The OSCAR Student Survey

Longitudinal Assessment of Student Learning Outcomes

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CUR Conference 2014, June 29
George Mason University

- 33,000 total students, more than 20,000 undergraduates
- 198 degree programs at 3 distributed campuses, 75 undergraduate degree programs
- Diverse student population
- Undergraduate research was adopted as our Quality Enhancement Plan (QEP) initiative
Students as Scholars at Mason

*Students as Scholars* aims to foster a culture of student scholarship through increased participation in and celebration of scholarly activities.

Students will see their education as a process of scholarly inquiry, where scholarship is valued as a core practice of the Mason student experience.
Primary Activities

- Helping students find a project and mentor
- Funding undergraduate research and creative projects
- Providing student travel grants
- Facilitating faculty and curriculum development
- Hosting the annual Celebration of Scholarship
Student Learning Outcomes

Creation of Scholarship
- Create an original scholarly or creative project
- Communicate knowledge from an original scholarly or creative project

Scholarly Inquiry
- Articulate a scholarly question; engage in key elements of the scholarly process; and situate the concepts, practices, or results of scholarship within a broader context

Discovery of Scholarship
- Understand how knowledge is generated and disseminated through scholarship, and the importance of scholarship to society
Undergraduate Research

- High impact educational practice (Kuh, 2008)
  - Increased student engagement
  - Improved retention

- Positive student outcomes
  - Written and oral communication skills
  - Academic performance
  - Critical thinking
  - Choice of major and career
  - Motivation and plans for graduate education
  - Personal development
Limitations of Current Research

- Research has largely focused on STEM fields
- Primarily self-reports and surveys
- Either too large for in-depth insight (e.g., NSSE) or too small for generalization
- Primarily focused on structured independent experiences, not on classroom experiences
Survey: Purposes and Development

- **Purposes**
  - Assessment of program and student learning outcomes
  - Understanding bigger questions about the impact of undergraduate research on student development

- **Development**
  - Locally developed, based on existing institutional surveys, scholarly literature, and \textit{Student as Scholars} outcomes
  - Pilot tested in two phases
  - Collaboration between \textit{Students as Scholars} and Office of Institutional Assessment

George Mason University Office of Institutional Assessment
Survey: Design & Measurement

- **Design**
  - Longitudinal collection of student responses with retrospective comparison group
  - Integration of institutional surveys
  - 3-part design corresponds to *Students as Scholars* outcomes

- **Measurement**
  - Attitudes and opinions about research and creative activities
  - Goals and plans for the future
  - Opportunities and motivation for undergraduate research
  - Learning: knowledge and skills; personal development
  - The research experience
How familiar are you with the Office of Student Scholarship, Creative Activities, and Research (OSCAR) and/or the Students as Scholars initiative?

% Somewhat or Very Familiar
Awareness of Opportunities

To what extent do you think that there are opportunities for undergraduate students to participate in research or creative activities (outside of regular course activities) at Mason?

% There are some/there are many

<table>
<thead>
<tr>
<th>Year</th>
<th>Individual Scholarly Experience</th>
<th>Course</th>
<th>Discovery</th>
<th>UNIV 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2012</td>
<td>91%</td>
<td>77%</td>
<td>75%</td>
<td>63%</td>
</tr>
<tr>
<td>Spring 2013</td>
<td>90%</td>
<td>63%</td>
<td>64%</td>
<td>67%</td>
</tr>
<tr>
<td>Fall 2013</td>
<td>100%</td>
<td>81%</td>
<td>72%</td>
<td>70%</td>
</tr>
<tr>
<td>Spring 2014</td>
<td>92%</td>
<td>70%</td>
<td>67%</td>
<td></td>
</tr>
</tbody>
</table>
Outside of regular course assignments, have you done or do you plan to work on a research or creative activity/project with a Mason faculty member before graduation?

<table>
<thead>
<tr>
<th>Fall 2012</th>
<th>Spring 2013</th>
<th>Fall 2013</th>
<th>Spring 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>39%</td>
<td>35%</td>
<td>34%</td>
</tr>
<tr>
<td>Not Sure</td>
<td>34%</td>
<td>30%</td>
<td>27%</td>
</tr>
<tr>
<td>No</td>
<td>26%</td>
<td>34%</td>
<td>35%</td>
</tr>
</tbody>
</table>
Attitudes about Research

Average score of 15 attitudes items

Sample items: “Learning about proper research methods and techniques is a valuable use of time” and “I take pleasure in learning about a subject in depth”

*Note: The mean attitudes are significantly different across all 4 samples.
**Motivations: Sample Comparison**

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Course, Discovery, &amp; UNIV 100</th>
<th>ISE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaining experience for career or graduate school</td>
<td>73%</td>
<td>84%</td>
</tr>
<tr>
<td>Working on a specific project of interest</td>
<td>67%</td>
<td>78%</td>
</tr>
<tr>
<td>Being excited by or loving the work</td>
<td>62%</td>
<td>71%</td>
</tr>
<tr>
<td>Working with a specific faculty member</td>
<td>35%</td>
<td>63%</td>
</tr>
<tr>
<td>Working on a project that might contribute to community well-being</td>
<td>40%</td>
<td>58%</td>
</tr>
<tr>
<td>Receiving compensation or pay</td>
<td>60%</td>
<td>55%</td>
</tr>
<tr>
<td>Meeting peers who have similar goals</td>
<td>38%</td>
<td>30%</td>
</tr>
<tr>
<td>Being required by my major or degree</td>
<td>19%</td>
<td>44%</td>
</tr>
</tbody>
</table>
Learning Outcomes

To what extent has this course (Course/Discovery)/experience (ISE) contributed to your learning?

- Understanding current issues in your major or field of study
  - Discovery: 57%
  - Course: 67%
  - ISE: 76%
- Judging the quality of research studies or creative works
  - Discovery: 58%
  - Course: 67%
  - ISE: 79%
- Explaining the advantages and limitations of different methods to approaching a question or problem in
  - Discovery: 60%
  - Course: 70%
  - ISE: 80%
- Understanding how to add to a scholarly or professional conversation through research and
  - Discovery: 64%
  - Course: 72%
  - ISE: 88%
- Understanding the research or creative process in your field
  - Discovery: 62%
  - Course: 73%
  - ISE: 84%
- Understanding the difference between personal beliefs and evidence supporting a position or
  - Discovery: 66%
  - Course: 75%
  - ISE: 81%
- Understanding how research is relevant to what you are learning in your classes
  - Discovery: 66%
  - Course: 76%
  - ISE: 81%
### Learning Outcomes

#### To what extent has this course (Course)/experience (ISE) contributed to your learning?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Course</th>
<th>ISE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career- or work-related knowledge and skills</td>
<td>59%</td>
<td>84%</td>
</tr>
<tr>
<td>Understanding terminology that is specific to your</td>
<td>57%</td>
<td>77%</td>
</tr>
<tr>
<td>Matching a scholarly question to the appropriate</td>
<td>59%</td>
<td>84%</td>
</tr>
<tr>
<td>Learning ethical conduct in your field</td>
<td>57%</td>
<td>75%</td>
</tr>
<tr>
<td>Collecting appropriate data or evidence for the</td>
<td>57%</td>
<td>84%</td>
</tr>
<tr>
<td>Dealing with obstacles faced in the research or</td>
<td>59%</td>
<td>91%</td>
</tr>
<tr>
<td>Analyzing data or information relevant to the project</td>
<td>57%</td>
<td>89%</td>
</tr>
<tr>
<td>Writing clearly and effectively</td>
<td>57%</td>
<td>78%</td>
</tr>
<tr>
<td>Evaluating scholars' positions or statements to</td>
<td>54%</td>
<td>78%</td>
</tr>
<tr>
<td>Communicating well orally in a presentation,</td>
<td>52%</td>
<td>80%</td>
</tr>
<tr>
<td>Articulating the broad implications or &quot;big picture&quot; of</td>
<td>56%</td>
<td>86%</td>
</tr>
<tr>
<td>Creating new ideas, solutions, or creative works</td>
<td>51%</td>
<td>84%</td>
</tr>
</tbody>
</table>
While you were a student at Mason, did you present your research or creative project outside of class in any of the following ways? Check all that apply.

- Presented a poster at a Mason event: 49%
- I plan to give an oral presentation, poster, or performance in the next 1-2 semesters: 33%
- Presented a paper or poster at an off-campus event: 20%
- I participated in an event that exhibited or demonstrated my invention or engineering: 8%
- I did not present anything outside of class: 8%
- I participated in a recital or performance: 4%
- I participated in an event that showcased my artwork or design project: 4%
Have you or do you plan to submit the results of your project for publication? Check all that apply.

- Submit an article to a peer-reviewed publication: 32%
- Write up the results in a report or paper: 27%
- Nothing at this time: 19%
- Submit an article to a professional or trade publication: 12%
- Other: 7%
Strengths of the Survey

- Locally developed and focuses on Mason’s learning outcomes
- Provides data for faculty and program staff
- Longitudinal assessment
  - Examines change over time
  - Ability to match with responses other surveys (e.g., NSSE, Graduating Senior Survey, Alumni Survey)
- Broad student sample
  - General student population
  - Variety of courses and experiences
Limitations of the Survey

- Ceiling effect for attitudes
  - Will there be enough variability to determine relationships?
- Causality versus maturation effects
- Response rates low
  - Limitations for longitudinal analysis

![Overall Response Rate](chart.png)

- Fall 2012: 39.8%
- Spring 2013: 30.1%
- Fall 2013: 23.2%
- Spring 2014: 39.1%
Future Directions & Questions

- Assessment of program effectiveness in reaching outcomes
- Working with faculty on using results to improve instruction
- Focused research
  - For example, immersion in scholarly inquiry and research focused classes may improve socialization in the field (Thiry et al., 2011) which could have a particularly strong influence on first generation college students
  - Additional questions may involve the moderating role of student characteristics (e.g., gender, major, future plans) on the impact of the program(s)
On Your Campus

- What are your assessment questions? Is a survey the best way to answer those questions?

- Scale it to your campus:
  - What data might you already have available to you?
  - How would you use survey data like these?
  - How can you match a survey with expertise available to you for collecting, processing, and reporting data?

- How would you administer a survey to get the best responses?
Discussion and Questions

Assessment materials available at

assessment.gmu.edu

Students as Scholars

oscar.gmu.edu