“History cannot give us a program for the future, but it can give us a fuller understanding of ourselves, and of our common humanity, so that we can better face the future.”

-Robert Penn Warren

MSU prides itself, and its graduates, on being a community of scholars that “shares a sense of purpose and a special bond” in working together to “create opportunity and to help discover solutions for the world’s most challenging problems.” One key element for describing “who we are and what we strive to be” is being “Principled.” While this could be considered hyperbole, it is not unlike the rhetoric of other established and recognized research extensive universities and does provide a sense of “direction and purpose” for MSU. Still, we are challenged individually and collectively to define what being “Principled” means, to foster conversations about why being “Principled” is important, to develop disciplinary cultures that reinforce being “Principled” as a valued trait, and to reward noteworthy research/scholarly accomplishments by individuals acting in ways that reflect being “Principled.”

Few would question that applying responsible research practices with integrity and in ways that reflect accepted professional standards and ethical practices should be considered as being “Principled.” Therefore, we must ask ourselves why so much time, effort, and money are committed to educational and training efforts in areas and for reasons that are seemingly self evident. Is there really a systematic knowledge gap concerning how to conduct research/scholarship responsibly and with integrity? Or, is this a symptom of trying to correct an ill-defined problem?
“Management is doing things right; leadership is doing the right things.”
-Peter F. Drucker

Educating its students and postdoctoral trainees about how to responsibly manage their research/scholarly activities and fostering development of individual leadership skills are important and realistic MSU goals. However, exhibiting “leadership” and “doing the right things” by students and postdoctoral trainees come from individual initiative based, in part, on knowledge and understanding. Unfortunately, neither can be assured by knowledge and understanding.

Here, I focus on two challenges in developing research ethics education and training programs. The first relates to a lack of clarity and uniformity of understanding and agreement about desired outcomes or objectives for required research ethics educational programs. We understand that there are things we must do as a result of formal requirements, but there are also things we should do to meet the unique trusts that the public and students/early-career scholars place in us. The challenge arises, because conclusions about effectiveness of institutional research ethics education and training efforts might differ strongly depending on the preferred measure(s) of success.

For example, no decrease in allegations or inquiries about research misconduct might lead to questions about compliance even if educational programs are judged to be relevant and useful. Similarly, detailed adherence and documentation of rigidly applied pedagogical plans might not have any measurable impact on “being principled” or “doing the right thing.”

The second challenge relates to obvious but subjective differences in unit cultures of “buying in” to the importance and need for imposing formal requirements for research ethics education and training. Unit cultures have long histories and different reasons for their origins. They seem to relate more to the vagaries of the units themselves than the academic disciplines to which they are affiliated. However, in all cases faculty are good to a fault in picking apart inconsistencies, inequities, incomplete justifications, etc. Therefore, explaining or justifying specific mandates, even ones that are reasoned or simply required, will sometimes not be sufficient to assure “buy in.”

As background to a fuller discussion of these issues, a historical framework is needed. One of many efforts that have guided MSU began in 1989 with the Council on the Review of Research and Graduate Education (CORRAGE) systematically examining research and graduate
education. Their 1991 report was the first full-scale review of research and graduate education since “A Report to the President of Michigan State University from the Committee on the Future of the University” was completed in 1959. The report addressed ethics in scholarship through “Intellectual Objectivity and Intellectual Property”, “Conflicts of Interest”, and “Misconduct and Fraud” but largely by highlighting the issues and recommending future study.

One of the most far-reaching recommendations was to “implement the reorganization of the Office of the Provost which establishes the position of Assistant Provost for Graduate Education and Dean of the Graduate School (AP&DGS), separate from the present position of the Vice President for Research and Graduate Studies (VPRGS), and with reporting lines to the VPRGS and the Provost.” This administrative structure was implemented and exists today, explaining the current titles of “Vice President for Research and Graduate Studies” as well as that of Dean of the Graduate School/Associate Provost for Graduate Education.

Through The Graduate School (TGS), MSU formally acknowledged and highlighted the importance of Responsible and Ethical Conduct of Research with the printing and distribution of its first Research Integrity Newsletter in 1996. Consistent with the mission of TGS “to serve as an advocate for graduate education to the university and beyond,” efforts were expanded in 1998 to develop an integrated workshop series as a component of TGS’s professional development programs. As the series expanded and became recognized, a number of graduate programs, but not all, elected to require attendance as a requirement for granting of their degrees. As a result, attendance increased, but the dynamic of the interactions with students evolved from one of intellectual inquiry and pursuit of understanding to one of compliance; essentially “what do I need to know?”

While not formally stated, there was a general perspective that academic cultures and perceptions about responsible research practices generally would be (could be) changed over time through graduate education. Two new initiatives effectively challenged this assumption. The first (but chronologically last) was the use of a Personal Response System (PRS) to record anonymous responses by students in Responsible Conduct of Research (RCR) workshops to personal questions to understand better their views about research integrity and factors contributing to their education of responsible research practices.
The second was an earlier report of a University Task Force on Research Mentoring of Graduate Students that was asked to “assess where we are and consider afresh our collective commitment to mentoring of graduate students.” The Task Force presented recommendations for topics to be addressed by every graduate program in their Handbooks and developed specific “Guidelines for Graduate Student Advising and Mentoring Relationships” and “Guidelines for Integrity in Research and Creative Activities.” These short documents are readily available and are considered to be the foundation for Research Ethics Education at MSU at all levels. The unfortunate reality is that students clearly indicated through use of the personal response system described above that they routinely are not made aware of these guidelines nor are the guidelines discussed in a substantive way collectively within graduate programs or individually in their research/scholarly groups.

When student responses were combined by the number of years of graduate experience (< 2 years; 2-4 years; and > 4 years), our sense was that patterns of responses were different but not always in ways that would be expected for students with more extensive education and training experiences. Two examples presented at the 1st Biennial ORI Conference on Responsible Conduct of Research Education, Instruction, and Training in St. Louis, MO are included below.

In the first example, students with greater than 4 years of graduate education responded to “Please assess your personal understanding of the issues and implications of integrity in research” in patterns (1 = “Extremely Well”; 10 = “Not at All”; 5 = “No Basis for Judging”) that suggest they perceive their personal understanding with less clarity than do graduate students with less experience. Similarly, when asked to rate the integrity of their department/program in regards to “Compliance with institutional and sponsor requirements” nearly 45% of students with greater than 4 years of graduate education indicated they had “No Basis for Judging” while only about 30% of students with less than four years of graduate experience felt they had “No Basis for Judging.” Possibly more intriguing is the fact that students with longer graduate experience tended to rate the integrity of their department/graduate program less favorably.
Consistent patterns of responses by graduate students over several years reinforced the belief that more needed to be done to foster educational efforts within departments/graduate programs. In July 2008, a collaborative proposal was submitted to the Council of Graduate Schools (CGS) in response to their solicitation for proposals from graduate schools under their Project for Scholarly Integrity (PSI)\(^\text{10}\). Graduate Deans at Pennsylvania State University, the University of Wisconsin - Madison, and MSU collaborated on a project that led to an institution-wide survey at each institution of the climate for responsible research practices. The survey was adapted from prior and on-going work by Dr. Carol R. Thrush and Brian C. Martinson\(^\text{11,12}\), with their permission and support. Results of the PSI were presented and discussed at the CGS PSI Capstone Conference on October 30, 2010\(^\text{13}\).
Passage of the American Competes Act in August 2007 and implementation of Section 7009 by the National Science Foundation (NSF) is viewed by MSU’s leadership as a good thing because of the mandate “to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, and postdoctoral researchers participating in the proposed research project.” This Federal requirement provided the impetus needed to enable requiring all graduate students to be provided research ethics education regardless of their financial support. However, NSF’s emphasis on “ethics education” (workshop in August 2008, entitled “Ethics Education: What’s Been Learned? What Should be Done?”) and “ethics resources” (NSF’s recent award to the University of Illinois “to develop a national center for professional and research ethics in science, mathematics and engineering”) leads to questions about their intent regarding the Research Ethics Education Policy requirement. More than a decade of sustained efforts has led MSU to emphasize education on responsible research/scholarly practices and integrity as a contributor to QUALITY research rather than for compliance purposes. We include discussions of ethical decision making as a key component, but the focus is on group deliberations and decisions rather than individual moral and ethical behavior(s). Individuals can have different ethical perspectives about specific dilemmas, but the key is to follow established guidelines or community consensus in a rational manner.

Our emphasis will continue to be on individual decision-making where the “right thing” to do is based on professional, disciplinary, and regulatory standards. Certainly moral and ethical perspectives are contributing factors, but we believe that it will be easier and more effective for departments and programs across disciplines to embrace research ethics education based on professional and disciplinary standards, particularly for departments/programs that are routinely not funded by NSF. We will continue to assess institutional and departmental climates for responsible research practices and to provide oversight to insure that education is provided according to MSU’s established Institutional Plan. We are less certain about how to assess effectiveness and outcomes from the perspective of individual behavior(s).

Research ethics education is rightly an institutional responsibility, but enabling and fostering distributed educational programs while striving for institutional consistency presents challenges. Data are critical for achieving “traction” with faculty in striving for institutional quality,
but sharing of such data can be personal and threatening. The challenge is to share information that is honest, objective, prepared thoughtfully, and persuasive. Using it for disciplinary or punitive reasons to protect institutional integrity must be done carefully while still maintaining the trust that is critical. Accomplishing this will be a challenge.

NOTES

1 This paper has been shared with others for review and comment, but the views expressed are solely the responsibility of the author. Dr. Karen L. Klomparens, Assoc. Provost for Graduate Education & Graduate Dean, and Dr. J. Ian Gray, Vice President for Research & Graduate Studies, have primary institutional responsibility for oversight of MSU’s Responsible Conduct of Research education and compliance programs. Their support and leadership are gratefully acknowledged and appreciated.


4 http://www.finestquotes.com/author_quotes-author-Peter%20F.%20Drucker-page-0.htm (Accessed on November 12, 2010)

5 While not directly linked, it should not be lost that the National Science Foundation and the Public Health Service first promulgated regulations and policies concerning research misconduct and financial conflicts of interest between 1987 and 1992.


7 The technology enabled individual students to respond to questions in ways allowing their answers to be presented and viewed by all within seconds. The system used currently is manufactured by Turning technologies, LLC (Accessed at http://www.turningtechnologies.com/studentresponseystems/studentclickers/ on November 19, 2010). The author has no financial interest in the company or this product.


9 “RCR Initiatives in Graduate Education: Experiences and Lessons Learned (Michigan State University)” by Terry A. May on April 18, 2008.


12 Brian C. Martinson, Carol R. Thrush, A. Lauren Crain. Research (R21-RR025279) to Validate Survey on Responsible Research Practices. Office of Research Integrity & NIH National Center for Research Resources.


16 Specific details of MSU’s Institutional Policy for Training and Oversight in the Responsible and Ethical Conduct of Research are provided at http://grad.msu.edu/researchintegrity/ (Accessed on November 30, 2010).