

Assessment of Student Learning

INSIDE THIS ISSUE

Message from the University
Assessment Specialist 2

In the Spotlight: Student
Engagement in Law School—
Preparing 21st Century
Lawyers..... 3

Assessment Project Support
Funding Available..... 4

Accreditation Self-Study Report
Soon Available 4

USP Assessment: It's
Crucial; It's Critical;
It's University-wide 5

UW Focuses on
Scientific Literacy 6

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UW's College Portrait

By Rollin Abernethy, Associate Provost, Academic Affairs

Have you taken a look at UW's College Portrait? President Buchanan first indicated UW's interest in the Voluntary System of Accountability (VSA) in the September 2007 edition of the *Assessment Newsletter*. UW's College Portrait can be viewed by clicking on the College Portrait logo on the bottom of UW's home page (www.uwyo.edu).

The College Portrait is the VSA Web-reporting common template. The VSA (www.voluntarysystem.org) is arguably the most prominent effort by the higher education community to provide prospective students, families, policy-makers, and other constituents comparable data on institutional characteristics and performance important to our primary mission. To date, more than 300 four-year colleges and research universities are participating in the VSA, and as such, providing online access to their College Portraits.

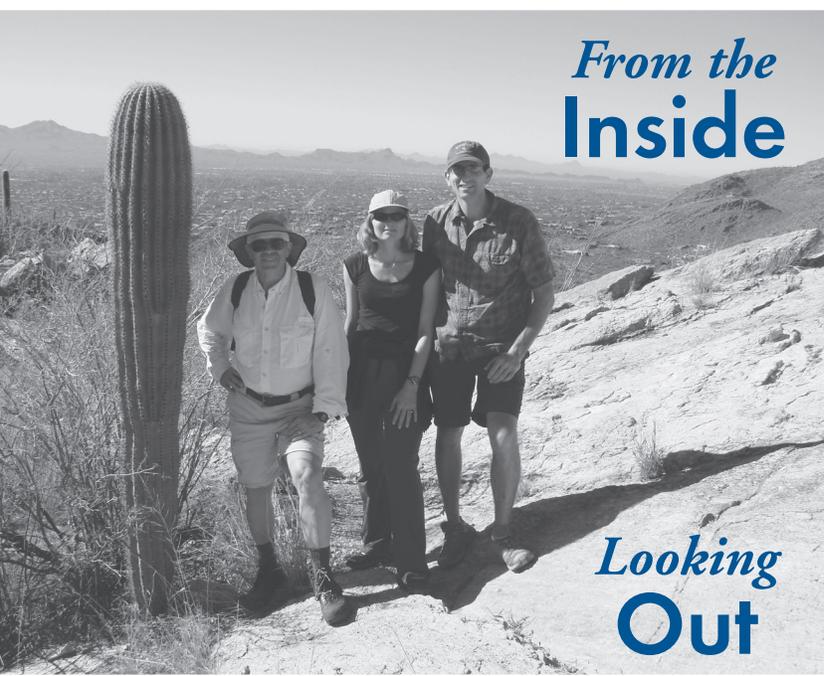
The VSA evolved over the last few years from within the higher education community in response to several widespread concerns. These concerns included the pervasive use of rankings based too much on spurious information and reputation, a growing call for accountability from the public, and the real sense that we have a responsibility to be more transparent about what matters most in the undergraduate experience. Academic leaders from AACSB and NASULGC, two major public higher-education organizations with nearly 600 member institutions, led the concept and detail development drawing on faculty and staff expertise from members nationwide. Initially launched during Secretary of Education Margaret Spellings' tenure, the growth of the



Rollin Abernethy

VSA largely occurred after it was apparent the most concerning recommendations of the Spellings Commission on higher education were not supported by Congress.

From the beginning of its inception, an underlying premise of the VSA was for institutions to draw on existing data sources and assessments and/or to commit to only a few additional assessments in the near future. The resulting College Portrait is a common, yet somewhat flexible template that gives institutions the opportunity to showcase their unique characteristics and performance, in addition to providing comparable data and information for prospective students and families. Each five page College Portrait is organized into three primary sections; 1) consumer (student and family) information,



Erika over the winter break hiking in the Santa Catalina Mountains with Steve Prager (Assistant Professor of Geography) and Bill Reiners (Professor of Botany).

Fall semester was busier than usual mostly due to the work required for UW's self-study for reaccreditation by the Higher Learning Commission (HLC). Nine different subcommittees worked through the fall semester to produce draft reports (currently being revised by the HLC Steering Committee) that will form the core of the university's self-study report. Please take a few minutes to acquaint yourself with the report when it becomes available. The Higher Learning Commission site visit is scheduled for March 1 through 3, 2010. For more information on the self-study process, go to www.uwyo.edu/accreditation.

The College Assessment Coordinators, in conjunction with the Ellbogen Center for Teaching and Learning, have awarded seven \$750 awards to support various assessment projects to advance departmental assessment efforts. The current list of recipients can be found on page 4. In past years, we have sponsored more formal assessment grants. While the intent is still to support departmental and program assessment initiatives, the process for obtaining funding is much less formal. Instead of a hard application date, we are taking applications for up to \$750 per project on a continual basis until the funding is depleted. There is still money available so I encourage faculty and APLs to apply. Go to the Assessment of Student Learning Web site at www.uwyo.edu/assessment for more information.

There are two university-wide assessments of student learning projects occurring this spring. The first is the National Survey of Student Engagement (NSSE) and the accompanying Faculty Survey of Student Engagement (FSSE). UW has been conducting the NSSE every two years since 2000. UW last conducted the FSSE in 2005. The NSSE gathers information from students about their engagement in certain academic activities while at UW. Beginning in February and continuing through the end of the semester, all freshmen will be surveyed as well as most seniors. The NSSE is administered online and students complete the survey outside of class on their own. Regarding the FSSE, UW faculty will be randomly selected and surveyed online. The FSSE asks faculty about the behaviors and actions of their students in class regarding the same academic activities that the students are surveyed about. The intent is to be able to compare the faculty perception to the student perception regarding activities related to engagement in college that are ultimately linked to student success. If you are selected to receive the faculty survey, I strongly encourage you to take a few minutes to respond. Your input is essential to UW having meaningful results.

The second university-wide assessment of student learning project is the Collegiate Learning Assessment (CLA) study. UW is participating in a four-year longitudinal study using the CLA to assess the critical thinking, problem-solving, and writing skills of our students over time. There is a group of nearly 300 students who began participation in the study in fall 2005. All of the students who agreed to participate in 2005 and remain enrolled at UW will be invited to take the CLA one last time. The results will show how the skill level in these areas has changed over time for this group of students. The CLA is important to UW for many reasons. UW has most recently used the results of the CLA as part of its participation in the Voluntary System of Accountability that Rollin Abernethy spoke about in the lead story. For more about the CLA, go to <http://cae.org/>.

I look forward to another great semester. If you need help on your assessment of student learning projects, feel free to contact me at ekprager@uwyo.edu or 766-2897.

Erika K. Prager

University Assessment Specialist

IN THE **spotlight:** Student Engagement in Law School— Preparing 21st Century Lawyers

By Denise Burke, Assistant Dean, College of Law

On January 7 the results of the national Law School Survey of Student Engagement (LSSSE) were released to the public. The report, titled *Student Engagement in Law School: Preparing 21st Century Lawyers*, summarizes the main findings from the 2008 national survey and highlights examples of how law schools are using their student engagement results to improve legal education. The University of Wyoming College of Law (UW Law) participated in the 2008 LSSSE survey and the faculty and staff are anxious to assess the individual school results, as well as to compare UW Law results to national results and to results from schools of comparable size and demographics. The newly released national report features a section on how law schools foster ethical and professional development among law students. The report also highlights findings about acquiring core legal competencies including legal writing, engagement of students with varied entering credentials, the relationship between computer use during class and student engagement, and the trends and patterns in class preparation and participation in class discussions.

Much like the National Survey of Student Engagement (NSSE), which is administered to undergraduate colleges and universities, the LSSSE evaluates a wide variety of indicators affecting student learning, including teaching approaches, student preparation, and the learning environment. The LSSSE was introduced in 2003 and to date, 148 law schools nationwide have administered the LSSSE at least once. In 2008, nearly 30,000 law students from 85 law schools participated

in the survey. The LSSSE project is co-sponsored by the Association of American Law Schools (AALS) and the Carnegie Foundation for the Advancement of Teaching.

In recent years legal education has come under much scrutiny. The Carnegie Foundation, the McCrate Report, and numerous other studies and reports have evaluated the structure and culture of law schools. Generally, these reports have concluded that law schools do an excellent job of teaching law students to “think like a lawyer,” but the learning experience diminishes following the traditionally rigorous first year of law school. Throughout the history of legal education in the United States, the most popular approach to legal teaching is based upon a case-study approach developed by Christopher Columbus Langdell in 1870. Langdell’s method combines the careful study of court decisions with the Socratic method of teaching, modeled after that used by the Greek philosopher Socrates. Using this method, students engage in a series of instructor-led questions whose answers are designed to lead to a logical conclusion foreseen by the instructor. While this approach has proven benefits, until recently, there has been little or no record of any concerted effort to consider what new lawyers should know or be able to do in the practice of law. In many law schools, there was limited exposure to the development of ethical and professional attributes needed for a successful legal career. Furthermore, research shows that the second and third years of law school are not nearly as engaging or challenging as they should be. As law schools evaluate their



Denise Burke

educational mission, curricula, and learning environments, the value of quality research and data on student engagement is of utmost importance.

To this end, the LSSSE survey includes a series of questions to assess the degree to which students think their legal education emphasizes ethical and professional development and conditions or opportunities that seem to be the most effective in developing these skills. “The Law School Survey of Student Engagement has become a valuable resource for legal education precisely because it provides the kind of feedback that law schools need in order to enhance the achievement of their core educational mission,” said William M. Sullivan, senior scholar at the Carnegie Foundation for the Advancement of Teaching.

Results of the 2008 LSSSE survey confirmed that UW Law has excellent student satisfaction and engagement

Continued on page 8

spotlight

Assessment Project Support Funding Available

The College Assessment Coordinators Committee, in conjunction with the ECTL, is pleased to announce that continues to accept applications from interested faculty or academic personnel seeking funds to assist with departmental assessment of student learning projects.

Requests are now being accepted. Applications will be reviewed within a month of being received.

Requests for up to \$750 may be made. Funds may be used for a variety of purposes including, but not limited

to the following: hiring of graduate student(s), technology development (software, programming, etc.), bringing in outside speakers related to your project, and the purchase of standardized assessment instruments. The major restriction is that funds cannot be used for faculty summer salary or other direct compensation.

For more information or to download the application, go to the Assessment of Student Learning Web page at www.uwyo.edu/assessment.

Congratulations to the following faculty whose applications have already been approved:

Stephen Herbert, Plant Sciences

Tricia Johnson, Elementary and Early Childhood Education

Robert Mayes, Science-Math Teaching Center

Dee Pridgen, Law School

Mary Sheridan-Rabideau, English

Margaret Flanigan Skinner, Zoology and Physiology

Jane Warren, Counselor Education

Accreditation Self-Study Report Soon Available

By Erika Prager, University Assessment Specialist

The University of Wyoming has been actively engaged in self-study for the last year as part of reaccreditation by the Higher Learning Commission. With assistance from the HLC Steering Committee, nine subcommittees worked tirelessly through fall semester to research their assigned topic areas and develop a draft report. These nine draft reports, along with a few additional introductory and concluding chapters, will comprise the full university self-study draft report. The draft report will be available to the entire university community for review and comment around the end of April. The HLC Steering Committee and the Office of Academic Affairs will accept feedback throughout the summer. The HLC Steering Committee will then review all feedback and revise the document in preparation for a designer to produce the final report in the fall. More information about the report release will be forthcoming. In addition, information about the self-study process and committee membership can be found at www.uwyo.edu/accreditation.

USP Assessment: It's Crucial; It's Coming; It's University-wide

By Penne Ainsworth, Associate Dean of Students, Department of Accounting Chairperson, College of Business

When USP 2003 was first implemented, a call was made to assess the program to ensure that the objectives were being met. However, it was unclear who was responsible for this assessment. Should the University Studies Program (USP) Committee assume responsibility for USP assessment since it determines which courses are granted USP initial and renewal designations; or should specific departments assume responsibility since they teach the courses that make up the USP program? It was a perplexing problem that no one seemed eager to solve. That is not to say that no assessment has taken place; WC courses have been assessed by the USP Committee, O courses have been assessed by the USP Committee, and the Department of English has assessed the WA courses. But a holistic approach to assessing all USP courses in a systematic fashion has not happened, until now.

This spring, USP assessment will be launched by the USP Committee. The committee has developed rubrics (scoring sheets) to measure student success against the learning

objectives for each category of USP. The instructor of the course (or the department in which the course is offered) is free to select the evidence (assignment) used to evaluate the students (as a whole) within the course. Data will be collected on a course-by-course basis, but will not be identified with any specific instructor/professor. It is the goal of the USP Committee to assess all USP courses within a three-year time period. The assessment timetable exhibited below indicates the frequency (year and semester) with which a given category of USP will be assessed.

While the USP Committee is willing to assume the responsibility for gathering and analyzing the data; it is up to each of you who teach a USP course to help in this effort. This is crucial to our efforts to understand student learning, to comply with the Higher Learning Commission, and to ensure the success (and make changes when necessary) of USP. A university-wide effort is needed and the time is now.

Year One	Year Two	Year Three
WA/WB/WC Spring	WA/WB/WC Spring	WA/WB/WC Spring
QA/QB Fall	QA/QB Fall	QA/QB Fall
O Spring	O Spring	O Spring
CH/C Fall and Spring	CS Fall and Spring	CA Fall and Spring
D Fall and Spring	G Fall and Spring	V Fall and Spring
I/L Fall	I/L Fall	I/L Fall
SB Fall and Spring	SE/S Fall and Spring	SP Fall and Spring
P Fall and Spring		P Fall and Spring

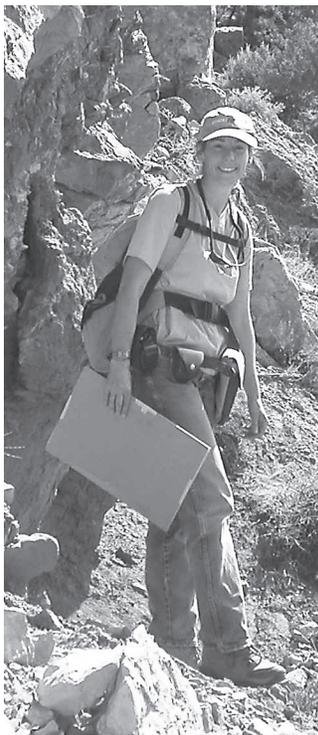
UW Focuses on Scientific Literacy

By Erin Campbell-Stone, Associate Lecturer, Department of Geology and Geophysics

The term scientific literacy was first used in the 1950s by a group of authors attempting to define the desired outcome of science education in the United States. Over 50 years later, the term is still poorly defined, though the goal is the same: to help students master the concepts and skills of science. Scientific literacy can range from the ability of non-scientists to comprehend scientific issues and appropriately apply their understanding to decision-making (from home-ownership to public policy), to the ability of specialists to advance science and technology in our society.

As early as 1798, Vice President Thomas Jefferson recognized the importance of science in education by ordering a survey of science teaching and requesting recommendations for improvement. Modern-day assessment reveals that, while progress is being made, opportunity for improvement remains in both the education of non-scientists and retention of students in scientific fields. In 1985 the American Association for the Advancement of Science initiated Project 2061, which provides techniques and guidelines for teachers at the elementary and secondary levels to help promote literacy in science, mathematics and technology. The collaborators of Project 2061 (named for the year of the return of Halley's Comet) have released content-based recommendations for scientific literacy in their publication *Science for All Americans*.

At the University of Wyoming, faculty and administrators have been examining the effectiveness of science education at UW through assessment at the college and course level. In fall 2007, the College of Arts and Sciences Teaching Committee, with the cooperation of several science faculty in Chemistry, Geography, Geology and Physics, examined almost 1,600 pieces of student work including short essays, lab exercises, short answers, and multiple choice answers from introductory science courses. The committee members identified several learning objectives: 1) understanding the scientific process; 2) understanding the difference between scientific conceptual levels (hypothesis versus theory); 3) connecting science to society; 4) applying science to decision-making; and 5) mastery of content. The strongest results were found in mastery of content, with 81 percent of the students answering correctly. The weakest areas were understanding scientific conceptual levels and applying science to decision-making, at



Erin Campbell-Stone

63 and 68 percent, respectively. The results of this assessment could be helpful to science faculty as they examine their course goals and revise course content.

Assessment for scientific literacy at the course level can positively affect student learning. From 2003 to 2008, Professor James Myers and I gathered data on the scientific literacy of the students in Geology 1100 (Physical Geology) as part of the FIPSE-funded CLAAS project through the Ellbogen Center for Teaching and Learning. We designed a survey to determine students' incoming mastery of skills that we considered crucial to their success in our course, such as qualitative assessment, quantitative calculations, using and creating graphs and tables, map interpretation, and spatial visualization. We gathered data from more than 2,000 students over five years and found the mean score on the survey was around 65 percent; our students were essentially failing the course before it had even begun. In response to those

results, we redesigned the course, but rather than lowering our expectations, we provided instruction and practice in those skills before we expected students to use them. The response from the students was encouraging; they performed better in lab and teaching assistants reported that the concepts were easier to teach.

Efforts to assess scientific literacy continue across campus through endeavors such as the Scientific Literacy Initiative (SLI), led by James Myers (Geology) and Mark Lyford (Botany). The SLI involves 27 faculty and administrators from UW and Wyoming community colleges with expertise in areas such as biology, physics, geology, chemistry, engineering, statistics, and education. The initiative has four goals:

- 1) Develop a common scientific literacy standard and assessment for Wyoming post-secondary educational institutions;
- 2) Develop assessment tools for measuring student mastery of scientific literacy that can be utilized in all post-secondary science courses;
- 3) Identify realms of the affective domain, which influences student learning in science courses;
- 4) Assist Wyoming post-secondary instructors in incorporating the scientific literacy standard and

Continued on page 7

UW's College Portrait Continued from page 1

2) student experiences and perceptions, and
3) core educational outcomes. To accommodate institutional differences, each participant can provide specific text, links to other pertinent information, and a customized page of unique data elements. UW currently provides our own introductory text, links to other UW sites such as majors (leading to departmental Web sites), and a link to our UW Assessment of Student Learning Web site.

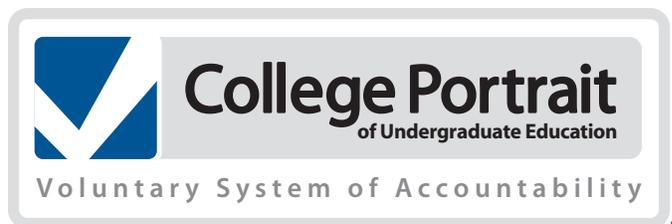
The first section of UW's College Portrait, characteristics of our students and the institution, draws on the annual IPEDS report required for federal funding eligibility. Two innovations are noteworthy in this first section. First there is a student and progress rate report that provides a better sense of "typical" student progress toward graduation than the federal graduation rate data. Second, there is a college cost calculator that allows students to comparatively approximate actual costs of attendance for UW and other VSA institutions of interest.

The second section of the College Portrait, student experiences and perceptions, draws from one of four different national surveys including the National Survey of Student Engagement (NSSE) that UW administers biennially to first-year and senior students. UW results are reported for seniors in six constructs correlated with student development and learning: 1) group learning experiences, 2) active learning experiences, 3) institutional commitment to student learning and success, 4) student satisfaction, 5) student interaction with faculty and staff, and 6) experiences with diverse groups of people and ideas.

The third section, core educational outcomes, links to institution specific learning outcomes and results from a pilot project designed to assess gains in critical thinking, analytic reasoning, and written communication at the institutional level using one of three tests. UW was awarded a Lumina Foundation grant in 2004 to participate in a longitudinal study to assess student gains in critical thinking and analytic

assessment, and techniques for including the affective domain in their teaching.

Members of the SLI have been meeting for two years as a group and in teams to work toward these goals. James Myers, Mark Lyford, and Alan Buss (Education) presented a progress report on this work at the Association of American Colleges and Universities' meeting *Engaging Science, Advancing Learning: General Education, Majors and the New Global Century* this fall, and the participants of the SLI are currently attempting to tackle the challenge of defining scientific literacy



writing over a four-year period using the essay based Collegiate Learning Assessment (CLA). The ongoing results of that study are included in UW's College Portrait. This section of the VSA has been the most controversial within the academy and assessment communities. A study to assess test construct validity for the three available VSA core educational outcomes tests has been funded by FIPSE and will be available in the near future.

We know little about the proposed direction of President Obama's appointee for Secretary of Education, Arne Duncan. Mr. Duncan's experience as chief in the Chicago Public School System provides little insight into his perceptions of post-secondary education, but we can ascertain that he is dissatisfied with the status quo in Chicago, pursues reform, expects schools and teachers to be accountable, and creates diverse coalition's to bring about change. Educational systems at every level can surely improve, and we do have a responsibility to be accountable to our constituents. Most in higher education accept the responsibility to provide our students the best possible education. Nationally and at UW, we have made great strides in collecting and analyzing data on our student learning outcomes with both direct measures of performance and indirect measures correlated with effective learning environments. We now strive to share this vital information with our publics.

For more information on the VSA or to see the list of participating institutions, go to www.voluntarysystem.org. To view UW's College Portrait, go to UW's home page at www.uwoyo.edu or the Assessment of Student Learning Web page at www.uwoyo.edu/assessment.

UW Focuses on Scientific Literacy Continued from page 6

through a Delphi study. The study aims to create a consensus among UW faculty and administrators as to what scientific concepts and skills are essential for our students to master.

In a global and highly technological society, scientific literacy becomes increasingly important if students are to compete professionally and make positive contributions to society. Although a precise definition of scientific literacy has been elusive, progress is being made toward providing all students, both scientists and non-scientists, with necessary skills and knowledge.

Student Engagement in Law School Continued from page 3

in a number of areas. Specifically, UW Law ranked higher than the national average and selected peer schools in such areas as clinical internships and field experience, participation in student-faculty committees, moot court competitions, and work with a faculty member on legal research projects outside of the course or program. In the academic and intellectual experiences category, UW Law students report statistically higher than average numbers on the following areas: 1) prepared two or more drafts of a paper or assignment before turning it in; 2) worked on a

paper that required integrating ideas or information from various sources; and 3) discussed assignments with a faculty member.

The LSSSE also verified some areas of concern that UW Law had identified during its 2007 accreditation self-study. Specifically, the report found lower than national average scores on: 1) the inclusion of diverse perspectives (different races, religions, sexual orientations, genders, political opinion, etc.) in class discussions or writing assignments; 2) students having

serious conversations with students of a different race or ethnicity than your own; and 3) study abroad experiences.

The College of Law will continue its process of reviewing curriculum and implementing new or revised teaching methodologies and assessment tools, aided by statistical information from the LSSSE individual school report and the newly released national study. For additional information on the LSSSE or on UW Law results, please contact Assistant Dean Denise Burke at dburke@uwyo.edu.

The University of Wyoming assessment newsletter is published each semester (Erika Prager, university assessment specialist, editor). Any editorial comments reflect the view of the editor and not necessarily the university. Send comments, questions, and/or suggestions to Erika @ 766-2897 or ekprager@uwyo.edu. Past issues are available at www.uwyo.edu/assessment/newsletter. • Persons seeking admission, employment, or access to programs of the University of Wyoming shall be considered without regard to race, color, religion, sex, national origin, disability, age, veteran status, sexual orientation, or political belief. • If you would like more information about support for students with disabilities at UW or to receive this publication in alternative formats, please call University Disability Support Services at (307) 766-6189 or TTY (307) 766-3073. • Graphic design by Elizabeth Ono Rabel • 2009/3M/BG

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