

IOWA STATE UNIVERSITY

Graduate College

Effective Use of Data in Evaluating Graduate Programs

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Motivation for Data Driven Graduate Program Evaluation

- Context
 - Accountability
 - Strategic Importance
 - Opportunity / Leverage
- Enhance Graduate Program Quality
 - Ultimate Goal is Graduate Student Success
- Improve External Perception of Institution
- Effective Utilization of Resources

Overview

- ISU Context
 - Institutional Scope
 - Iowa, Midwest, National, Global
- Graduate Program Quality Assessment
- Data Driven Strategic Priorities
- Resource Utilization – Human, Fiscal, Physical

Iowa State University

- First land-grant institution in the United States (1864)
- 29,9887 students total (Fall 2011)
- 5,544 graduate and professional students (Fall 2011)
- 3,424 International Students from 106 Countries (Fall 2011)



ISU College Enrollment (Fall 2011)	Under	Grad	Total
Agriculture and Life Sciences	3,584	627	4,211
Business	3,212	258	3,470
Design	1,798	158	1,956
Engineering	5,935	997	6,932
Human Sciences	3,430	766	4,196
Liberal Arts and Sciences	6,384	1,217	7,601
Interdepartmental	0	556	556
Veterinary Medicine Professional	0	587	689
Veterinary Medicine Graduate	0	102	
Post-graduate (post-doc)	0	0	276
Total	24,343	5268	29,887

Operating Revenues – FY 2010

- Total \$1.043 Billion
- Tuition and Fees – 26.4%
- Contracts and Grants – 26.1%
- State Appropriations – 25.7%
- Auxiliary Enterprises – 13.4%
- Other Income – 7.2%
- Federal Appropriations – 1.2%

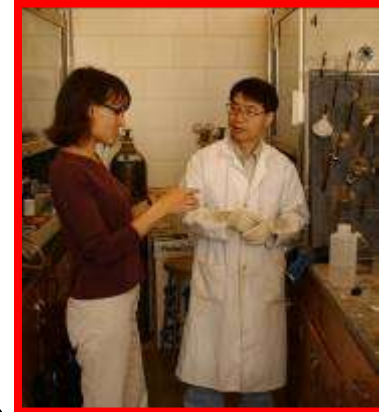
Land Grant Culture

- Tripartite mission
 - Teaching
 - Research
 - Extension/Outreach
- Academic excellence
- Access for UG
- Application of knowledge for the betterment of all
- Tech transfer; Professional development



Research and Graduate Education

- \$342.3 million in grants, contracts and cooperative agreements in fiscal year 2011.
Largest sources:
 - National Science Foundation: \$37.9 million
 - U.S. Department of Energy: \$36.2 million
 - U.S. Department of Agriculture: \$33.8 million
- More than 100 fields of study leading to graduate and professional degrees
- 15th in licenses and options generating income



External Context

- Supportive state environment with high expectations and increasing desire for quantitative accountability
- 10 Land Grant “Peers” most with similar scope
 - Direct competitors for faculty, graduate students, and post docs
- Publics in states that border IA
- AAU Public Universities
- International partner universities

Graduate Program Quality Assessment

- Periodic external peer review
 - Minimum of every seven years
 - Data based qualitative judgment
 - Review team from aspirational peers
 - Outcomes focus
- Periodic internal review
 - Task force approach
 - Data driven
 - Strategic importance; Leverage; Future Opportunity
 - Outcomes focus

Dimensions of Graduate Program Quality

- Faculty Quality
 - Productivity
 - Qualitative assessment
- Incoming Student Quality
 - Characteristics of applicants
 - Characteristics of enrollees
 - Information about non-enrollees
- Student Success
 - While enrolled
 - Following degree completion

Data Normalization

- Program Graduate Faculty
- External Research Funding
- Total Funding
- Admitted Students
- Program Enrollment
- Diversity (Relative to Disciplinary Opportunity)

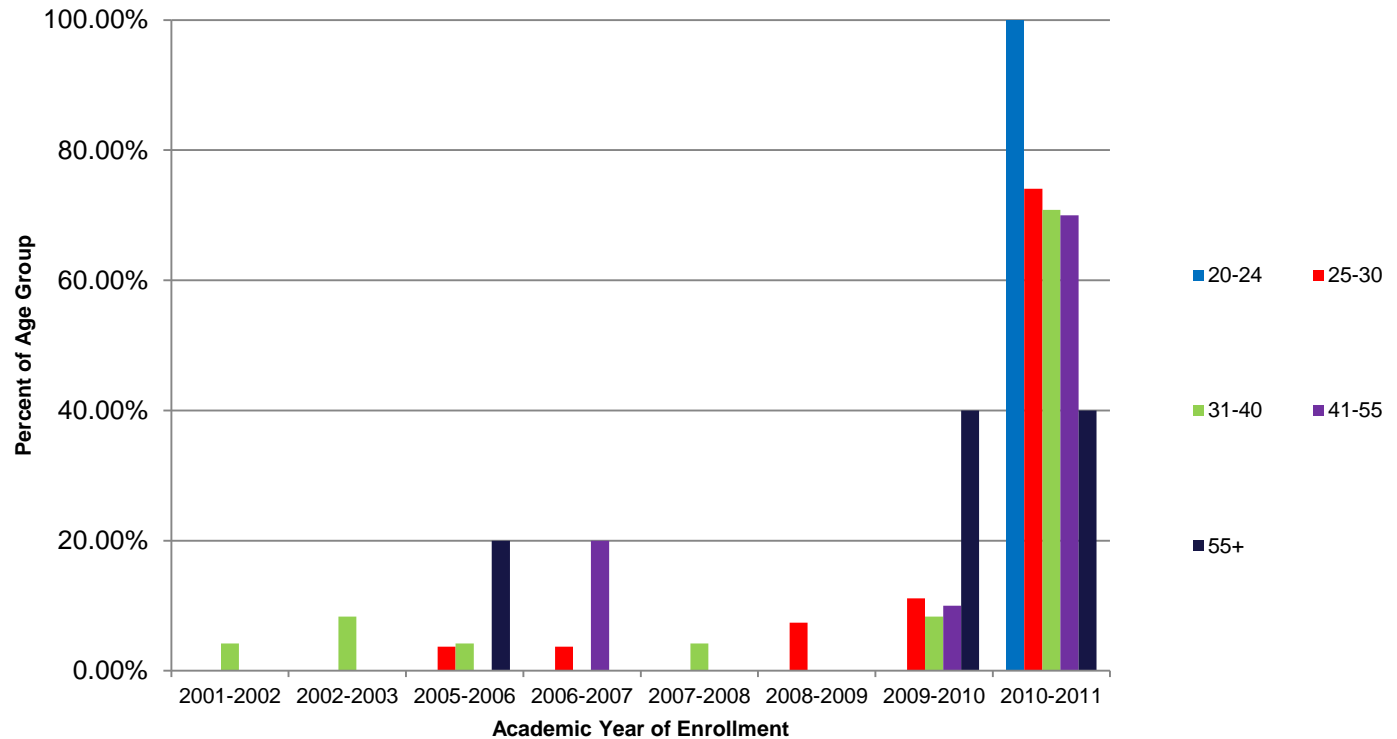
Graduate Program Data Analyzed

- Graduate Faculty Quality and Productivity
 - NRC Data
 - AAUDE Data
 - Academic Analytics
- Incoming Student Quality
 - GRE, GPA
 - Selectivity
 - Acceptance rate
 - Diversity
 - Domestic / International Mix

Enrolled Graduate Student Success

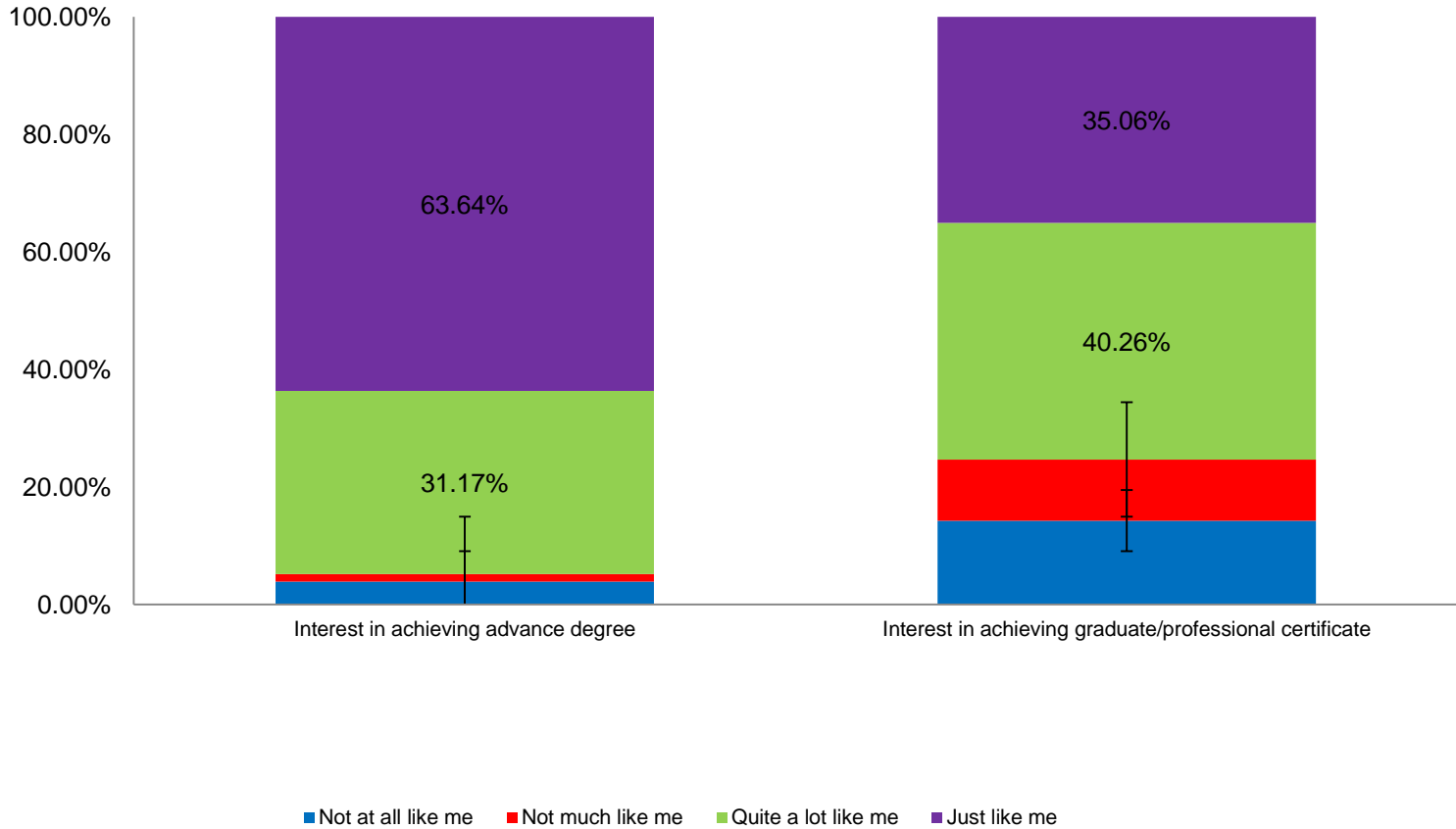
- Retention / Persistence
- Completion Rate
- Time to Degree
- Placement
- AAUDE Exit Survey
- Early Career Success

Undeclared Student Age Distribution



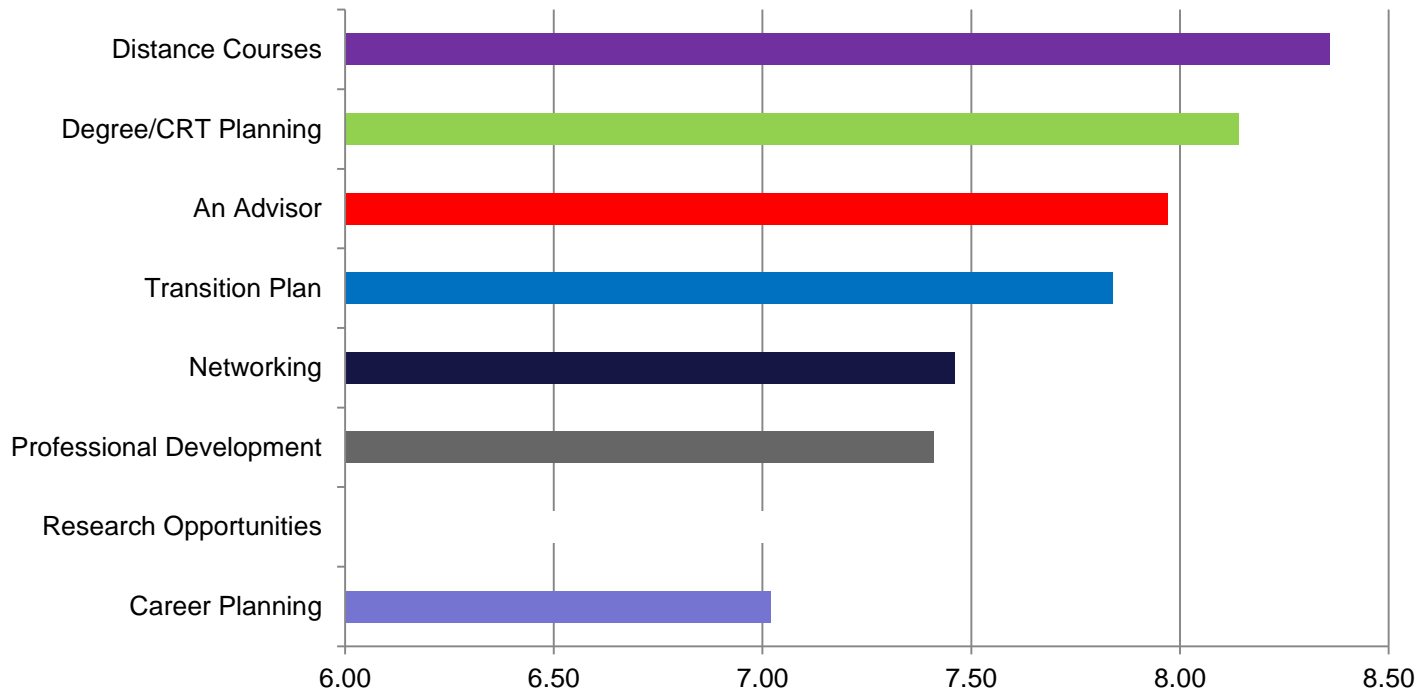
Undeclared Student Aspirations

Undeclared Graduate Students: What they want to do?



Undeclared Student Perceived Needs

How Can ISU Help?



Average response rate: How useful would the following be on a scale of 1 to 10.

Data Driven Strategic Prioritization

- Institutional Scope and Strategic Priorities
- Projected Future Opportunities
- Leverage
 - Large or expanding research programs
 - Related strong graduate programs
 - Collaborations
 - Potential collaborations
- External Perception of Program Quality
- Program Quality Trajectory

Accountability

- Normalized Program Productivity
 - Student Success Focus
- Effective Human Resource Utilization
 - Leverage
 - Specified expectations
- Effective Physical Resource Utilization
 - Data-driven space allocation / reallocation
 - Infrastructure allocation / reallocation
- Effective Fiscal Resource Utilization

Concluding Thoughts

- Context is Important to Data Driven Program Evaluation and Prioritization
- Program Quality Enhancement Focus
- Graduate Student Success Focus
 - Successful Careers and Lives
- Appropriate Data-Driven Qualitative Evaluation of Programs is Critical
- Program Self-Perception and Intra-institutional Perception can be Valuable