



Midwestern Association of
Graduate Schools

An Affiliate of the Council of Graduate Schools

***Principles of Scholarly Integrity:
Shifting from Compliance Mode to an
On-going Professional Dialogue***

Minnetta Gardinier, PhD (Associate Dean)
University of Iowa - Graduate College
m-gardinier@uiowa.edu

What was the starting point?

650:270 Responsible Conduct of Research

- **Didactic style presentations to a large audience**
 - **Taken by students sometime in their first 2 yrs of graduate study**
 - **7 sessions in one semester**
 - **Introductions – Reasons why this course exists**
 - **Handling of misconduct / Conflict of interest**
 - **Issues in genetics**
 - **Proper gathering, interpretation & retention of data / responsible authorship**
 - **Issues of humans in research / Mock IRB**
 - **Training & mentorship – What you should expect from a mentor & your obligations to a mentor**
 - **Issues of animals in research**
-

What provided the impetus for change?

- **Student feedback**
- **T32 site visit reviews**
- ***Teaching Survival Skills & Ethics: Trainer-of-Trainers Conference (University of Pittsburgh)***
- **Information provided by the *Council of Graduate Schools* RCR initiatives funded by ORI and NSF**

The Project for Scholarly Integrity in Graduate Education (CGS)

- **The *Council of Graduate Schools* (CGS) has been pursuing this initiative to integrate scholarly integrity into graduate education.**
- **Scholarly integrity is a core value of scholarship and is the foundation of trust between society and the university.**
- **Lapses in scholarly integrity erode the public trust in our scholarship mission with consequences for all stakeholders – the individual scholar, the university, and society.**
- **We must evolve from a narrow compliance/regulatory framework to a broader values-based dialogue that will emphasize personal and professional integrity throughout one's career.**

What was the process to implement change?

- **RCR / Scholarly Integrity task force formed**
 - Intercollegiate representation (Dentistry, Education, Engineering, Liberal Arts & Sciences, Medicine, Nursing, Pharmacy, Public Health)
 - Graduate College
 - Office of the Vice President for Research
 - **Our mission was to transition this training from compliance mode to a scholarly integrity model.**
 - **Our goal is to implement change via conversation and continuing education.**
-

What were the campus perceptions – faculty vs. students?

UI Scholarly Integrity Survey (Spring 2009)	Faculty		Students	
<i>Respondents: faculty (338), students (573)</i>	Strongly agree	Agree	Strongly agree	Agree
The responsible and ethical conduct of research is relevant to my area of scholarship and research.	75%	16%	67%	25%
Graduate students can benefit from continuing discussions about Scholarly integrity.	58%	32%	35%	49%
Scholarly Integrity programs should be a required component of the curriculum in my graduate program.	38%	28%	24%	34%

Perceptions on forums used to deliver training in scholarly integrity

- **Forums**: Informal discussion, course lectures, seminars/workshops, articles/case studies, web based tutorials, no training
- **Areas**: **Authorship**, collaborative research, conflict of interest, data management & ownership, ethics, **peer review**, **mentor/mentee relationships**, publications, human/animal subjects, research misconduct

	Authorship		Peer review		Mentor/mentee relationships	
	Faculty	Students	Faculty	Students	Faculty	Students
Informal discussion	77%	50%	75%	49%	78%	47%
No training	6%	24%	8%	25%	9%	35%

Why reinvent the wheel if we can find a good model already in use?

- **Review of programs at CGS/ORI/NSF institutions**
 - **CIC/Big 10: Indiana University, Michigan State University, University of Wisconsin – Madison**
 - **Boston College, Columbia University, Duke University, Florida State University, UC – Davis, UC – San Diego, University of Kansas, University of New Hampshire, University of Rhode Island**

Scholarly Integrity & Responsibility in the Community of Scholars

- **9 core instructional areas from NIH *Office of Research Integrity***
 - Data Acquisition, Management, Sharing and Ownership
 - Conflict of Interest and Commitment
 - Human Subjects
 - Animal Welfare
 - Research Misconduct
 - Publication Practices and Responsible Authorship
 - Mentor / Trainee Responsibilities
 - Peer Review
 - Collaborative Science
 - **Plus 3**
 - Financial Management
 - Responsibility to Society
 - Research Safety
-

Changing the Tone of the Conversation: From Compliance to Personal Responsibility

- Most importantly, scholarly integrity is a personal and professional responsibility for everybody in the community of scholars.
- New, incoming scholars must be informed and educated about their responsibilities and our expectations for them as they join this community.
- Virtually all of the tenets outlined by NIH/ORI are applicable to all scholars, not just “bench scientists”
- **Goal:** To initiate and sustain an ongoing dialogue among ALL graduate students across ALL graduate programs
- **Model:** Orientation for all new graduate students plus “continuing education” experiences beyond the introduction

The Duke Model

- *“At Duke, RCR training embodies the full range of ethical responsibilities of those engaged in research and teaching. It encompasses not only the obligation to conduct research and teach with integrity, but also to ensure that the rights and interests of original sources, human subjects and/or animal subjects are protected.”*
- *“Moreover, RCR at Duke is framed as a positive obligation rather than as the avoidance of ‘misconduct’.”*
- Since 2003, ALL PhD students at Duke are required to complete RCR training
 - Natural Sciences & Engineering (6-hr orientation + 6 hrs continuing education)
 - Humanities & Social Sciences (6-hr orientation + 6 hrs continuing education)
 - Basic Medical Sciences (12-hr orientation + 6 hrs continuing education)
- Continuing education is provided thru regular workshops and seminars offered by the Graduate School and/or academic programs (approved by the Graduate School) – to be completed by the end of year 3

The Iowa Model: a work in progress

- ***“Introduction to the Principles of Scholarly Integrity”*** – orientation
 - Presented to new graduate students in the week before the start of classes in the Fall and Spring semesters
 - 4-hr orientation / introduction to the core concepts of scholarly integrity
- ***“Topics in Scholarly Integrity”*** – continuing education workshops
 - Doctoral students complete eight 90-min workshops over 4 semesters
 - Masters students complete four 90-min workshops over 2 semesters
- Individual graduate programs may provide additional training
 - Graduate programs may offer discipline-specific seminars, workshops, courses in fulfillment of this requirement
 - Partnerships and shared efforts would be encouraged.

650:270/604

Principles of Scholarly Integrity

■ **Overview**

- What is a scholar? What is the Community of Scholars?
- Introduction to the core tenets of Scholarly Integrity with definitions

■ **Student / Mentor Responsibilities for Pursuit of Scholarly Work**

- Ownership; Authorship & Peer Review; Plagiarism, Falsification, & Fabrication

■ **Student / Mentor Relationship – Promoting an Intellectual Dialogue**

- Communication & The Transition from Undergraduate to Graduate Learning; Collaboration; Grievance Management

■ **Considerations in the Use of Animals and Human Subjects**

■ **Student Responsibilities to the Institution, the Community of Scholars, and Society**

- Intellectual property; Conflict of interest; Fiscal responsibilities

The Iowa Model: year 1 rollout

- **Principles of Scholarly Integrity – 650:270 (for graduate students) and 650:604 (for postdocs & NIH K award faculty)**
 - Open to programs previously requiring this course – 29 programs represented (primarily in the biomedical, clinical and physical sciences)
 - Serving 144 doctoral + 12 masters students + 10 postdocs + 5 K award faculty
- **Faculty facilitators (25) – the backbone of the course!**
 - Each participating program must provide at least one faculty member to serve as a facilitator to moderate case study discussions
 - Provided with guided talking points for the case studies
 - Promote discussion of case studies and score attendance/participation for a multi-disciplinary small group of graduate students and postdocs

650:270/604 – *The Logistics*

- **Introductory workshop** – “convocation” and setting the tone
- **Topical workshops** – creating flexible, manageable sections
 - Section 1 (11 groups) – meets Sep, Nov, Jan, and Mar
 - Section 2 (11 groups) – meets Oct, Nov, Feb, and Apr
 - Each student is assigned to a section and a small group with a faculty facilitator leader
 - Each workshop is given twice (Section 1 and Section 2)
- Masters degree students complete Intro + 4 workshops in 1 year
- Doctoral degree students complete Intro + 8 workshops in 2 years
- Postdoctoral scholars complete 4 workshops in 1 year
- Faculty facilitators commit to the Intro + 4 workshops in 1 year

650:270/604 – The Logistics (cont.)

- **“Grading”**
 - Attendance (0, 5, 10 pts)
 - Participation (0, 5, 10 pts)
- **Excused absences (e.g., conferences, illnesses, family emergencies)**
- **Unexcused absences (e.g., forgetfulness, time management issues)**

Vertical & Horizontal Integration of Ideas

- **Small groups include faculty, postdocs, doctoral and masters degree graduate students from different areas of study.**
 - Exposure to disciplinary perspectives
 - Appreciation for the complexity in making ethical decisions
 - Decision-making skills mature as their graduate training advances
- **Because doctoral students will participate over a two-year period, the case study “library” expands to ensure that they are exposed to different experiences.**
 - While similar topics may be discussed, students will benefit from revisiting areas as they mature during their first two years of study

Partnerships and Collaborations to Effect a Campus-Wide Impact

- **In order to effect a university-wide initiative to promote a values-based approach to Scholarly Integrity, we will need the full support of the President, the Provost, and the Vice President for Research.**
- **Identification of existing collegiate and departmental programming that can become an integral part of the orientation and/or the continuing education programming**
- **Formation of interdisciplinary partnerships to promote better networking and to consolidate resources**

What's next?

- **Expand to include more programs – e.g., physical and social sciences**
 - We have an immediate need to address the NSF and NIH mandates.
- **Ultimately, our target is to ensure that ALL graduate students participate.**
- **Identification of other collegiate/departmental programming that can become an integral part of or supplement for 650:270/604**
- **Formation of interdisciplinary partnerships to promote better networking and to consolidate resources**

Questions?

Your models?

Your suggestions?