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# **Instruments for Assessing Learning Outcomes at URI:**

## **Descriptions and Preliminary Findings**

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19 November 2008



Sangworn, a mahout (elephant driver), stands with his 13 year old elephant, Bussaba, at his temporary camp September 26, 2008 in Bangkok, Thailand. While the elephant is a symbol of Thailand, it is a fairly common site to see the unemployed and homeless animals roaming the city streets begging for food. The tame elephants dodge the traffic as their mahouts sell sugar cane by the bag to tourists who then feed them. Thai officials frown upon the practice and have passed laws banning elephants from roadways but the mahouts still come risking fines in order to survive. Elephants have been big business for the country for centuries but now they are reduced to a major tourist attraction. Elephants are trained to paint, play musical instruments, and even kick soccer balls. Until Thailand banned logging in 1989, many Asian elephants were laborers working in the jungles. (Paula Bronstein/Getty Images)

Photo and text from *The Big Picture: News and Stories of the Day* found online in the Boston Globe ([http://www.boston.com/bigpicture/2008/10/world\\_animal\\_day.html#photo38](http://www.boston.com/bigpicture/2008/10/world_animal_day.html#photo38)).

## **Parable of the Blind Men and the Elephant**

The very well-known story of the blind men and an elephant originated from India and has been used by the Sufis, Jainists, Buddhists, and Hindus. In the tale, a group of blind men touch an elephant to learn what it is like. However, each one touches only one part and that is different from what the others touch. In one version the blind man who feels a leg says the elephant is like a pillar; the one who feels the tail says the elephant is like a rope; the one who feels the trunk says the elephant is like a tree branch; the one who feels the ear says the elephant is like a hand fan; the one who feels the belly says the elephant is like a wall; and the one who feels the tusk says the elephant is like a solid pipe. When they compare their impressions they strenuously disagree about the true nature of an elephant.

Trying to assess student learning with surveys exemplifies the parable. The massive beast is approached with tools of limited perception that deliver an incomplete understanding of the subject. No instrument or its interpretation will be precisely right and the suite of assessments will not be comprehensive. Extracting meaning from the results is difficult. However, there is some real information in the data and the challenge is to harmonize the results of the assessments. Results – where they agree and disagree – can inform the development of policies for improving student learning as well as improve the assessment process.

This report is an initial compilation of information as of the fall 2008 semester about the various assessment instruments. It is intended to be the starting point for a fuller inventory and discussion of the results to date.

## **Pre-existing areas of interest**

In August 2007 a Summit on Student Learning presented a collection of student data elements derived from multiple sources. Several thematic areas of interest were developed from the information:

1. Level of Academic Challenge
2. Active and Collaborative Learning
3. Student-Faculty Interactions
4. Enriching Educational Experience
5. Supportive Campus Environment
6. Diversity
7. Studying Behaviors
8. Time Utilization
9. Retention, Attrition, and Graduation

The purpose of the Summit was to *foster “inquiry about the nature of our students and how best to improve their patterns of learning”* and *“to begin conversation and reflection on the implications of our practices.”* The data presented included demographic information and results from NSSE, Orientation, Post-URI101, Exit, and Student Quality of Life assessments.

## Recent Assessment tools

- Purpose, methodology, reliability, history
- 1. **National Survey of Student Engagement (NSSE)** – Conducted each spring term since 2000 at hundreds of four-year institutions (774 in the 2008 survey) – populations of “first year” and “senior” students selected randomly – based on extensive research in education – intended to measure “actual student behavior and perceptions of the extent to which the institution actively encourages high levels of engagement” – online survey of demographically representative samples of first-year and senior students cohorts provided by the institution – questions are concerned with curriculum, interactions with faculty, student behavior, and perceptions about their experiences in college – responses are aggregated in to clusters (“benchmarks”) of effective educational practice – peer comparisons are useful – administered by the Indiana University Center for Postsecondary Research – <http://nsse.iub.edu/html/origins.cfm> – NSSE documentation provides guidance for interpretation and use of data – 3 iterations at URI (2002, 2005, 2007) with response rates at 20-23% – respondent demographics are very similar to student populations – RIBGHE mandated biennial administration
- 2. **Faculty Survey of Student Engagement (FSSE)** – developed to complement NSSE – conducted each spring since 2003 at hundreds of four-year institutions – focuses on faculty perceptions of student engagement and learning, nature and frequency of faculty-student interactions, and how faculty members organize their time – online survey of instructional faculty provided by the institution – provides comparison with student perspective on some items – <http://fsse.iub.edu/html/about.cfm> – 1<sup>st</sup> sampling at URI in Spring 2008 with response rate of 45 % (332 of 732 invited) – respondent demographics are similar to overall faculty population
- 3. **Wabash National Study of Liberal Arts Education** – conducted with a small set of about 20 participating institutions beginning in 2006 – resurveys initial populations of first-year students for longitudinal analysis over four years – paper surveys of recruited students conducted on campus – measures enjoyment of cognitive activities, leadership development, psychological well-being, awareness and acceptance of similarities and differences among people, critical thinking abilities, and moral reasoning abilities – includes College Assessment of Academic Proficiency (CAAP) and Defining Issues Test (DIT-2) instruments – small group of participating institutions weakens usefulness of peer comparisons – URI started Fall 2007 and repeated in Fall 2008 – cohorts were not selected by a randomizing procedure which may skew results
- 4. **Student Evaluation of Teaching (SET)** – conducted by Enrollment Services since the 1970s under strict validity standards – paper survey available to all course sections – mark-sense forms processed on campus and results returned to administration, instructors, and students (composite results only) – quantifies

student perceptions of individual course quality to provide feedback to instructors – 20 questions are grouped into four composite areas (analytic/synthetic approach, organization/clarity, instructor/group interaction, instructor/individual student interaction) – voluntary participation (by both instructors and students) and validity criteria skew results for total university

5. **General Education Learning Outcomes Assessment** – conducted by the Faculty Senate approved Subcommittee on Assessment of General Education (SAGE) – highly focused to evaluate the general education program – data were collected on paper surveys and from submitted materials – analysis done on campus– 1<sup>st</sup> sampling in Fall 2007 – 3,558 students in 97 course sections participated in a survey at end of term – a sample of 55 assignments and student work from 50 sections also were assessed directly for learning outcomes – first implementation results will be used to develop a cyclical process of assessment in general education
6. **A. University College Orientation Surveys** – given to incoming freshmen students at orientation sessions during the summer before their first semester – instruments have varied over time – asks about high school experiences, anticipated college experiences, and evaluation of abilities – conducted and analyzed by UC staff  
**B. URI101 Surveys** – conducted online with new freshmen enrolled in URI101 course during the first semester – instruments have changed over time – some were designed to give snapshot views on focused issues; others are similar to Orientation surveys and used for before-and-after comparisons – conducted and analyzed by UC staff
7. **URI Exit Surveys** – required as part of the formal withdrawal process – ascertains reasons a student is leaving school – questions related to personal, academic, financial, student life, and general environment – began in 2006 and new data are analyzed annually by Office of Institutional Research
8. **Career Services Survey of Recent Graduates** – analysis of undergraduate and graduate student employment status within one year of graduating from URI – relates to academic major area of study, satisfaction with education, and use of job-seeking services – conducted annually since 2006 – online survey instrument administered after email contact
9. **Student Quality of Life and Satisfaction Survey (SQOLAS)** – initiated in 1996 and conducted periodically (last in 2007) by the Division of Student Affairs to assess quality of life, utilization and quality of various student services, and campus diversity at URI – specifically targeted assessments of student populations and university services using different instruments as subsections of the overall survey – [http://www.uri.edu/student\\_affairs/sqolas/repartindex.html](http://www.uri.edu/student_affairs/sqolas/repartindex.html)

**10. URI Perceptions survey** – conducted in 2007 as pre-survey part of the Branding Initiative – mixed methodology included telephone and online questionnaires coordinated by the CPRC – many items addressed issues and topic similar to other surveys – student and faculty responses are comparable to other assessment instruments and may confirm interpretations.

– Some general findings

### **1. NSSE**

In the 2007 survey URI surpasses peers (selected, Carnegie, all NSSE institutions) in two benchmarks – Active and Collaborative Learning (ACL) and Enriching Educational Experiences (EEE). It underperforms peers in Supportive Campus Environment (SCE) and is equal to peers in Level of Academic Challenge (LAC) and Student-Faculty Interactions (SFI).

Seniors rated the LAC, ACL, SFI, and EEE benchmarks higher than First-Years; for SCE they were about the same.

Compared to larger peer groups (Carnegie and all NSSE), URI students at both levels are significantly less likely to rate their entire educational experience positively and to say they would choose URI again if they could start over.

### **2. FSSE**

Responses are not grouped into benchmark indicators; however, individual items relating to the same topic in both FSSE and NSSE are presented in a combined report with the caveats that the items are not necessarily phrased or scaled identically and that perceptions may differ because of dissimilar understanding of the question. For example, for an item asking about critical and analytical thinking, faculty are asked if they structure their courses so that students learn in that area while students are asked about the extent their college experience contributed to their knowledge and development in that area. Although direct comparisons of average response values are invalid, consistent patterns in the whole dataset have some meaning.

- Working hard to meet the instructor's standards – more students than faculty think so by about 2:1.

- Prompt feedback on academic assignments – about 90% of faculty agreed, but only about 55% of students did.

- About 70% of faculty thought it was important for students to examine the strengths and weaknesses of their views on issues, but only about 50% of students thought they did this often.
- Over 90% of faculty thought it was important for students to learn something that changes the way they understand and issue or concept, but only about 60% of students thought they did this often.
- High proportions of both faculty (90%) and students (80%) thought evaluations (“examinations” in the student question) were challenging the students to do their best work.
- About one quarter of the faculty thought their courses emphasized memorization quite a bit, but over two thirds of the students thought this was the case.
- Faculty (85%) thought the synthesis and organization of ideas and information to be more common in their courses than students (65%) did.
- Students (about 66%) think their college experience contributed quite a bit to working effectively with others although only about half of the faculty (55%) report they structure their course for that.
- Nine out of ten faculty structure their courses for students learning on their own, but only two thirds of students feel their college experience of included quite a bit of this.

### **3. Wabash**

The battery of instruments used is broader than NSSE and collects data on student characteristics and behaviors, personal goals, enjoyment of academic activities, critical thinking, social responsibility, and psychological well-being. The first time a cohort is assessed (early in the first fall semester) student responses most strongly reflect conditions before the influence of the college experience. Results so far only represent the initial assessments.

- Compared to the limited number of peers, the URI cohort is less racially diverse, more likely to have had a high school gpa in the B+ to B- range, less likely to have had URI as a first choice of college, and scored a little lower on entrance exams.
- As seniors in high school they tended to be more socially than academically oriented.
- Highly rated values and goals were 1) becoming passionate about or committed to and occupation, 2) raising a family, 3) helping others, and 4) making a lot of money.

- They are much less concerned with artistic pursuits, developing a meaningful philosophy of life, spirituality, and understanding other countries and cultures. Although getting the best grades they could is important to them, they aren't particularly interested in academic challenge or working harder if it doesn't pay off in a better grade.

- They aren't interested in reading poetry or literature, about history or science, or expressing themselves in writing. It bores them. On the hand, they find partying interesting, being more likely than students at peer institutions to have consumed alcoholic beverages while in high school (both in volume and number of times per week).

- URI students returned lower scores than their peers in the Critical Thinking test and Need for Cognition Survey. They scored higher in Personal Interest and may have less sophisticated levels of moral reasoning than peers. Score on the psychological well-being instrument indicate they feel less well-grounded, confident, and purposeful.

- Overall, these incoming students could be characterized as self-interested, immature, and somewhat unmotivated. They appear to view college as a means to an end that centers mostly on their personal futures and give less thought to a broader context.

#### **4. SET**

No analysis of university-wide results has been conducted.

#### **5. GenEd**

Data have been collected but not analyzed in detail yet.

#### **6. Orientation and URI101**

The instruments compare student attitudes before and after the URI101 course experience as well as year-to-year. Evaluations of academic abilities, study habits, activities, behaviors advising, programs and services, and expectations are somewhat variable. Patterns are similar to the NSSE results. Statistical significance was not calculated.

#### **7. Exit**

Students often cite personal reasons for leaving such as illness, pregnancy, moving, stress, and family-related issues. Others complain about an unfriendly atmosphere at URI, few social activities, too much drinking. Financial concerns, perceived better values at other institutions, and unsatisfactory interactions with

staff are additional reasons. Some students have problems with academic requirements, personal motivation, housing/roommates, and aspects of the campus environment. Additional pressures of high costs, lack of financial aid, work, and family are contributing factors. Other students leave because they are able to transfer to a college they just find more attractive or challenging to them personally. Overall, the reasons students give for leaving URI are numerous and often multiple. In many cases there just is a significant lack of fit between student and institution.

## **8. Career**

The two most recent surveys of recent baccalaureate degree recipients from URI indicate that a large majority have found full-time employment in areas related to their academic majors within a few months after graduation. About half were engaged in further education either part-time or in graduate school instead of employment. Internships often lead to continuing with an employer. Overall respondents were satisfied with their education at URI in terms of preparation for a career.

## **9. SQOLAS**

Significant differences were found in 2004 between the opinions of minority and non-minority students on questions about diversity.

## **10. URI Perceptions**

Summary data has been requested.

### – Meaning of results:

#### 1. For students at entry

Incoming students could be characterized as immature, unsure about themselves, less interested in learning about people different from themselves, unmotivated by artistic and intellectual things, less interested in social and political issues, concerned with personal success but at not too great a cost in effort, and for a significant number a history of excessive alcohol use in high school.

#### 2. For students in the first year

First-years are caught up in the adjustment to college. Compared to Seniors they tend to participate less in class, collaborate less with classmates outside of class, and be less likely to integrate ideas and concepts from other courses. They think

the emphasis of their coursework is more on memorization than on analysis, synthesis, evaluation and application. They are more likely than Seniors to think that URI provides academic and social support and helps them cope with non-academic responsibilities.

### 3. For students in senior year

Seniors are more confident about their academic work in terms of participation, collaboration, amount and effort. They are more likely to talk with other students and faculty about their ideas and studies. They have had more opportunities for enriching educational experiences than First-years and report higher quality of relationships with other students and faculty. Working off campus for pay is more common. The institutional environment is less satisfactory to them, but they recognize educational growth more than First-years do.

### 4. Compared to students elsewhere

Among the peer groups assembled by the various instruments, URI results tend toward the lower than average side. This just may be an artifact of the peer group. However, judging by the number of items across the instruments showing statistically significant differences, it is possible that the URI student population has some inherent differences in background, attitudes, and perceptions.

### 5. With respect to faculty perceptions

There is an apparent disconnect between student and faculty in terms of effort, communication, and learning. Even allowing for incongruence between instruments, students tend to see themselves working harder but not hearing soon enough about how well they are doing. Faculty thought it important to make their courses challenging and focused on synthesis and organization of ideas, but students thought there was too much emphasis on memorization.

### 6. In validation studies

Recent research has questioned the value of the NSSE benchmarks (Gordon, et al. 2008) as predictors of several student outcomes (freshman retention, GPA, pursuit of graduate education, and employment outcome). Individual item responses may be a little better than the aggregate benchmarks as indicators of institutional effectiveness, but the jury is still out on the connection between self-reported learning outcomes and objective test results.

Analysis of the first phase of the Wabash National Study of Liberal Arts Education (Seifert, et al. 2008) indicates that the liberal arts experience had a positive effect on four outcomes: intercultural effectiveness, inclination to inquire and lifelong learning, well-being, and leadership.

Gordon, J., Ludlum, J. and Hoey, J. J. (2008) Validating NSSE Against Student Outcomes: Are They Related? *Research in Higher Education*, 49(1):19-39.

Seifert, T. A., Goodman, K. M., Lindsay, N., Jorgensen, J. D., Wolniak, G. C., Pascarella, E. T., and Blaich, C. (2008). The Effects of Liberal Arts Experiences on Liberal Arts Outcomes. *Research in Higher Education*, 49(2):107-125.

### **Where do the blind men (assessment tools) go from here?**

- Explore results in more detail

Results of the various assessments need much more evaluation and discussion before an accurate synthesis of the information can be achieved. Broader participation in the analysis will give a much better picture. Additionally, some assessments still are in progress and the results are not yet available.

- Evaluate the usefulness of the instruments

What remains unanalyzed? Are there alternatives?

- Develop an effective and efficient assessment process and schedule

Haphazard assessment ultimately wastes resources by not gleaning the most useful information for the effort expended. Coordination and consolidation based on a plan will produce better results. Frequent surveying also tends to suppress responses.

Exploration of alternative ways to recruit respondents needs to be explored. Social networking sites such as Facebook show some promise for contact notification and promoting participation.

The use of incentives has costs and benefits and needs informed judgment of its usefulness in particular surveys.

Statistical validity of results needs to be assured with careful design and execution of assessment instruments.