Volume 2, Issue 2

Progressive Measures

Mission Statement:

"The University Assessment Office is responsible for conducting a variety of assessment activities related to student learning outcomes using qualitative and quantitative research techniques, providing support services to other units engaged in such assessment, and sharing best practices for and results of assessment activities."

From the Director

Inside this issue:

ISU & the Engaged Campus Movement	2	с
FOCUS	3	tł C
NSSE Trend Analysis	4	tł tł
Improving Institutional Satisfaction Through Relational Quality	6	Y e fe b
Meaningful Assessment: Use of Portfolio vs. Traditional Assessment in Science Education	7	d li w o c te e
CTLT—UAO Update	11	s ir [a B

am always amazed by what messages seem to resonate most loudly with us. Last fall I attended I a conference session presented by olleagues at Utah Valley State College nat discussed the steps that lead to a ampus-wide appreciation for systematic, ersus episodic, assessment. To make neir case for the value of assessment ney tied it to the practice of flossing. es, flossing. The group of presenters mphasized that that there are likely very ew people who disagree with the enefits of flossing in regards to our ental health; and like flossing there are kely very few individuals on a campus ho disagree with the value of assessing ur programs and practices. However, it an be the timing, intent, and/or the echnique we use of our flossina... excuse me - assessment that we see ignificant variations. Likely some ndividuals are diligent with their flossing assessment practices] just before and/or Ifter a visit to the dentist [accreditors]. ut the goal of good flossing [assessment] practices is that we stay committed to our plan in an effort to obtain the greatest level of benefit.

I recognize that comparing assessment to flossing certainly doesn't appear to be very scholarly in nature. However, as my colleagues from Utah Valley State College pointed out it makes a tangible analogy that clearly illustrates the value of staying current with our assessment plans and practices. The University Assessment Office should be the first place you turn if you are struggling at all to maintain a *healthy* assessment regimen. We encourage you to contact us if you have questions or concerns about how you can develop/revise and implement an assessment plan that provides valueadded data to help make important decisions in your unit while carrying forward the mission and goals of the University as well as those defined for your College and Department/School. Now might just be the perfect time to schedule your assessment *check-up*!

Marduel Q. Will

Mardell A. Wilson, EdD, RD Director - University Assessment Office



Illinois State University and the Engaged Campus Movement Nadia Wendlandt - Graduate Assistant for the FOCUS Initiative Mardell Wilson, RD, EdD - Director - UAO

In recent decades, interest in public and social issues has increased and there has been a push for organizations to be more responsive to the needs of their surrounding communities. Many for-profit organizations have responded by implementing programs with a community connection. In an effort to prepare future employees for this new dimension of civic involvement, higher education has been called upon to begin to put a greater emphasis on civic engagement which has lead to what is being referred to as the engaged campus movement.

Higher education plays a vital role within society as it has the opportunity to inspire a culture of citizenry among its students and ultimately the nation's future leader. Illinois State University has certainly been a campus that has capitalized on the engaged campus movement. In March 2003, Provost Presley introduced Illinois State University to the American Democracy Project [ADP] which served as the first step to enhancing awareness about the need for en-

hanced civic commitment by our students, as well as our faculty and staff. Today we find ourselves not only actively involved in the American Democracy Project, but Illinois State University is also one of eight campuses participating in the ADP sponsored Political Engagement Project. In addition, the FOCUS [Faculty Opportunities for Creating Civic and Community Understanding Among Students] Initiative represents ISU's commitment to all of its faculty to help develop the knowledge and skills necessary to incorporate civic opportunities and/or awareness in nearly every course offered. The FOCUS Modules provide a user-friendly way for faculty to access information when they want it. The Summer FOCUS Fellowships are an excellent example of how Illinois State provides opportunities and support for those faculty interesting in contributing to the development of our civic potential. Unlike campuses which have struggled with ways to create and maximize programs that represent the engaged campus movement, Illinois State University has truly been a national leader.





FACULTY OPPORTUNITIES FOR CREATING CIVIC & COMMUNITY UNDERSTANDING AMONG STUDENTS

2007 FOCUS Faculty Fellowships

Do you...

- Have experience integrating civic and community engagement into your courses?
- Have a desire to expand your knowledge and knowledge of your peers in this area?
- Want to earn \$5,000 in summer funding?

If this sounds good to you, consider spending some quality time this summer as a FOCUS Faculty Fellow collaborating with your peers to develop content for two online modules designed to benefit ISU faculty.

Fellowship Qualifications:

- Tenured, tenure track, and non-tenure track (100% full time) faculty are eligible.
- Knowledge of the literature regarding the value of civic/community engagement in various instructional settings.
- Experience integrating civic/community engagement activities into curricula and an interest in expanding faculty peers' involvement in this area.

Application Information:

Fellowship application materials are available online at: www.focus.ilstu.edu/fellows.

Application Deadline: March 27, 2007



Announcing Focus Initiative Awards

Department/Schools Award	School of Communication
	Honorable Mention - Department of Physics
Faculty Award	Dr. Sara Cole (Health Sciences)
	Honorable Mention - Dr. Maria Schmeeckle (Sociology & Anthropology)

These awards were given to recognize and reward departments/schools and individual faculty who have demonstrated their commitment to civic and/or community engagement and its benefits to the students, the University, and the community at large.

Accessing the FOCUS Modules

Have you accessed the FOCUS Modules yet? Learn more about how to get your students engaged!

Don't Delay... Log-On Today!!

Visit <u>www.focus.ilstu.edu/modules</u> and follow the simple login instructions.



NSSE Trend Analysis: Taking Stock After 5 Years

Matt Fuller, Asstant Director, UAO

The University Assessment Office recently celebrated a milestone in that 2005 was the fifth year the UAO collected data through the National Survey of Student Engagement (NSSE). While "the number 5" holds no real statistical importance, the fifth year of ISU's NSSE administration allows us the opportunity to analyze the means of nearly 4000 students' responses across the 5 year period for trends. Many institutions utilize multiple years of NSSE data to graph a mean for one variable compared to that variable's mean from a subsequent year. However, simply looking at means and seeing if the mean has "gone up," or "gone down," does not take into account changes in sample size and, thus, sample error. This time-series study seeks to document which means have been trending downward, and which, if any have statistically-significant trends in the positive direction; trends which can not be due by chance of sample size difference or sampling error.

Background

The UAO began collecting NSSE data in 2000, one year after the NSSE became available to American institutions of Higher Education. For each of the five years following the NSSE's initiation, the UAO collected data from a total of 3938 ISU students. NSSE surveys are given to freshmen and seniors in spring semesters, allowing most freshmen 6 or more months from which to draw their conclusions of the collegiate experience. The results are highly stable and do not tend to result in sharp spikes or dips in variable means from year to year. ISU NSSE response rates have steadily increased with each year of NSSE's administration. The NSSE 2000 response rate of 9.3% has given way to a response rate of 29% in 2005. In years' past, the UAO has made use of NSSE data to support a multitude educational and instructional activities on campus and will continue to do so. However, an analysis of how NSSE responses have changed over time has not yet been conducted.

Methodology and Limitations

The five years of data were reviewed for survey validity and variables were merged into one master file. Data files were structured to group data according to the variables represented across all five years of NSSE administration. Therein lies the first limitation of this particular study. The 2000 administration of NSSE contained sixty-two variables and no institutionally designated questions. In contrast, the 2004 and 2005 NSSE instruments contained an exhaustive 187 variables, 48 of which ISU elected to administer through participation in the American Democracy Project Consortium. Thus, these additional 125 variables, while they may offer some of the most intriguing data gathered in NSSE, are not able to be analyzed to this study since these data have been collected for less than 5 years.

Data were analyzed for differences in means using one way analysis of variance (ANOVA), corrections for unbalanced sample sizes, and post hoc analysis. Another limitation is noticed in this regard. As previously mentioned, responses to the NSSE have steadily increased since its inception at ISU. Thus, the 5 different years of institutional NSSE data represent unbalanced, unequal sample sizes; most of which have unequal means and unequal variances. Fortunately, statistical tests do exist which are able to account for these non-homogenous response pools.

Results

One way analysis of variance (ANOVA) was used to first ascertain which annual response pool means exhibited a statistically-significantly difference between the annual respondents. ANOVA tables, including weighted linear and quadratic trend components, were developed using SPSS to reveal significance values, the Fischer (F) score, and confidence intervals. Results of the one-way ANOVA produced thirty-six variables in which at least two years of data exhibited a statistically-significant difference in their means. In addition to the use of ANOVA, Welch and Brown-Forsythe Statistics were calculated to account for the amount of variance due to sample size difference. Welch and Brown-Forsythe Statistics revealed two additional variables which may have means which are different due to a difference in sample size or sampling error. Despite accounting for unbalanced sample sizes, ANOVA provides a significance value of the difference between all of the years of NSSE responses. For the remaining 34 variables, Schefe and Tukey post hoc analyses were used to ascertain which years accounted for the greatest significant difference of means of all of the five years and to begin laying out trending graphs. From this analysis, trend models based upon significance (i.e. not solely the means) began to emerge. For example, one can assume that in a trending time series of the NSSE variables, the difference between the 2000 and 2001.

Seven of the thirty-four variables appear to have a statistically-significant upward trend across the five years since NSSE has been administered on the ISU campus. Mean differences between the 2000 and 2005 (the largest spread of mean differences) means are also offered below. These seven variables are:

- About how often did you participate in a community-based project as part of a regular course in the past year. (Mean Difference = 0.182)
- How often have you tutored or taught other students (Mean difference = 0.149)
- How often have you used e-mail to communicate with an instructor (Mean difference = 0.233)
- How often have you received prompt feedback from faculty on your academic performance (written or oral) (Mean difference = 0.181)
- To what extent has ISU contributed to your acquiring a broad general education (Mean difference = 0.047)
- To what extent has ISU contributed to your ability to speak clearly and effectively (Mean difference = 0.230)
- To what extent has ISU contributed to your ability thinking critically and analytically (Mean dif-

ference = 0.152)

Of the statistically-significant time series, three exhibited a downward trend. These three variables include:

- About how many hours do you spend in a typical 7-day week working for pay on campus (Mean difference = -0.248)
- About how many hours do you spend in a typical 7-day week working for pay off campus (Mean difference = -0.452)
- About how many hours do you spend in a typical 7-day week relaxing and socializing (watching TV, partying, exercising, playing computer and other games, etc.) (Mean difference = -0.565).

Graphs of the trends were produced for each of the 7 upward and 3 downward trends. One of the more representative graphics for an upward trend if offered below.





Supporting Student Writers in the Disciplines' Workshop

Thursday, April, 5th 3:30-4:30pm Facilitators: Dr. Bob Broad, English; Dr. Tom Gerschick, Sociology;

Dr. Byron Wiegand, Agriculture

Improving Institutional Satisfaction through Relational Quality Andrew E. Monroe, Graduate Assistant-UAO

The Educating Illinois 2003-2010 initiative sets out that one of the key goals for Illinois State University is to increase retention and graduation rates. In 2004, the University reported retaining 85% of new beginning freshmen. Under the Educating Illinois initiative. ISU has been called upon to increase this percentage to 88%. With this challenge, it becomes increasingly important to address possible determinates for student retention. One such determinate may well be students' satisfaction with their educational experience at ISU. While understanding all of the facets of students' perceived satisfaction with ISU is complex, one key factor is students' satisfaction with both their relationships with the Illinois State faculty and with their peers. Also, as the university population is a dynamic one, it is important to track changes over time in order to better understand the issues related to satisfaction and retention.

To examine both the trends over time and the impact of the quality of peer and student-faculty relationships, data were taken from the 2000 and 2004 National Survey of Student Engagement (NSSE). Specifically, NSSE contains several questions asking students to report the amount of time spent per week: (a) relaxing and socializing, (b) preparing for class, (c) participating in co-curricular activities, and (d) working off campus for pay. Additionally, NSSE includes items asking students to report the perceived quality of their relationships with the ISU faculty and other students. This study investigates two key questions with regard to predicting satisfaction with Illinois State University. Do relationships with faculty and peers significantly impact institutional satisfaction? And, what weekly activities can affect the quality of peer and student-faculty relationships?

To examine these relationships two sets of several multiple regression analyses, one set of analyses on the 2000 NSSE data and one set of analyses on the 2004 NSSE data. The analyses revealed that the quality of peer relationships significantly predicted students' evaluation their educational experience at ISU for both the 2000, (b* = .20, t[360] = 4.23, p < .001) and the 2004 data, b = .21, t(708) = 6.08, p < .001. Additionally, the guality of studentfaculty relationships significantly predicted students' evaluation on their educational experience at ISU for both the 2000, (b = .39, t[360] = 8.04, p < .001) and the 2004 data, b = .36, t(708) = 10.15, p < .001. Together, the quality of peer and student faculty relationships explained a significant proportion of variance in students' evaluation on their educational experience at ISU for both 2000 (R^2 = .23, F[2, 360] = 54.69, p < .001 and $2004, R^2 = .22, F[2, 708] =$ 100.0, *p* < .001.

These analyses point out that nearly 20% of the variance for both the 2000 and 2004 NSSE sample is explained purely by how students rated the quality of their

relationships with their peers and professors. This finding alone has important implications for increasing retention rates, as we assume students who are satisfied with ISU will largely continue to attend. However, this still leaves unanswered what facilitates or detracts from these experiences, and what specific action can ISU take to improve these relationships.

To address this question an additional two sets of several multiple regression analyses, one set on the 2000 NSSE data and one set on the 2004 NSSE data. For these analyses I used the items that related to reported: relaxing and socializing, preparing for class, participating in cocurricular activities, and working off campus for pay to predict quality of peer and student-faculty relationships respectively.

The analyses on the 2000 NSSE data revealed that preparing for class (b = .13, t[354] = 2.51, p = .013) and participating in co-curricular activities (b = .21, t[354] = 3.97, p < .001) both significantly predicted quality of relationships with other students. Interestingly, in 2004 time spent preparing for class did not significantly predict the quality of peer relationships, b = .03, t(706) = .91, p = .36. However, participating in co-curricular activities (b = .16, t [706] = 4.21, p < .001), relaxing and socializing (b = .08, t [706] = 2.13, p = .033), and time working off campus (b = .08, t [706] = -2.17, p = .030) all significantly predicted the quality of peer relationships.

With regard to predicting the quality of student faculty relationships, the same set of four predictors for all of the analyses was used. In 2000, only time spent preparing for class significantly predicted quality of student faculty relationships, b = .15, t(354) = 2.75, p = .006. Interestingly, in 2004 this trend switched such that only participating in co-curricular activities significantly predicted quality of student faculty dent faculty relationships, b = .11, t(706) = 3.02, p = .003.

Taken together, these results seem to identify two major points. First, that the perceived quality of relationships with peers and professors has a relative degree of impact on students' evaluations of their educational experience at Illinois State University. Secondly, there has been a significant paradigm shift with regard to some of the factors that influence the quality of these relationships. The 2004 samples routinely reported out-of-class experiences as being larger determinates compared to the sample taken from 2000 which had a strong focus on class work. Additionally, working off campus seemed to detract from students' engagement with other students. This change raises some interesting questions and challenges for ISU faculty and administrators for finding new and innovative ways to engage students not only in the classroom, but also within the various co-curricular activities available.

Meaningful Assessment: Use of Portfolio vs. Traditional Assessment in Science Education

Do-Yong Park, Ph.D.- Assistant Professor of Science Education

Assessment and achievement tests play a critical and powerful role in influencing teaching and learning. Over the past decade it has been repeatedly demonstrated that assessment affects more than just what students learn and what teachers teach. Assessment has also been used as a source of information for decision making in education policy (Moss, et al., 1992; Zeichner & Wray, 2001). Specifically, this fact is clear in the No Child Left Behind (NCLB) context. Those states that want NCLB money must test all children in grades three through eight every year in reading, math, and now in science, and demonstrate "Adequate Yearly Progress (AYP)" until all the children in the schools attain the "proficient" level by 2014. Bracey (2003, p5) pointed out that the NCLB-funded schools and states would have to abandon their own programs used over the last decades to meet the provisions of the NCLB.

Educational woes often emanate from the results of student achievement tests (Colwell, 2000; Bracey, 2000). Rita R. Colwell (2000), the former director of the National Science Foundation, stated that if the U.S. is to sustain its position in the world economy, the nation's students should achieve high levels in Mathematics and Science. Today, however, students' low achievement in the International Assessment of Educational Progress presents educational challenges and concerns from country to country (Gonzales, et. al., 2004). One of the major causes of today's educational woe is the current assessment system and testing. The National Education Association (NEA) and other education organizations began to publicly criticize the negative impact of standardized tests on the schools (Bracey, 2003 & 2000; Haney & Madaus, 1989; Herman & Golan, 1993; Goldberg, 2004; Platt, 2004). Studies point to narrowness of content in standardized tests, their lack of match with curricula and instruction, their neglect of higher order thinking skills, and their limited relevance and meaningfulness of the multiple-choice formats. In addition, Neill and Medina (1989) argued that in reality, "objective" standardized tests often produce results that are inaccurate, inconsistent, and biased. They went on to say that as teaching becomes "coaching for the test" in too many schools, real learning and real thinking are crowded out ... and thus continued emphasis on testing will only make the situation worse and hinder educational reform. Wiggins (1989) suggested that we need to change traditional assessment practices so they engage students in real world application of knowledge and skills. The key point is to test students in context rather than by using standardized tests.

Actually the NEA encouraged the "elimination of group standardized intelligence, aptitude, and achievement tests" in a handbook *Alternatives to Standardized Testing* (Haney & Madaus, 1989).

With the advent of assessment alternatives, portfolio assessments have received considerable attention. Although not used globally on a large-scale, the authenticity and benefits of science portfolio assessment practices are recognized throughout the field of testing. The next section will show some examples of the use of portfolio assessment and identify meaningful advantages over traditional assessment practices.

The Portfolio in Science Education

Portfolio assessment has become a popular alternative to standardized tests across all academic disciplines. Although portfolios have been adopted most frequently in the area of language arts (Herman, Gearhart, & Baker, 1993; Tierney, Carter, & Desai, 1991), there are also a number of portfolio assessment systems emerging in science education, e.g., West Virginia statewide portfolios, Project SEPIA, ACT Passport Portfolio Assessment, and Project AAMU. This includes a number of projects for improving instructions and learning (Barton & Collins, 1997; Barrow, 1993; Bogina & Roberts, 2005; Moseley, 2000; Corcoran, et. al., 2004; Zembal-Saul, et. al., 2002). The State Department of West Virginia adopted a portfolio assessment system throughout the state in grade 1-6 in 1991 (Jorgensen, 1994). Pittsburgh Public Schools conduct Project SEPIA (Science Education though Portfolio Instruction and Assessment), a project funded by the National Science Foundation (Gitomer & Duschl, 1995). On the other hand, ACT (America College Testing) directs the ACT Passport portfolio project in science, mathematics, and language arts. The ACT's portfolio assessment is a project conducted to prove its potential for large scale use in seven high schools in six different states (Reckase, 1995). With the National Science Foundation funding (1992-1994), the AAMU (Authentic Assessment for Multiple Users) project was implemented in science and mathematics for the elementary and middle grades (Jorgensen, 1996). The focus of portfolio assessment is not only on documenting student learning but also on changing teachers' instructional and assessment practices.

The science portfolio is one type of alternative assessment. Based on cognitive theories, portfolio assessments on learning have been focusing on "what students know and can do" and the focus could lead teachers to find out what students do not know in traditional testing.

What Is Portfolio Assessment and Is It Meaningful?

Portfolios provide a way of assessing student learning that is quite different from traditional methods. Unlike standardized tests, portfolio assessment offers the opportunity to observe students in a broader context: taking risks, developing creative solutions, and learning to make judgments about their own performances. A portfolio is a portfolio when it provides a complex and comprehensive view of student performance in a real context (Paulson, Paulson, & Meyer, 1991). Portfolio assessment is typically described as:

> A purposeful collection of student work that tells the story of the students' efforts, progress, or achievement in a given area. This collection must include student participation in selection of portfolio content, the guidelines for selection, the criteria for judging merit, and evidence for student self-reflection. (Meyer, Schuman, & Angello, 1990)

A portfolio is more than a collection of a student's work. It is a deliberate, organized collection of evidence to monitor a student's development of content knowledge, understanding of concept, process skills, and attitudes in one or more areas. The selected evidence in the portfolio represents what the student judges to be improvement in his/her work over time. Students must select evidence that shows growth, effort, achievement, skills, and the ability to apply knowledge.

Portfolio assessment is used not only to grasp students' growth of learning but also to assess teachers' professional development in assessment practice (Shulman, 1998; Freidus, 1998; Avraamidou & Zembal-Saul, 2003; Corcoran, et. al., 2004). In relation to professional development of teachers in assessment, the National Science Education Standards also articulate that teachers must have opportunities to observe practitioners of good classroom assessment and to review assessment instruments and their use (NRC, 1996). Thus, it is suggested that professional development activities must provide opportunities for teachers to learn to use various tools and techniques for self-reflection such as portfolios, peer coaching, and journals. The existing portfolio assessment procedures for teachers are congruent with the characteristics of assessment practice recommended by the National Science Education Standards. The changing emphases in assessment practices are envisioned in the assessment standards (NRC, 1996). Science teachers need to embrace these new trends as essential characteristics of their assessment practices.

Why are portfolios gaining favor as an alternative assessment over the traditional standardized test? The essence of the appeal of portfolio assessments is in their realism and instructional relevance (Mullen, Britten & McFadden, 2005; Reckase, 1995). Because of their desired connection to real-life tasks, sometimes portfolio assessments have been labeled as authentic assessments (Burke, 1992). Authenticity of assessment lies on linking tests to the tasks, contexts, and "feel" of real-world challenges—in all their messiness (Wiggins, 1993). Authentic assessment helps identify teachers' subject matter knowledge, instructional pedagogies and skills, and knowledge of teaching and learning process in a classroom setting (Bullock & Hawk, 2005; Arends, 2001). There are some development models of portfolio assessment for classroom activities that work (Barton & Collins, 1997; Arter & Spandel, 1992; Jorgensen, 1996; Reckase, 1996; Morris & Buckland, 2000). Certainly portfolio has effectively been implemented in classrooms and proved the followings.

First, Portfolios allow students to assume some ownership in assessment. Ownership means some control over where and what goes into the portfolio and, probably, over where and how it is moved (Arter & Spandel, 1992). Students take responsibility of their assessment by providing evidence of growth, and they learn how to make decisions about the quality and usefulness of their own work. Unlike the traditional methods of learning and assessment, students take responsibility by having the opportunity to select evidence of their learning (Cole, et. al., 2000).

Second, portfolios provide a multidimensional view of each student's development not only of content knowledge but also of creativity, attitudes, learning strategies, misconceptions, and higher order thinking skills. Portfolio assessment allows a teacher to examine the student's learning strategies and to assess the student's attitudes (Tierney, 1992; Herbert, 2001). Portfolios encourage students to think of creative ways to share what they are learning, making students feel comfortable in expressing themselves. Educators argues that portfolio performance assessment plays a key role in nurturing critical and creative thought and higher order thinking skills (Wolf, et al., 1991; Newmann, 1990).

Third, as a strategy for improving teacher's pedagogical competence, portfolios provide a connection to the contexts and personal histories of real teaching. Portfolios offer teachers the opportunities to document their actual teaching (Shulman, 1987). Wolf (1991) feels that portfolios can provide teachers with a purpose and framework for monitoring and collegial interactions and can stimulate teachers to reflect on their own work and on the act of teaching. As Shulman (1988) put it, in ways that no other assessment methods can, portfolio provide a connection to the contexts and personal histories and make it possible to document the unfolding of both teaching and learning over time. Portfolios assist the teacher in assessing student performance over time, and teachers can become aware of students' strengths and weaknesses. Portfolio assessment influences and supports teachers' instructional change. Teachers who have been using portfolios reflect on comments from students' journals and assess the needs of their students and then use the obtained information in their teaching, i.e., lesson planning and adapting teaching style. The teachers also learn more about how their students learn, and the information helps them become more effective teachers (Barton & Collins, 1997).

Concluding remarks

Longstanding dissatisfaction with testing, espe-

cially standardized testing formats, led to a search for alternatives in educational assessment. Standardized tests generally focus on basic skills, rather than on critical thinking, reasoning, or problem solving. They emphasize what students can memorize rather than how students can think. In contrast, portfolio assessment focuses on collecting evidence on "what students know and can do" by providing a connection to the contexts and personal histories of real learning and teaching. By documenting teaching and learning based on context over time, portfolios provide information of authentic learning and instruction. Portfolio assessment enables teachers to pinpoint not only what a student knows, but how a student learns best. Portfolios at least appear to be one solution to such educational woes embedded in traditional testing practice. In reality, implementing portfolio in the classroom is not an overnight task. It takes a considerable investment of time, money, stress and some risk. It is flawed as is any type of assessment: hard to score, fragile in terms of validity and reliability, difficult to implement in large scale, time-consuming, and not readily comparable (Underwood, 1999).

Although challenges are present, no other method of assessment seems to equal portfolios in the development of student creativity, motivation, and higher order thinking skills. Presently an increasing number of portfolio projects are on field tests locally and state widely. The rationale for portfolio assessment seems a potential solution to traditional testing, yet we do not want to witness people rushing portfolio assessment only to discard it later because it did not work. Without careful design and implementation, portfolios cannot live up to the expectation of educators. It is hoped that more experiences of psychometric considerations (e.g., validity and reliability) can be provided and more people (e.g., parents, policy makers, and educators) can become involved in portfolio assessment to successfully avoid some of the harmful problems that traditional assessment practice revealed across educational areas, especially science.

References

- Arends, R. I. (2001). Manual for observation, reflection, and portfolio to accompany Learning to teach (5th ed.). NY, NY: McGraw-Hill Higher Education.
- Arter, J. A. & Spandel, V. (1992). Using portfolios of student work in instruction and assessment. *Educational Measurement: Issues and Practice.* 11(1), 36-44.
- Avraamidou, L. & Zembal-Saul, C. (2003). Exploring the Influence of Web-Based Portfolio Development on Learning to Teach Elementary Science. *Journal of Technology and Teacher Education*, 11(3), 415-442.
- Barrow, D. (1993). The Use of Portfolios to Assess Student Learning. Journal of College Science Teaching, 22, 148-153.
- Barton, J. & Collins, A. (Eds). (1997). Portfolio assessment: A handbook for educators. Addison-Wesley Publishing.

- Bogina, M., Roberts, B. (2005). The Use of Haiku and Portfolio Entry to Teach the Change of Seasons, *Journal of Geoscience Education*, 53(5), 559-562.
- Bracey, G. (2003). On the Death of Childhood and the Destruction of Public Schools: The Folly of Today's Education Policies and Practices. NH: Heinemann.
- Bracey, G. (2000). The TIMSS "Final Year" Study and Report: A Critique, Educational Researcher, 29(4), 4-10.
- Bullock, A. B., & Hawk, P. P. (2005). Developing a teaching portfolio: A guide for preservice and practicing teachers (2nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Burke, K. (Ed.). (1992). Authentic assessment: A collection. Palatine IL: IRI/ Skyline.
- Colwell, R. (2000). National Science Foundation Director's Statement, in Patrick Gonzales et al. eds. Pursuing Excellence: Comparisons of International Eighth-Grade Mathematics \$ Science Achievement from a U.S. Perspective, 1995 & 1999. Whatshington, D.C.; National Center for Education Statistics, U.S. Department of Education, pp. vii-viii.
- Corcoran, C., Dershimer, E., & Tichenor, M. (2004). A Teacher's Guide to Alternative Assessment: Taking the First Steps. *Clearing House*, 77(5). p.213.
- Freidus, H. (1998). Mentoring portfolio development. In N. Lyons (Ed.), With portfolio in hand: Validating the new teacher professionalism (pp. 51-68). New York: Teachers College Press.
- Gitomer, D. & Duschl, R. (1995). Moving toward a portfolio culture in science education, In S. M. Glynn & R. Duit (Eds.), *Learning science in the schools: Research reforming practice* (pp. 299-326). NJ: Lawrence Erlbaum Associates.
- Goldberg, M. (2004). The Test Mess Phi Delta Kappan, 85(5), 361-366.
- Gonzales, P., Guzman, J.C., Partelow, L., Pahlke, E., Jocelyn, L., Kastberg, D., & Williams, T. (2004). *Highlights From the Trends in International Mathematics and Science Study: TIMSS 2003.* National Center for Educational Statistics.
- Haney, W. & Madaus, G. (1989). Searching for alternatives to standardized tests: Whys, whats, and whithers. *Phi Delta Kappan*, 70(9), 683-687.
- Hebert, E. (2001). The Power of Portfolios: What Children Can Teach Us About Learning and Assessment. CA: Jossey-Bass - A Wiley Co.
- Herman, J. L, Gearhart, M., & Baker, E. L. (1993). Assessing writing portfolios: Issues in the meaning and validity of scores. *Educational Assessment*, 1(3), 201-224.
- Herman, J. & Golan, S. (1993). The effects of standardized testing on teaching and schools. *Educational Measurement: Issues and Practice*, 12(4), 20-25,41.
- Jorgensen, M. (1996). *Rethinking portfolio assessment: Documenting the intellectual works of learners in science and mathematics.* Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.
- Jorgensen, M. (1994). Assessing habits of mind: performance-based assessment in science and mathematics (pp. 21-34). Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.
- Meyer, C., Schuman, S., & Angello, N. (1990). NWEA White paper on aggregating portfolio data. Lake Oswego, OR: Northwest Evaluation Association.
- Morris, J. & Buckland, H. (2000). *Electronic portfolios for learning and as*sessment. Paper presented at the annual meeting of the Society for Information Technology and Teacher Education, San Diego, CA.
- Moseley, C. (2000). Standards direct preservice teacher portfolios. *Science* and *Children*, 37(5). 39-43.

Page 9

- Moss, P. A., Beck, J. S., Ebbs, C., Matson, B., Muchmore, J., Steele, D., & Taylor, C. (1992). Portfolio accountability, and an interpretive approach to validity. *Educational Measurement: Issues and Practice*, 11(3), 12-21.
- Mullen, L., Britten, J., & McFadden, J. (2005). Digital portfolios in teacher education. Indianapolis, IN: JIST Publishing, Inc.
- National Research Council. (1996). National Science Education Standard, Washington, DC: National Academy Press.
- Neill, D. M. & Medina, N. J. (1989). Standardized testing: Harmful to educational health. *Phi Delta Kappan,* May, 688-697.
- Newmann, F. M. (1990). Higher order thinking in teaching social studies: A rationale for the assessment of room thoughtfulness. *Journal of Curriculum Studies*, 22(1), 41-56.
- Paulson, L., Paulson, P., & Meyer, C. (1991). What makes a portfolio a portfolio? *Educational Leadership*, 48(5), 60-63.
- Platt, R. (2004). Standardized Tests: Whose Standards Are We Talking About? *Phi Delta Kappan*, 85(5), 381-382.
- Reckase, M. (1996). *The design and field test of the ACT portfolio system.* Paper presented at the annual meeting of the National Council on Measurement in Education, New York, NY.
- Reckase, M. (1995). Large scale portfolio assessment: Dream or reality? Paper presented at the Large Scale Assessment Conference sponsored by the Council of Chief State School Officers, Phoenix, Arizona.
- Shulman, L. (Ed.). (1998). *Teacher portfolios: A theoretical activity.* New York: Teachers College Press.
- Shulman, L. (1988). A union of insufficiencies: Strategies for teacher

assessment in a period of educational reform. *Educational Leadership*, November, 36-41.

- Shulman, L. (1987). Assessment for teaching: An initiative for the profession. *Phi Delta Kappan, September,* 38-44.
- Tierney, R. (1992). Setting a new agenda for assessment. *Learning*, 21(1), 61-64.
- Tierney, R., Carter, M., & Desai, L. (1991). *Portfolio assessment in the reading -writing classroom*. Norwood, MA: Christopher Gordon Publishers.
- Underwood, T. (1999). Portfolio Project: A Study of Assessment, Instruction, and Middle School Reform. IL: National council of Teachers of English.
- Wiggins, G. (1993). Assessment: Authenticity, context, and validity. *Phi Delta Kappan*, November, 200-214.
- Wiggins, G. (1989). A true test: Toward more authentic and equitable assessment. *Phi Delta Kappan*, May, 703-713.
- Wolf, D., Bixy, J., Glenn, J., III, & Gardner, H. (1991). To use their minds well: Investigating new forms of student assessment. *Review of Research in Education*, 17, 31-74.
- Wolf, K. (1991). The schoolteacher's portfolio: Issues in design, implementation, and evaluation. *Phi Delta Kappan*, October, 129-136.
- Zeichner, K. & Wray, S. (2001). The Teaching Portfolio in US Teacher Education Programs: What We Know and What We Need to Know. *Teaching and Teacher Education*, 17(5), 613-621.
- Zembal-Saul, C., Haefner, L.A., & Avraamidou, L. (2002). Web-Based Portfolios: A Vehicle for Examining Prospective Elementary Teachers Developing Understandings of Teaching Science. *Journal of Science Teacher Education*, 13(4), 283-302.





If you attended the University Assessment Office session at the January 2007 Teaching & Learning Symposium, you already know that the UAO has been looking closely at the data from the National Survey of Student Engagement (NSSE) and the Faculty Survey of Student Engagement (FSSE) and found some interesting "gaps" or discrepancies between the perceptions of the two groups. Specifically, these gaps in perceptions fell into four identifiable categories: differing faculty and student perceptions of student writing, differing faculty and student perceptions of the value of research and experiential learning, differing faculty and student perceptions of gaps and differing faculty and student perceptions of the treatment of or attention paid to diverse and global perspectives. In an effort to begin to make sense of these gaps—and with an eye toward narrowing them—the UAO and the Center for Teaching, Learning & Technology began a year-long venture in joint programming.

The first product of this venture was the Spring 2007 Teaching Excellence Series, "Improve Student Writing and Still Have a Life." Predicated in the student perception that effective writing requires multiple drafts and the faculty perception that requiring multiple drafts is unnecessary, the series explored four questions: How does the inner core (English 101) prepare student writers? What strategies can faculty use to improve student writing while preserving time and energy for other important priorities? How can faculty teaching general education courses support student writers (and still have time and energy for other priorities)? And how can faculty teaching in the disciplines student writers (and still have time and energy for other priorities)?

The second product of the UAO/CTLT collaboration will take place during the May University Teaching Workshop on Tuesday, May 15 and Wednesday, May 16. From 1-3 p.m. each afternoon, the UAO staff will join with faculty from across campus to explore questions such as

- What do students think when they hear the word 'research'?
- What do faculty think when they hear the word 'research'? How can we change the way students perceive "research"?
- How can faculty support student research in the classes they teach?

What intersections are possible between faculty and student research?

The two sessions will include presentations, discussions, and hands-on planning. They will be held in the CTLT Instructional Resource Commons, 301 S. Main.

Watch future issues of Progressive Measures and refer to the CTLT website (<u>www.teachtech.ilstu.edu</u>) for information about additional joint programming efforts in the future.

Dr. Claire C. Lamonica Assistant Director, CTLT

University Assessment Office

Instructional Technology Development Center (ITDC) Room 122 Campus Box 2500 301 S. Main St. Normal, IL 61790-2500

Phone: (309) 438-2135 Fax: (309) 438-8788 Email: UAO@ilstu.edu

Visit us on the Web:

http://www.assessment.ilstu.edu





UAO Staff

Back Row (L to R): Shanell Jones (Marketing & Promotions Graduate Assistant), Nadia Wendlandt (FOCUS Initiatives Graduate Assistant), Dr. Mardell Wilson (Director), Radhika Gopi (Technical Graduate Assistant Fall 2006) Front Row: Matt Fuller (Assistant Director) ,and Chris Jackson (Staff Clerk) Not Pictured: Andrew Monroe (Technical Graduate Assistant Spring 2007)

Assessment Related Conferences/Workshops

Association of American Colleges & Universities (AACU) The Student as Scholar: Undergraduate Research and Creative Practice April 19-21, 2007 Long Beach, CA

The Higher Learning Commission Leading for the Common Good Call for Proposals: Due by October 16, 2006 April 20-24, 2007 Chicago, IL

Association of American Colleges & Universities (AACU) Institute on General Education May 18-23, 2007 Newport, RI

Association of American Colleges & Universities (AACU) 2007 Greater Expectations Institute: Campus Leadership for Student Engagement, Inclusion and Achievement June 20-24, 2007 Burlington, VT

20th International Conference on The First-Year Experience Call for Proposals: Ends March 12, 2007 July 9-12, 2007 Hilo/Big island, Hawaii