Developing an Integrative, Inclusive Framework For Undergraduate Assessment: Supporting Data Managers & Decision-Makers At A Decentralized University

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Analyst, Office of Institutional Research

University of Minnesota
Driven to Discover

American Evaluation Association Conference, 2012
University of Minnesota-Twin Cities

• Founded 1851: Land grant university
• Enrollment:
  – 30,375 undergraduate
  – 13,124 graduate
  – 3,824 professional studies
  – 4,530 non-degree
• 22,523 employees
• Campuses in Minneapolis and St. Paul
## Decentralization

### Highest Undergraduate Populations:
- CLA: 14,172
- CSE: 5,098
- CEHD: 2,399
- CSOM: 2,334
- CFANS: 1,993

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<tr>
<td>School of Public Health</td>
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</table>
Anarchical University
Anarchical University

- Bounded rationality
- Cannot give attention to the infinite number of elements that exist in the environment
- Problematic goals
- Unclear technologies
- Fluid participation (Birnbaum, 1988)
Decisions in an Organized Anarchy

Garbage can decision process:
• Problems
• Solutions
• Participants
• Choice opportunities
• Tight coupling

Decision styles:
• Resolution
• Flight
• Oversight
Providing Data to Decision-Makers

Identify Concepts and Measures

- Develop a conceptual model
- Include measurements
- Identify key stakeholders
- Define essential requirements required to make decisions
Assessment Plan

- Displayed on OIR website
- Grounded in higher education research & theory
Conceptual framework

inputs
- student background characteristics, motivations, experiences, & expectations

environment
- high-impact practices; campus climate; organizational & structural factors; student engagement, interactions, & experiences

Outcomes
- research activity; student learning outcomes; student development outcomes; global citizenship; student success outcomes (retention, graduation, academic achievement); student satisfaction, and alumni outcomes (career satisfaction and overall satisfaction with educational experience)
Stakeholders, primary intended users & audience

Bresciani, Gardner, & Hickmott (2009) emphasize the importance of involving stakeholders in assessment activities, acknowledging that “outcomes-based assessment requires the involvement of many to ensure that assessment efforts do not fall by the wayside once the data collection and interpretation of results are complete” (p. 71). Additionally, taking steps to identify and involve stakeholders will “contribute to increased acceptance of the assessment process in general, which will affirm organizational commitment to evidence-based decision making to improve student learning and success” (Bresciani, Gardner, & Hickmott, 2009, p. 71).

We have identified several important stakeholders who will contribute to and ultimately benefit from this process of assessment. Their diverse opinions and views shape the ways in which the assessment plan was conceptualized. Since we consider stakeholders to be a larger group of individuals who benefit widely and generally from the assessment process, results, and subsequent improvements, we consider a broad group of stakeholders to include undergraduate students, faculty, staff, administrators, the campus community, and the State of Minnesota.

The primary intended users of the assessment plan include UMN Twin Cities administrators who can utilize the data collection, scholarship, and assessment to frame decisions, support student development, enhance student retention and graduation, and benchmark our relative standing with our peer institutions. The primary intended users include:
- Undergraduate Education
- Associate Deans
- Accreditation Coordinator
- Faculty Affairs
- Student Affairs
- Equity and Diversity
- Office of Planning and Analysis
- Public Engagement

Additionally, while not directly involved in the assessment process, as their concerns center more on graduate students and alumni, we have identified secondary intended users who may indirectly benefit or utilize the results of institutional-wide undergraduate assessment:
- Foundation and Alumni Association
- Graduate School
- Academic Health Center
description of data collection instruments

Bresciani, Gardner, and Hickmott (2009) acknowledge that, “when engaging in institutional assessment, it is imperative that validity and reliability are ensured” (p. 57). Many nationally-recognized and administered survey instruments are designed to be reliable (meaning that the measure produces the same results over time) and valid (meaning that the tools are designed to accurately measure what is appropriate). As a result, we recommend continual use of the following instruments to collect information on student outcomes:

Cooperative Institutional Research Program Freshman Survey
(administered nationally, with UMNTC participating every other year)
The CIRP freshman survey project is aimed at providing information on the characteristics and educational goals and aspirations of first-time college students. The data provide information on changes in the characteristics of freshmen and form the baseline for conducting longitudinal studies of important student outcomes issues. Since a number of other public universities participate in the project, the data also provide comparisons of UMNTC freshmen to these.

National Survey of Student Engagement
(administered nationally—UMNTC plans)
This national survey project focuses on and aims to develop national benchmarking for UMNTC. It was first administered at UMNTC in the spring of freshmen and seniors and provides a representation of the effectiveness of undergraduate program experience. UMNTC participates in the consortium for this survey. The survey is sponsored by the Center for Teaching Excellence and First Year Experience.

Student Experience in the Real World
(annual survey to all nine University of Colorado and other AAU research universities)
This survey project began as a vehicle at UMNTC to generate institutional and comparative data and to encourage systematic use of data and institutional self-improvement. Survey questions focus on current job and education assessment of their educational experience.

Graduate Exit Survey
(Locally developed survey sponsored by the Office of Undergraduate Education, the survey is administered to a stratified random sample of graduate and professional students historically across the system focusing on educational and social experiences and satisfaction. Twin Cities will continue portions of the survey under the optional item section of the SERU to undergraduates. The survey will continue to be administered on a coordinated basis. Continuation of the survey with graduate and professional students is under review.

University of Minnesota Student Expectations Survey
(administered locally every other year)
In-house developed survey sponsored by the Office of Undergraduate Education, the survey is administered to a stratified random sample of undergraduate, graduate and professional students historically across the campus focusing on educational and social experiences and satisfaction. Twin Cities will continue portions of the survey under the optional item section of the SERU to undergraduates. The survey will continue to be administered on a coordinated basis. Continuation of the survey with graduate and professional students is under review.

University of Minnesota Student Interest Survey
(administered locally every five years)
Roger Harold created the Student Interest Survey, and has provided leadership in its administration to random samples of students at five-year intervals since 1971. The year 2006 marked the eighth administration of the survey and was a joint project of five University units. The Office for Student Affairs, Department of Recational Sports, and Student Unions & Activities funded the project, and the Office of Institutional Research administered the survey and prepared the data for analysis.
Collect and Store Data

• Obtain qualitative and quantitative data
• Store data so they are accessible
• Develop data definitions and descriptions
• Use technology where appropriate
Structuring and Showcasing Data
Showcasing Data

Office of Institutional Research

Official Enrollment Statistics: Fall 2012

This is the first iteration of the new Official Enrollment Statistics Report. The report is now web-based as opposed to static PDF documents. The data are presented graphically by term or five-year trends. The historic enrollment (STIX) reports for terms Fall 1999 - Summer 2010 will remain available. The new format includes data back to Fall 2001. If you would like to combine or cross a number of variables seen below, you could try the more flexible Enrollment Pivot report. May Session enrollment is reported separately.

View the data load table for details on the scheduled updating and staff contact for these data.

Select another term: Fall 2012

Fall 2012 Headcount Data
- Academic Level
- Registration Status
- Class
- Credit Load
- Full-Time/Part-Time Status
- Gender
- Race/Ethnicity
- Race/Ethnicity (Multi)
- Students of Color
- Age
- Home Location
- Tuition Residency
- All of the above on one page

Fall 2008-2012 Trend Data
- Academic Level
- Registration Status
- Class
- Credit Load
- Full-Time/Part-Time Status
- Gender
- Race/Ethnicity
- Students of Color
- Age
- Home Location
- Tuition Residency
## Showcasing Data & Definitions

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<td>378</td>
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</table>
Showcasing Data & Definitions

Freshman. Class level designation for first-year student in undergraduate programs.

Sophomore. Class level designation for second-year student in undergraduate programs.

Junior. Class level designation for third-year student in undergraduate programs.

Senior. Class level designation for fourth-year or later student in undergraduate programs.

Unknown. Not available. Information that could not be obtained from the student's record or the record did not fit into one of the above categories.

Masters. Class level designation for students in a master's program.

Doctoral. Class level designation for students in a doctoral program.

Other Grad. Graduate students who are not in a master's or doctoral program, but are pursuing a degree.

1st Yr. Class level designation for first-year student in professional programs.

2nd Yr. Class level designation for second-year student in professional programs.

3rd Yr. Class level designation for third-year student in professional programs.

4th Yr. Class level designation for fourth-year student in professional programs.

Other Prfl. Class level designation for special case professional programs including Pharmacy, Medical Residency Students, etc.

Non-Degree. Class level designation for any student in a non-degree program.
Survey Data

The Student Experience in the Research University (SERU) Project is a collaboration between academic scholars and institutional researchers devoted to creating new data sources and policy relevant analysis to help broaden our understanding of the undergraduate experience and to promote a culture of institutional self-improvement.

The University of Minnesota participated in this national study about undergraduate students in 2009, 2010 and 2012. The SERU is conducted by the Center for Studies in Higher Education at the University of California Berkeley. More information about the SERU and the SERU consortium can be found at: http://www.serv.unm.edu/.

The University of Minnesota received responses from approximately 9,600 students (~34% response rate) in 2010 and approximately 9,100 students (~32% response rate) in 2012. The data is presented as a distribution for each possible response, so the the columns should be considered a percentage unless noted otherwise. The final column is the number of students who provided a valid response for each question.

Your account has SERU Administrator access. This means you have access to the SERU Administrator results, which offers more data points and further ability to drilldown and the 2012 SERU Wild Card results, which are the web based reports for the University of Minnesota specific wild card module.

Educational Experience
- Time Allocation: Academic/Professional
- Time Allocation: Personal
- Hours of Sleep
- Academic Improvement
- Self Improvement
- Campus Climate for Diversity
- Academic Engagement: Class and Studying
- Academic Engagement: Faculty Interaction
- Academic Engagement: Challenging Self
- Course Reading Completion
- Post-Graduation Plans
- Career Aspirations
- Academic Aspirations
- Research and Creative Activities
- Overall Satisfaction
- Sense of Belonging

Major/Educational Experience Evaluation
- Deciding on a Major
- Required Effort
- Own Effort
- Academic Policies
- Satisfaction: Courses in Major
- Satisfaction: Academic Advising
- Satisfaction: Instruction
- Satisfaction: Resource Availability, Access, Opportunities
- Professor Rapport

Student Demographics
- Debt Concerns
- Meeting Collegiate Expenses
- Fiscal Behavior
- Is University Cost Manageable
- Born in the US?
- English Knowledge
- Family Origin
- Socioeconomic Background
- Income Range: Dependent Students
- Income Range: Independent Students
- Religious & Spiritual Preference
- Political Orientation
- Sport Activities
SERU Results: Professor Rapport

How many professors do you know well enough to ask for a letter of recommendation in support of an application for a job or for graduate or professional school?

Term: Spring 2012  College: All Colleges  Data Breaks: None

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<td>1,455</td>
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<td>2</td>
<td>1,688</td>
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<td>3</td>
<td>959</td>
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<tr>
<td>4 or more</td>
<td>705</td>
<td>11.7</td>
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<tr>
<td>Total</td>
<td>6,047</td>
<td>100.0</td>
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</table>

Notes & Data Sources:
# Restructure and Analyze Facts

## Students

**When does it start?**
The SERU survey administration is complete for 2012 as of July 9th.

**Why respond?**
We want to know how things are going for you, because U Matter! Your survey responses will help:
- Improve existing student services
- Create new services
- Enhance the student experience
- Find out more...

## 2012 Response Rates

<table>
<thead>
<tr>
<th>Institution</th>
<th>Response Rate</th>
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<tr>
<td>UMN</td>
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<tr>
<td>CSE</td>
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<tr>
<td>CSE</td>
<td></td>
</tr>
<tr>
<td>CLA</td>
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## News & Highlights

**SERU survey closed.**
Monday, 09 July 2012 (Item 1 of 3)

## Staff & Administration

**Promoting the survey**
Create personalized messages for your students by using resources from our U Matter SERU communications toolkit.
- Find out more...

**Utilizing the data**
The SERU survey offers a wealth of data all campus community members can use.
- Find out more...

**Research questions**
Do you have a burning question about the student experience?
Restructure and Analyze Facts

Qualitative Analysis

In the NSE, students responded to the open-ended question, "If you have any additional comments or feedback that you'd like to share on the quality of your academic experience, please type them below. The data suggest that transfer students and new high school graduates share a few concerns in common. Namely, students are concerned about academic advising, the size of the university, and the quality of courses. Students also talked about tension between the research and teaching mission of the university. Transfer students who self-identified as nontraditional noted additional challenges. The following sections discuss these in greater detail and are substantiated by student comments, which are not edited for grammar or spelling.

Academic Advising

A few transfer students noted that their academic advisors were unsympathetic to their experiences as nontraditional students on campus. One transfer student wrote that,

"Often times, the student is provided with obligations outside the class..."

When asked about suggestions students had for improving academic advising, they commented that advisors should be more accessible, provide more information about different academic programs, and be more understanding of students' needs. If you want a transfer student to feel heard, then there needs to be a relationship that includes meaningful communication.

Transfer students also noted interactions with advisors who seemed to know much about different programs. However, some transfer students felt that advisors were not very helpful or accommodating. Advisors often addressed students' concerns without offering solutions or next steps. The advisor's role was to simply provide information and direct the student to another resource. This can be frustrating for students who are new to the academic environment.

Academic advisors should not only focus on the program required to succeed in their major. The advisor should provide information about the different academic programs offered and offer guidance in choosing the right one. The advisor should also be available to offer support and guidance when needed.

Benchmarks

The data suggest that transfer students at the University of Minnesota-Twin Cities receive significant improvement in their academic performance when compared to nontransfer students, particularly in the STEM fields. The following tables show the percentage of students who achieved a certain grade level in various courses.

Table 1:

<table>
<thead>
<tr>
<th>Course</th>
<th>Transfer Students</th>
<th>Nontransfer Students</th>
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</thead>
<tbody>
<tr>
<td>Math</td>
<td>60%</td>
<td>75%</td>
</tr>
<tr>
<td>Science</td>
<td>55%</td>
<td>70%</td>
</tr>
<tr>
<td>English</td>
<td>50%</td>
<td>55%</td>
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</table>

Table 2:

<table>
<thead>
<tr>
<th>Course</th>
<th>Transfer Students</th>
<th>Nontransfer Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td>60%</td>
<td>75%</td>
</tr>
<tr>
<td>Science</td>
<td>55%</td>
<td>70%</td>
</tr>
<tr>
<td>English</td>
<td>50%</td>
<td>55%</td>
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</tbody>
</table>

The data support that transfer students at the University of Minnesota-Twin Cities receive significant improvement in their academic performance when compared to nontransfer students, particularly in the STEM fields. The percentage of students who achieved a certain grade level in various courses is shown in the following tables.
Restructure and Analyze Facts

- 120 students from Otter Tail County
- 2433 students from China
Deliver and Report Information

Summary of Research

Examples of research studies
The Office of Institutional Research has engaged in a number of formal research studies using SERU data. A few examples of these presentations, reports, or analyses are highlighted below.

- UMNTC first-year students’ academic engagement
- First-generation students’ academic engagement
- Impact of first-year learning communities
- Using social class data in institutional research
- High impact practices and underrepresented minority STEM students’ aspirations to graduate education
- Immigrant students’ sense of belonging at large, public research universities
- Community-engaged learning and academic gains

Forthcoming publications using SERU data will appear in the following journals:

- NACADA Journal of Academic Advising
- Journal of College Orientation and Transition
- Journal of College Student Retention
- The Learning Assistance Review
- Journal of College Counseling
- Multicultural Teaching and Learning
- Teaching in Higher Education

SERU data has also been highlighted at the following local, national, and international conferences:

- Internationalizing the Curriculum and Campus Conference
- 31st Annual Conference on the First-Year Experience
- International Association for Research on Service-learning and Community Engagement (IARSCLE)
- Association for Institutional Research in the Upper Midwest (AIRUM)
- American College Personnel Association (ACPA)
- Association for Institutional Research (AIR) Forum
Deliver and Report Information

- Wide variety of reports—appeal and reach out to a variety of stakeholders
- Publication—advances research mission and promotes world class status of programs
- Conferences—generate new ideas and connect with others
Results

- December 1, 2011 to February 29, 2012 (90 days)
- 11,032 visits from 7,933 visitors
- 70% increase from the period one year earlier
Visits Per Day in One Month

[Line graph showing visits per day in Sept-Oct 2010 and Sept-Oct 2012]
SERU Site

- 2,789 unique visitors visited the site
- 6,593 page views
Results Summary

- Synthesized data collection efforts
- Provided more open access to data for stakeholders’ decision making
- Enhanced transparency of data results and data collection
- Increased capacity of stakeholders to make informed decisions
Thank you!

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