforts to capture the impact of teacher education on teaching performance and pupil learning. With strong and visible support from top university administrators and a growing national reputation, WOU is poised to develop a deeper and richer evidentiary warrant for the distinctive features of its teacher education programs and document its effectiveness in preparing teachers who are catalysts for pupil learning.

APPENDIX A

INTERVIEWEES

Patsy Beauchamp, Adjunct Instructor, Teacher Education

Hank Bersani, Professor, Special Education

Meredith Brodsky, Former Director, Teaching Research Institute

Bob Brownbridge, Associate Professor, Special Education

Elizabeth Cera, Teacher Education Student

Linda Cress, Adjunct Instructor, Teacher Education

Sue Dauer, Associate Professor, Teacher Education

Mark Girod, Associate Professor, Teacher Education

Carol Harding, Chair, Humanities Department CHECK

Joyce Cosky, Teacher Education Student

Kent Neely, Provost

Salam Noor, Oregon University System

Cornelia Paraskevas, Professor, English

Mickey Pardew, Professor, Special Education

Gwenda Rice, Professor, Teacher Education

Pam Salmon, Graduate Assistant, College of Education

Hilda Rosselli, Dean, College of Education

Mary Scarlato, Associate Professor, Special Education

Mark Schalock, Associate Fellow, Teaching Research Institute

Stephen Scheck, Dean, College of Liberal Arts and Sciences

Adele Schepige, Professor, Teacher Education

Linda Stonecipher, Director of Graduate Programs

Ella Taylor, Director of Sponsored Projects, Sponsored Research Office

Sue Thomas, Director of Student Teaching and Licensure

Bob Turner, Assistant to the Chancellor, Oregon University System

Philip Wade, Adjunct Instructor, Earth/Physical Science

Katie Wiley, Graduate Assistant, College of Education

Steve Wojcikiewicz, Assistant Professor, Teacher Education