



Council of Graduate Schools

Advocacy, Research, and Innovation

Professional Science Master's Programs

Enrollment and Degrees and Student Outcomes

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Council of Graduate Schools

PSM Enrollment & Degrees

- Funded by the Alfred P. Sloan Foundation
 - FY 2011 and 2012

- Purpose is to collect:
 - First-year enrollment (fall 2010 & 2011)
 - Total enrollment (fall 2010 & 2011)
 - Degrees awarded (2009/10 & 2010/11)



PSM Enrollment & Degrees

- Sample
 - All CGS-recognized PSM programs (235 in 2009/10)
- Design
 - Review of 20+ existing surveys, reviewed by experts
- Implementation
 - Launched in April, closed in May
 - 209 usable responses, an 89% response rate



PSM Enrollment & Degrees

■ Limitations

- Some categories were combined
- Some data were necessarily suppressed
- One institution has several large programs
- 11% did not respond



PSM Enrollment & Degrees

- Of 209 usable responses ...
 - 174 PSM programs enrolled students (fall 2010)
 - Among U.S.-based programs
 - 74% in public, 26% private, not-for-profit
 - 67% in doctoral, 37% master's-focused or specialized
 - Among all programs
 - 29% Biology/biotechnology
 - 25% Environmental sciences
 - 10% Mathematics and statistics
 - 9% Computational sciences



PSM Enrollment & Degrees

- 4,396 applications received (fall 2010)
 - Among U.S. based programs:
 - 77% public, 23% private, not-for profit
 - 63% doctoral, 37% master's-focused or specialized
 - Among all programs:
 - 34% for Biology/biotechnology
 - 23% Mathematics and statistics
 - 14% Computational sciences
 - 11% Environmental sciences



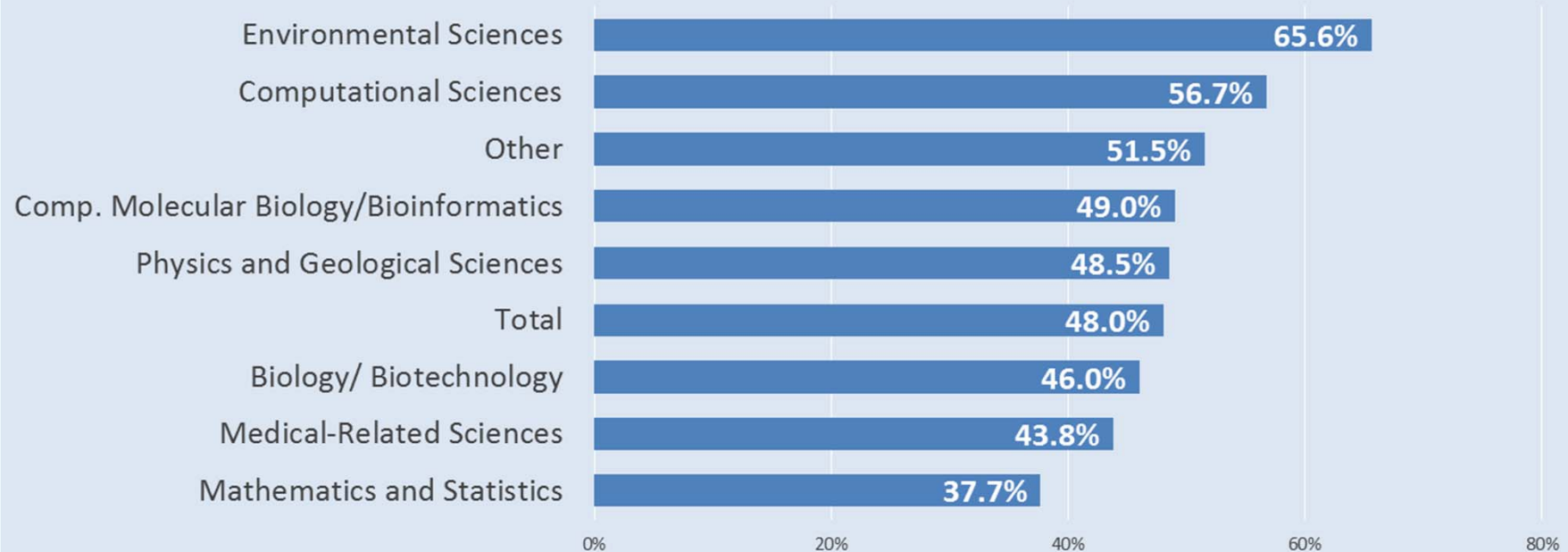
PSM Enrollment & Degrees

- 2,134 applications accepted
 - Among U.S.-based programs:
 - 76% public, 24% private, not-for-profit
 - 60% doctoral, 40% master's-focused, specialized
 - Among all programs (U.S. and non-U.S.):
 - 33% Biology/biotechnology
 - 18% Mathematics and statistics
 - 16% Computational sciences
 - 15% Environmental sciences



PSM Enrollment & Degrees

Acceptance Rates in PSM Programs by Field of Study, Fall 2010



Source: Council of Graduate Schools, 2011
Represents U.S. and non-U.S.-based programs, except for two, which did not provide complete data
Other includes chemistry, forensic sciences, nanoscience, and national defense



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PSM Enrollment & Degrees

- 1,471 first-time enrollees (fall 2010)
 - 56% men, 44% women
 - 41% part-time, 59% full-time
 - Among U.S.-based enrollments:
 - 17% international students
 - 69% Asian/Pacific Islander or White
 - 22% Underrepresented minorities
 - 9% Two or more races



PSM Enrollment & Degrees

- Yield rates (fall 2010)
 - 69% overall
 - By field
 - 93% Computational sciences
 - 92% Medical-related science
 - 86% Environmental sciences
 - 45% Mathematics and statistics
 - 44% Comp. molecular biology/bioinformatics



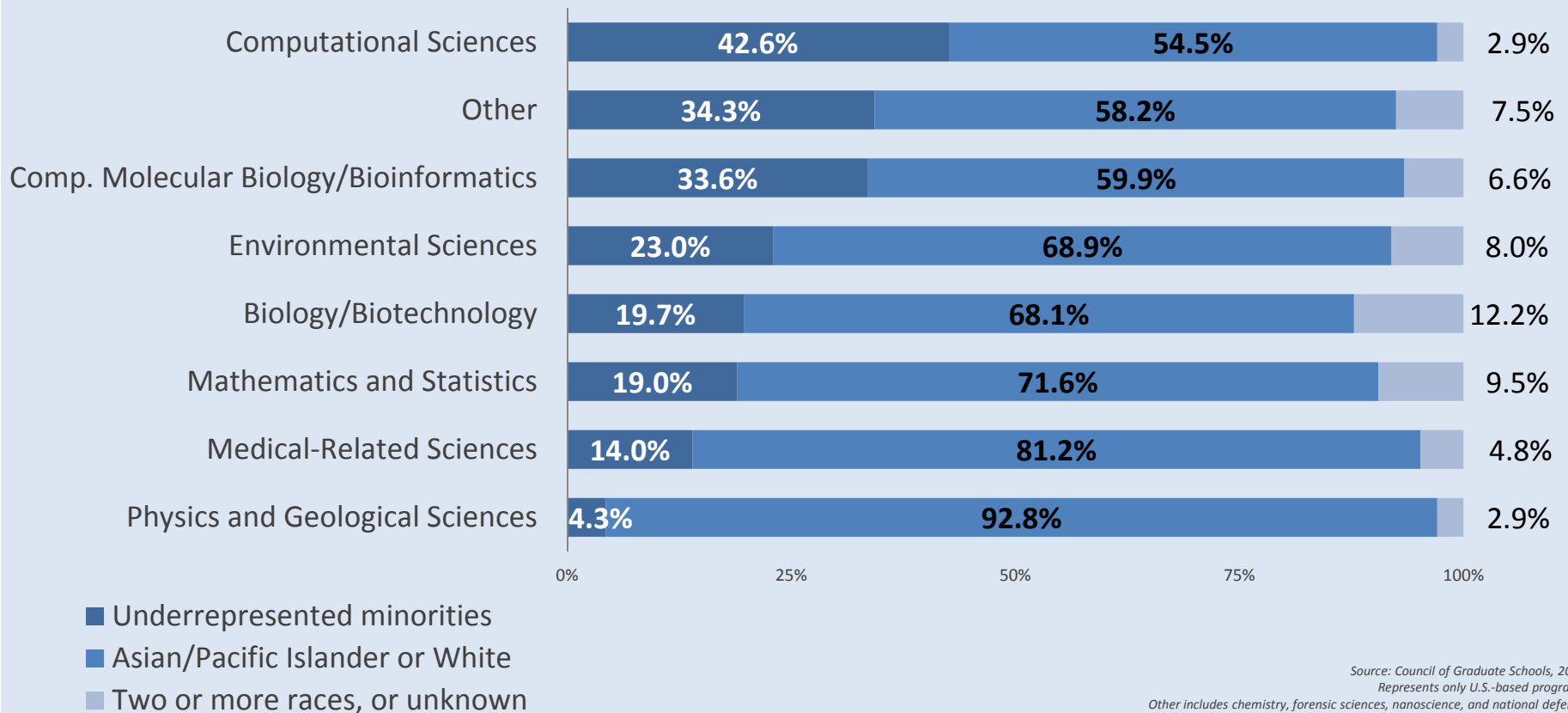
PSM Enrollment & Degrees

- 4,753 students enrolled in PSM programs (fall 2010)
 - 51% men, 49% women
 - 64% part-time, 36% full-time
 - Among U.S.-based enrollments
 - 13% international students
 - 64% Asian/Pacific Islander or White
 - 29% Underrepresented minorities
 - 7% Two or more races or unknown



PSM Enrollment & Degrees

Total Enrollment in PSM Programs by Field of Study and Race/Ethnicity, Fall 2010



Source: Council of Graduate Schools, 2011
 Represents only U.S.-based programs
 Other includes chemistry, forensic sciences, nanoscience, and national defense



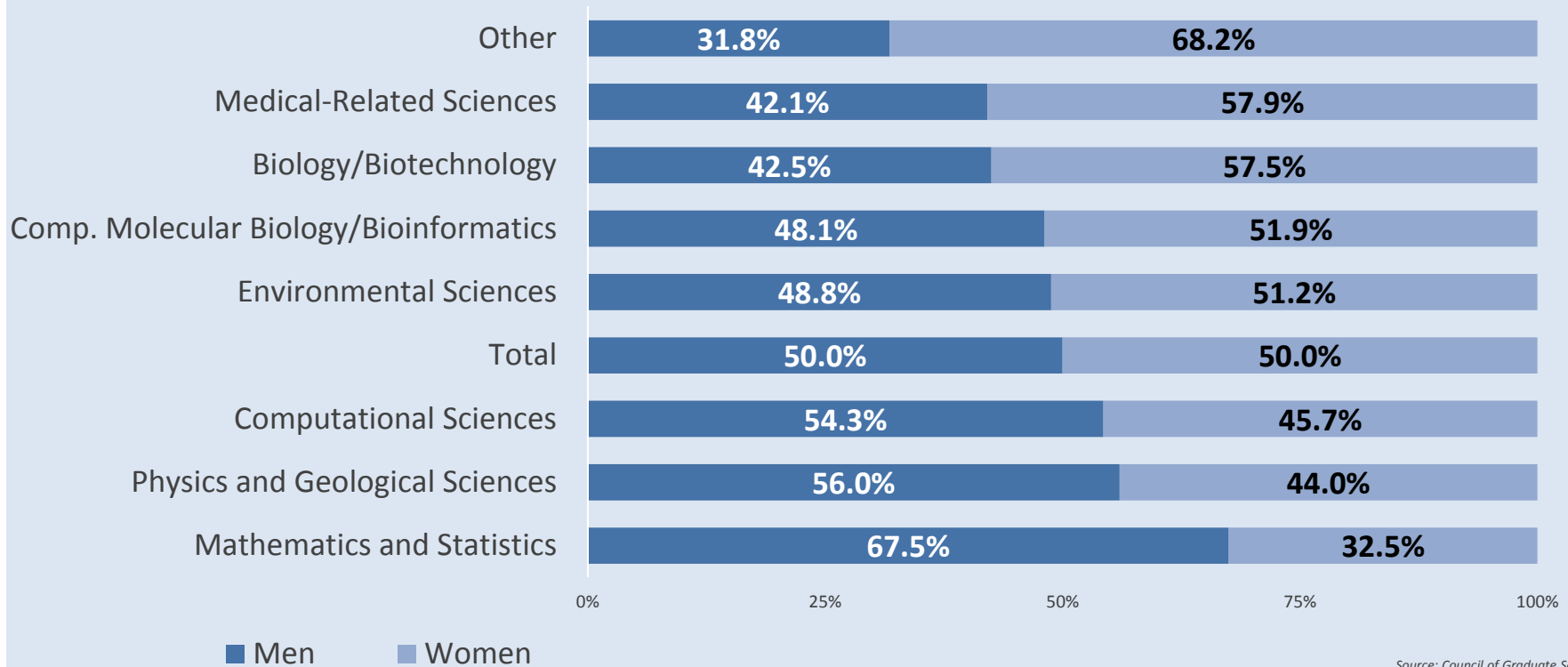
PSM Enrollment & Degrees

- 1,102 degrees awarded (2009/10)
 - 50% men, 50% women
 - Among U.S.-based programs
 - 24% international students
 - 70% Asian/Pacific Islander or White
 - 22% Underrepresented minorities
 - 7% Two or more races or unknown



PSM Enrollment & Degrees

PSM Degrees Awarded by Field of Study and Gender, 2009/10



Source: Council of Graduate Schools, 2011
 Represents U.S. and non-U.S.-based programs
 Other includes chemistry, forensic sciences, nanoscience, and national defense



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PSM Enrollment & Degrees

■ Next Steps

- Launch 2011 survey (October 18)
- Close data collection (November 15)
- Release final report (December 15)
 - Differences between 2010 and 2011 will be noted



PSM Enrollment & Degrees

■ Highlights:

- 4,753 total enrollment (fall 2010)
- 1,102 degrees awarded (2009/10)
- Gender distribution generally even
- Race/ethnicity generally consistent
- Many large biology/biotechnology programs
- Many small environmental science programs
- A few large computer science programs



PSM Student Outcomes

- Funded by Alfred P. Sloan Foundation
 - FY 2011 and 2012
- Purpose
 - Capture initial hiring outcomes
 - Follow graduates for up to five years
 - Ascertain career placements and perceived satisfaction with the PSM degree
- AY 2010/11 and 2011/12



PSM Student Outcomes Survey

■ Conceptual Limitations

- Overwhelming array of inputs, outputs, outcomes
- Conceptual leap between education and employment
- We know little about knowledge transfer
- Outcomes take years to observe



PSM Student Outcomes Survey

- Operational Limitations
 - CGS cannot access to contact information
 - Incomplete contact information
 - Lack of relationship with the graduates
 - PSM is still new, lacks a “brand”
 - One institution with some very large programs



PSM Student Outcomes Survey

- Conceptual and Analytical Map
 - Need to keep the survey short and simple
 - Run as many respondents through the same questions as possible
 - Able to parse workers, students, and others
 - Capable of facilitating some comparisons



PSM Student Outcomes Survey

- Distribution by field of study
 - 46% enrolled in biology/biotechnology
 - 18% enrolled in environmental sciences
 - 12% computational sciences
 - 24% in eight other fields



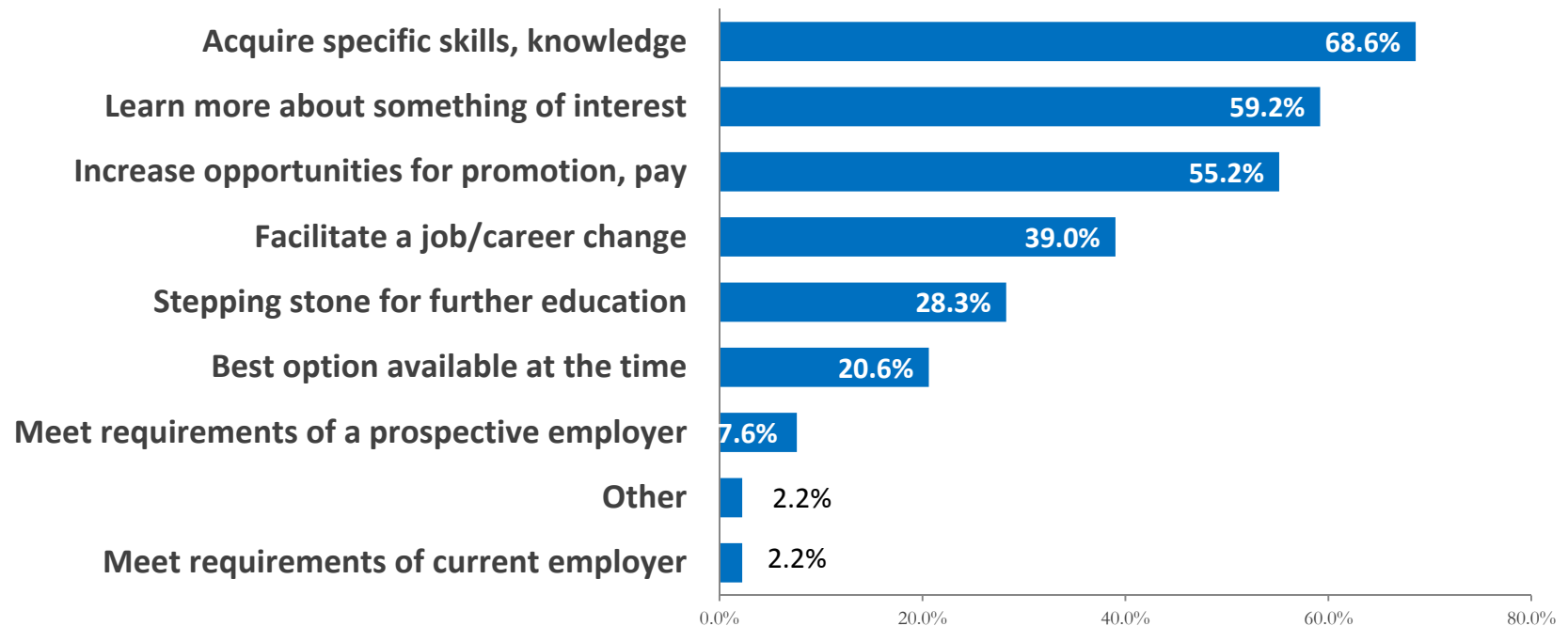
PSM Student Outcomes Survey

- Young (presumably) respondent pool
 - 10% earned undergraduate degree in 2010
 - 60% earned undergraduate degree between 2007-2010
 - 79% earned undergraduate degree between 2003-2010



PSM Student Outcomes Survey

Reasons for Enrolling in PSM Programs by Status, 2011



Source: Council of Graduate Schools, 2011



PSM Student Outcomes Survey

Topics Covered by PSM Programs of Study, 2011



Source: Council of Graduate Schools, 2011



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PSM Student Outcomes Survey

- Percent “very” or “generally” satisfied with:

Quality of scientific and/or mathematical training 82%

Distinctive nature/reputation of program 82%

Quality of non-scientific professional training 79%

Internships and “real world” experiences 78%

Post-graduation employment prospects 74%

Networking opportunities 71%



PSM Student Outcomes Survey

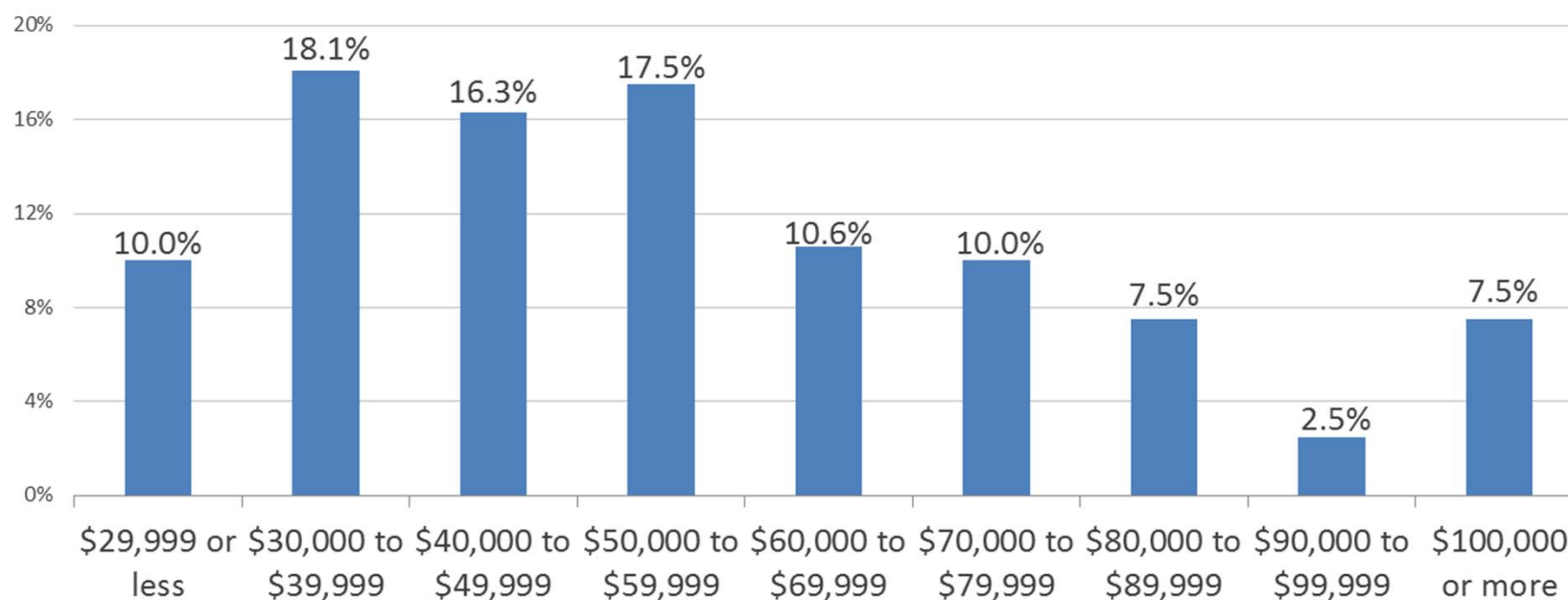
■ Current situation

- 82% are working. Of those:
 - 88% are working in a job that is “closely” or “somewhat” related to their field of study
 - 36% working in the same job
 - 45% working in a different job
 - 19% not working prior to starting
- 5% students
- 12% not working and seeking work
- 1% not working and not seeking work



PSM Student Outcomes Survey

Salary Distribution Among PSM Graduates Working Full-Time, 2011



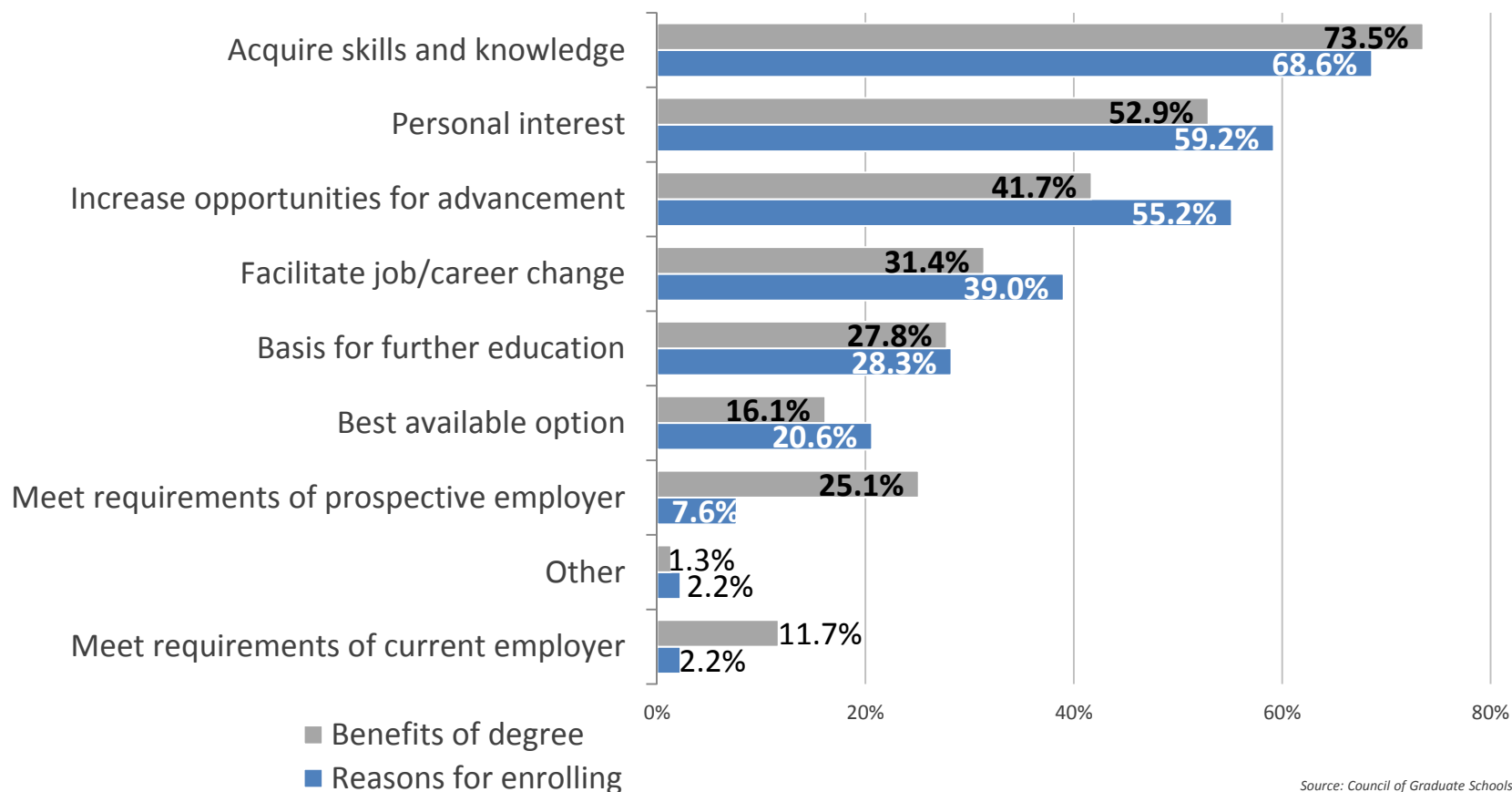
Source: Council of Graduate Schools, 2011
Represents only respondents who were working during the week of June 20, 2011



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PSM Student Outcomes Survey

Reasons for Enrolling and Benefits of Degree Comparison, 2011

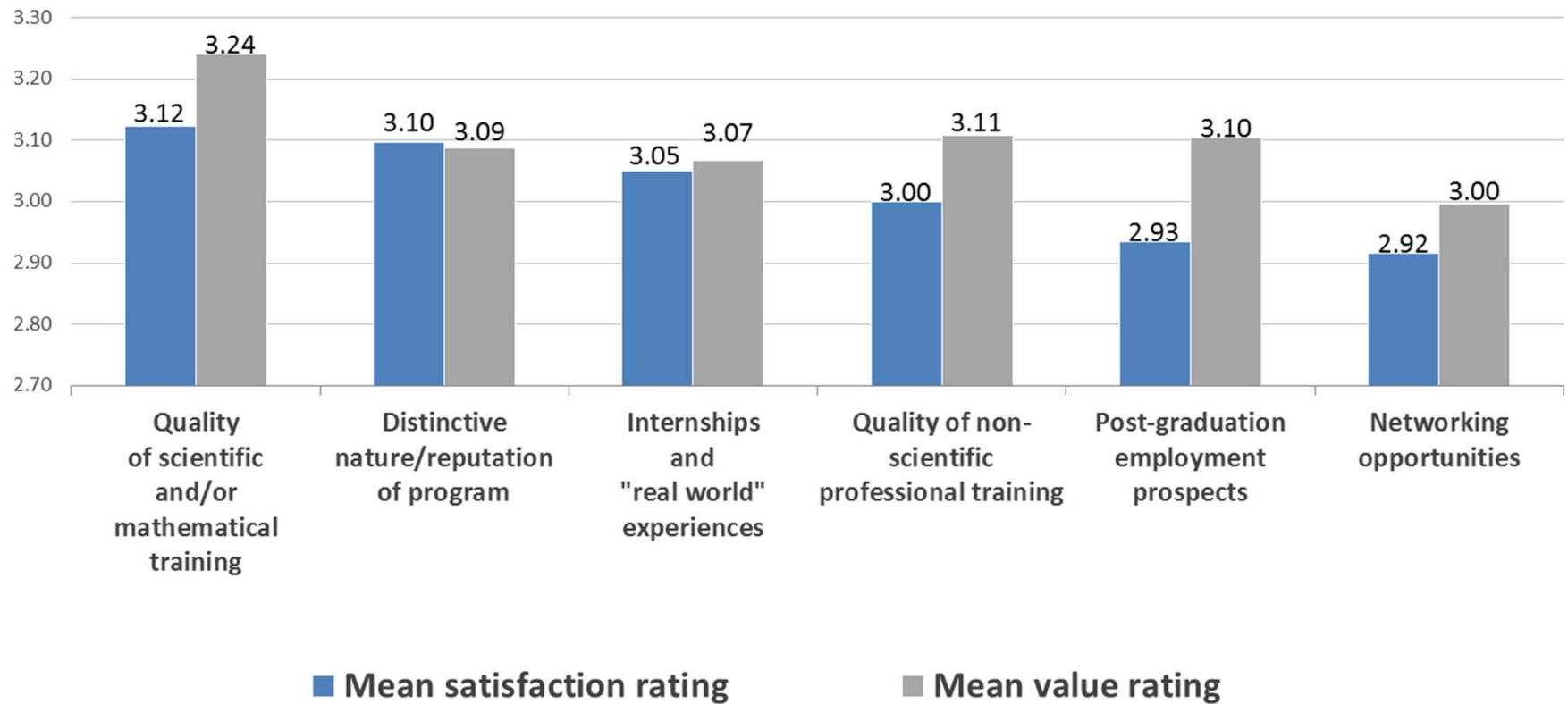


Source: Council of Graduate Schools, 2011



PSM Student Outcomes Survey

Mean Satisfaction and Value Ratings for PSM Program Attributes, 2011



PSM Student Outcomes Survey

■ Highlights:

- 82% of PSM graduates are working
- Of those, 88% are working in their preferred field
- Satisfaction ratings are high, value ratings are higher
- Most frequently cited reason for enrolling in PSM:
 - Impart scientific/technical skills/training
 - Fulfill personal interest
 - Increase opportunity for advancement/pay



PSM Student Outcomes Survey

- Next steps

- Survey 2011/12 graduates (June 2012)
- Survey 2010/11 graduates (June 2012)



Questions / Comments?

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