Project on Scholarly Integrity

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And on behalf of Penn State and U Wisconsin-Madison
CGS Summer Workshop 2010

Background

- MSU, PSU, UW-Madison collaborative

- Survey on the Climate for Responsible Research Practices—Carol Thrush and Brian Martinson

- Faculty, grad students, postdocs, staff—9,910 invitations at MSU with 45% participation

- Similar numbers at PSU and UW-Madison

Survey-C. Thrush and B. Martinson

- Content validity for survey questions developed by Carol Thrush:
  - Thrush, et al. 2007. *Content Validation of the Organizational Climate for Research Integrity (OCRI) Survey*. J. Empirical Research on Human Research Ethics, Dec 2007, 2 (4): 35-53.
  - 27 experts rated 64 potential survey items
  - Result: set of 43 items had high "content validity index" (CVI=.90)

Eight survey composite measures

Departmental/Program

Expectations – 2 questions

How fair are your department/program's expectations with respect to publishing?

Integrity Norms – 11 questions

How committed are people in your department/program to maintaining data integrity and data confidentiality?

Integrity Socialization – 11 questions

How able are people in your department/program to define research misconduct?

Integrity Inhibitors – 11 questions

How true is it that pressure to produce "positive findings" has a negative effect on the judgment of researchers in your department/program?

Advisor-Advisee Relations– 3 questions

How fairly do advisors/supervisors treat advisees/supervisees?

Composite measures...continued

Institutional

Institutional Regulatory Quality – 4 questions

How useful are your university's policies/guidelines for the responsible

conduct of research?

Institutional RCR Resources – 5 questions

How effective are the available educational opportunities for learning about responsible research practices (e.g., lectures, seminars, web-based courses, etc) at your university?

Combined Departmental/Program and Institutional

Global Climate of Integrity – 4 questions

How committed are people in your department/program to maintaining high standards of integrity in their research/scholarship?

MSU College Summary

College: **EXAMPLE**

Number of Respondents: **429**
(192 Research Masters & Doctoral Students; 90 Postdoctoral

Composite Measures	College Results				MSU Average
	Average Composite Measures	% >= 4.5 (Scale of 1-5)	Average Dept./Pgm. Percentile Rank	Average % NBFJ Response	
Program Expectations	3.93	22.4%	68.1	15.5%	3.78
Program Integrity Norms	4.11	25.6%	52.6	18.0%	4.09
Program Integrity Socialization	3.59	12.9%	52.5	16.5%	3.62
Program Integrity Inhibitors	3.88	23.4%	58.0	17.8%	3.78
Program Advisor-Advisee Relations	3.92	18.8%	54.3	7.3%	3.88
Global Climate of Integrity	4.27	45.3%	49.3	3.3%	4.25
Institutional Regulatory Quality	3.73	18.8%	52.1	28.7%	3.71
Institutional Integrity Resources	3.58	11.8%	45.7	10.0%	3.56

Average Departmental / Program Percentile Rank
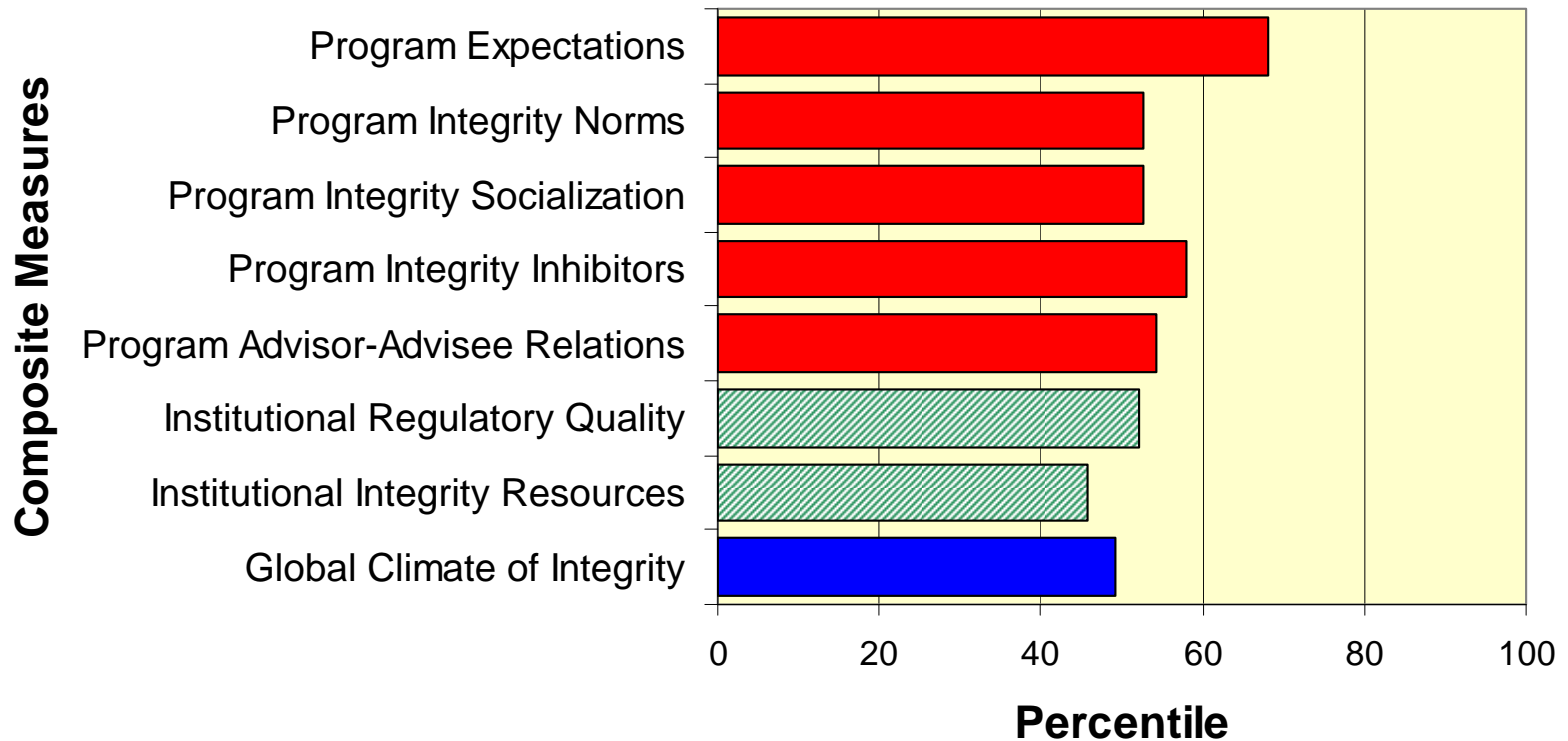
MSU "Dashboard" example

Composite Measures	N [3]	% NBFJ (Resp. 6)	ALL RESPONSES [1,2]			
			Mean	Standard Deviation	% Factor Measures >= 4.5	75th Percentile
FACTOR 1 -- Departmental Integrity (Subscale B -- Integrity Socialization)	**2,821**		**3.617**	**0.808**	**14.6%**	**4.18**
Graduate Student [4]	1,510		3.753	0.794	19.4%	4.30
Postdoctoral Trainee / Research Associate	165		3.454	0.857	12.1%	4.00
Faculty [5]	1,146		3.462	0.788	8.6%	4.00
How able are people in your department/program to define research misconduct?	3,180	30.4%	4.364	1.340		
Graduate Student	1,712	31.3%	4.461	1.296		
Postdoctoral Trainee / Research Associate	193	34.2%	4.373	1.427		
Faculty	1,275	28.6%	4.234	1.375		

1 N = Number of Cases; NBFJ = "No Basis for Judging"

2 Reponses: 1 = "Not at all"; 2 = "Somewhat"; 3 = "Moderately"; 4 = "Very"; 5 = "Completely"; 6 = "No basis for judging"

3 Factor Scale N = Number of Cases where half or more of individual Measures comprising Factor 1B were answered "1" through "5"; N of Individual Measures = Number of Cases with Responses of "1" through "6" (N of Measure means = N - [N x % NBFJ])

4 Graduate Student in a Research Masters Program & Graduate Student in a Doctoral Program combined

5 Fixed-term Faculty -- Not Tenure-track; Tenure-track Faculty -- Not Tenured; Tenure-Tack Faculty -- Tenured; & Clinical Faculty combined

MSU Department/Program Summary

Department / Program: **NAME**

College: **NAME**

Number of Respondents: **35 TOTAL**

20 Research Masters & Doctoral Students; 0 Postdoctoral & Research Associates; 15 Faculty

Composite Measures	Department / Program Results				College Results			
	Average Composite Measures	% >= 4.5 (Scale of 1-5)	Dept./Pgm. Percentile Rank	Average % NBFJ Response	Average Composite Measures	% >= 4.5 (Scale of 1-5)	Average Dept./Pgm. Percentile Rank	MSU Average Composite Measures
Program Expectations	3.31	6.5%	3.1	13.6%	3.77	23.9%	45.8	3.78
Program Integrity Norms	3.91	10.7%	17.9	17.9%	4.07	25.9%	46.1	4.09
Program Integrity Socialization	3.51	10.7%	31.5	19.4%	3.61	12.6%	47.1	3.62
Program Integrity Inhibitors	3.43	10.3%	16.1	22.4%	3.75	18.3%	39.3	3.78
Program Advisor-Advisee Relations	3.64	13.3%	7.6	10.1%	3.88	17.8%	47.2	3.88
Global Climate of Integrity	4.05	40.0%	17.3	8.8%	4.29	50.1%	47.7	4.25
Institutional Regulatory Quality	3.96	30.3%	82.8	6.6%	3.79	19.9%	60.1	3.71
Institutional Integrity Resources	3.67	12.1%	62.9	6.5%	3.60	12.3%	55.7	3.56

MICHIGAN STATE
U N I V E R S I T Y

Research & Scholarly Integrity

MSU Department example
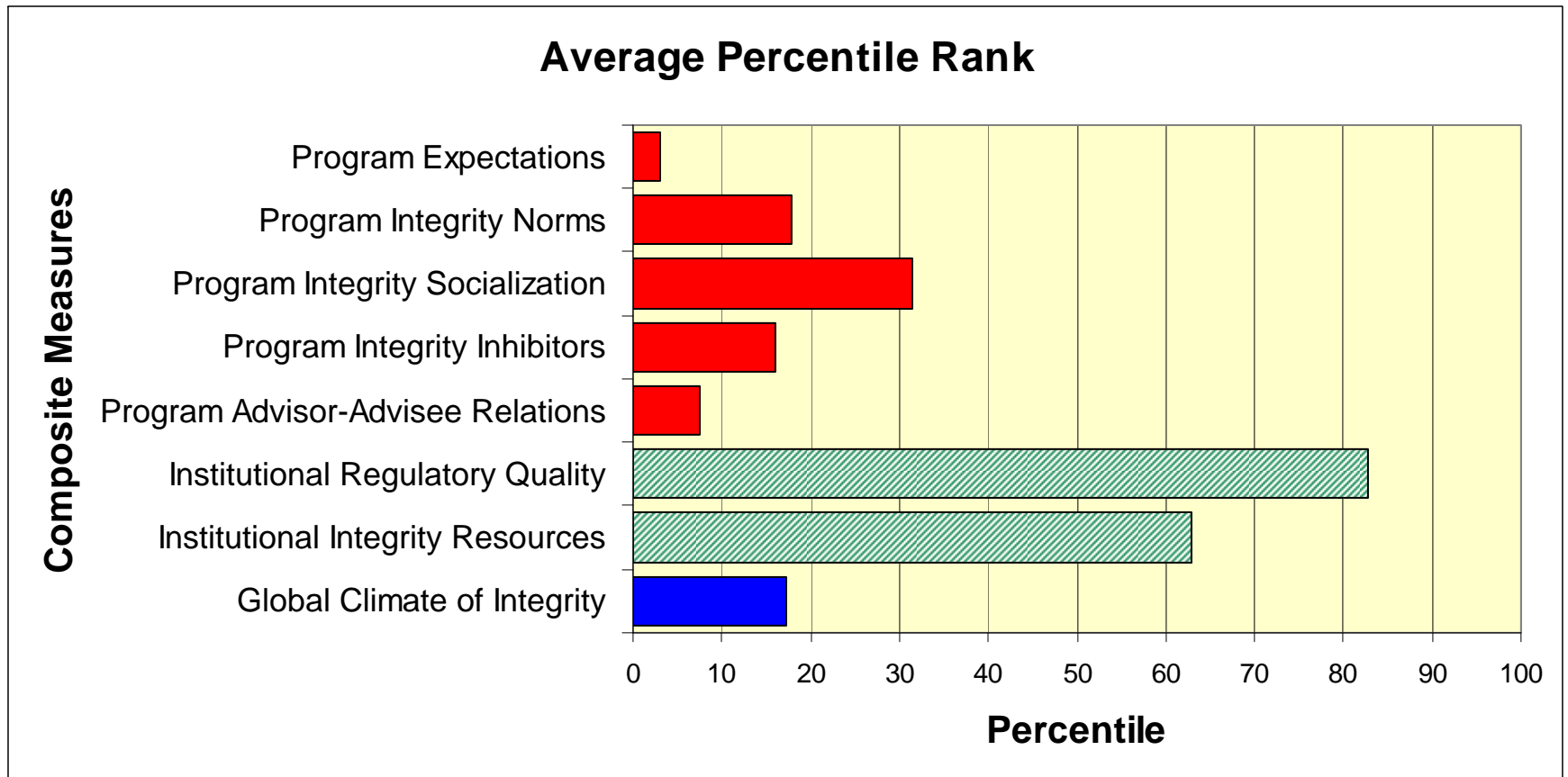
MSU—integrated approach

- Research Integrity Council (for VPR and Provost)—faculty, grad students, postdocs
  - Completed a 12-item MSU "needs assessment" using CGS inventory. Recommendations e.g., communication—at all levels, focus on postdocs, link to NSF requirement

  No obvious correlation of inventory results with climate survey results

- Link to Grad Handbooks project and updates

- Ongoing learning assessment with personal response system

- Connected to U Grad Council and Council of Grad Students

- Link to NSF requirement

- Developing Resources Website: http://grad.msu.edu/researchintegrity/

Survey Results Dissemination at UW-Madison (J. Wells, E. Callahan)

- Developed summary results for 119 graduate programs at UW-Madison with 4 or more respondents (N = 3,785)

  - Comparative results for 8 composite measures (mean, proportion scoring above cut-point, campus percentiles)

  - Programs own and campus-wide item-by-item results

- Presented overall results to Graduate School deans and associate deans for research of campus schools/colleges prior to dissemination

- Sent results to 119 graduate programs (directed to departmental chair and graduate program chair)

- Provided document to assist in data interpretation, posted Website with survey FAQs and RCR resources

Survey on Responsible Research Practices

- Survey validation work ongoing
  - Co-PI's C. Thrush (UAMS) & B. Martinson (HealthPartners)
  - NIH-NCRR/ORI funded "R21"
  - fielded in 40 institutions nationally
- Goal: establish data repository with metrics for institution, dept., field comparisons
- Psychometric analysis in process
  - placement in Creative Commons expected by late 2010
- Permission for CGS Deans to view pre-validated instrument available now

Survey support materials

- Survey Codebook - Survey of Responsible Research Practices
  - Technical description of the survey elements and the resulting composite measures developed from the multi-university data.
- Users Manual - Survey of Responsible Research Practices, includes:
    - Background and Survey Development
    - Terms of Permission to Use the Survey
    - Survey Description
    - Survey Administration Considerations
    - Scale Creation Notes & Considerations
    - SAS Code for Computing the Eight Climate Composite Measures
    - List of Demographic Questions & Climate Questions
    - List of Composite Measures Descriptions & Items Represented
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Survey Implementation Planning

- Defining and identifying sample

- Obtaining lists of mailing addresses (e.g., HR, directories)

- Sufficient information on departmental units to be able to denominate internal units for reporting (#'s invited, #'s responded) {know your own context}

- Notification and good will communications!

  – leadership emails, newsletters, 3-6 weeks prior

- Mapping out survey process itself

  – Mode of delivery and return (web or paper) (IT assistance)
  – Timing of implementation
  – Timing and number of reminders

How to use survey effectively

- Presentation to grad associate deans—sharing college data (incl. quartile distribution)

- Data dashboard for each department

- Guidelines on how to use the data:
  - Identify 1 or 2 composite measures or even single survey items as the focus
  - Present the "dashboard" in context with other units
  - Link to the NSF requirement and ongoing improvement efforts
  - Offer support, resources, and guidance