Research integrity
- Training the trainers

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Why focus on training the trainers?

• Ethics education should begin with academics instead of the focus on students meeting course requirements (Stevens, Harris & Williamson 1993; Mumford et al, 2006).

• Improving the quality of mentoring has been seen as a remedy to research misconduct (Kornfeld, 2012)

• Ethics mentoring tends to have an inverse relationship with misconduct (Anderson et al. 2007)

• But a rare large-scale study on mentoring and training in RCR among US NIH-funded researchers (Anderson et al. 2007) suggests that mentoring is a powerful tool in terms of both decreasing and increasing behaviors that are problematic from an integrity point of view.
Why focus on training the trainers?

- Despite the influence that mentors and other senior academics exert on their younger colleagues and students (e.g. Kitchener, 1992; Anderson et al. 2007; Keyser et al., 2008), the training of these individuals in integrity and RCR has received little attention in the literature.

- Academic staff who have received ethics training feel more comfortable teaching ethics, spend more time teaching it, and are more likely than non-trained faculty to incorporate ethics content into their teaching (Beauvais et al. 2007).
Are academics competent to teach integrity?

- There is consensus neither about key contents in ethics and integrity guidance, nor about content, level, timing and frequency of ethics training and the qualifications of trainers (Godecharle, Nemery & Dierickx 2013).
- A quarter of US federally funded scientists felt insufficiently prepared to deal with the ethics that their work presents them (N= approx. 3300)(Anderson et al., 2007).
- Very few field-specific studies on the extent to which faculty are trained or feel comfortable discussing ethics in their teaching (Beauvais et al., 2007)
- Many faculty members lack confidence in their skills and competencies to teach ethics contents (Keller, 2011).
- Academics believe that academic staff do have the knowledge and competence to teach academic integrity (Löfström et al., 2014).
- … but need more training in how to teach about research ethics and integrity (Hyytinen & Löfström, manuscript)
- The institutional teaching culture provides an indication of what kind of instructional development is encouraged. If faculty believe that ethics/integrity are an institutional priority they are more likely to develop competencies for effectively incorporating ethics into their teaching (Beauvais et al., 2007).
Developments in the field and trends

- Training of trainers is an emerging trend in itself
  - Training is often multi-disciplinary
- Focus on junior scholars
  - Training mostly targeted for post docs, although initiatives are available for more experienced faculty as well
  - Reluctance of academics to participate
- Training offered by various stakeholders, mostly university departments, institutional ethics committees, and scientific associations
- Training of trainers is varied
  - Alongside targeted training it is immersed in a variety of topics and training schemes
Developments in the field: Where does the training of trainers fit in?

- Ethics training
- Training in policies and guidelines
- Teaching academic writing
- Pedagogical staff development
- Supervision and mentoring training
Common contents for training of trainers

• General training in good research practices (planning, conducting and reporting research, etc.)
• Training on the responsible use of human participants in research
• Training on the responsible use of animal subjects in research
• Training on conflict of interest
• Training on managing research data and records
• Training on other specialist research integrity areas
Goals for training of trainers

• University of North Carolina at Chapel Hill “Train the Trainer” course for postdoctoral scholars in ethics and research conduct.
• “The primary objective for the UNC Research Ethics “Train-the-Trainer Short Course” is to address RCR topics such as Publication Practices and Responsible Authorship, Mentor/Trainee Responsibilities, Research Misconduct, and Communication and Difficult Conversations.
• The program’s goals are to:
  • Provide a basic training in research ethics which will focus on ethical decision making and encourage postdoctoral scholars to think about the impact of their research and decisions on society.
  • Introduce interdisciplinary views into the ethics training curriculum by including Parr Center Fellows and the Center for Genomics and Society faculty from philosophy, sociology, law, business and other disciplines outside of biomedical research disciplines.
  • Create a cultural shift within the biomedical science community that promotes the importance of ethical issues and fosters open discussions among postdoctoral scholars as well as faculty, students and staff.
  • Provide advanced training on research ethics and prepare postdoctoral scholars to teach a mandatory research ethics course for incoming biological and biomedical graduate students.”
Case: Victoria University

- Open training by VU Ethics committee
  - a) General training on history of research ethics and institutional procedures (once each semester)
  - b) Specific topics, e.g. privacy, managing risks, clinical trials, illegal activities (once a month)
- For supervisors and students – encouraged to come together
- Additionally call-in service and compulsory meetings with researchers with difficult ethics approval applications
Case: Involving academics in RCR workshops for graduate students (Fischer & Zigmond, 2001)

RCR workshops for graduate students at University of Pittsburgh:

- Small group discussions led by faculty members recruited from departments whose students attend the workshops.
- 1-2 weeks before the workshop, faculty members receive information package about the training, including ethics case and notes on the issues in the case + general suggestions on leading a group discussion.
- Immediately prior to the workshop, faculty members meet to discuss the case with the RCR workshop staff. This session assists faculty members in clarifying aspects of the ethics case and try out lines of reasoning. This discussion serves the purposes of
  - Preparing the faculty members for the discussion
  - Generates new insights into the case
  - Reduces their anxiety about taking the "ethicist" role
Case: Integrity training and hands-on experience

- Case: Dartmouth College **Ethics Facilitator training**:
- For graduate students, postdocs, administrators, and academic faculty
- Objectives: to gain skills in case style teaching methods and develop a framework for thinking about ethical issues that occur in research.
- 4 x 2 hour workshops on:
  - Professionalism
  - Mentoring
  - Authorship and peer review
  - Data collection
- + teaching 4 ethics workshops for small groups of 1st year students
Case: Taking responsibility for academic integrity – project at La Trobe U Australia

- RCR training as part of a pedagogical development initiative (East & Donnelly, 2012)
- Initiative on academic integrity content integrated with development of teaching practices and assessment
- Academic staff involved in creating integrity and ethics resources
  - Modules for students and staff (teaches staff about their responsibilities). Staff and student support side by side!
  - Dissemination taking place via university-wide colloquia
  - Ongoing collaborative process, but continued effort and mandated support needed.
Teaching academic writing

• How to teach writing
• Increased use of text-matching software in higher education has lead to
  • Training in the use of software and institutional plagiarism/misconduct policies
  • Materials and resources, e.g. Be a good Writer! (Kupila, Karppinen, Löfström & Helminen, 2012)
    – staff and student resources side by side
Succesfull models and approaches

- Combines ethics training with mentoring/supervision training and pedagogical staff development

- The more innovative designs involve immersing faculty in training initiatives and provide supported hands-on teaching experiences

- Focus on case-based pedagogies
Central Issues 1/2

• **Whose responsibility?** Institutions struggle to provide training for trainers; ethics committees and national integrity offices are expected to take more responsibility.

• **Emerging contents?** Trainers need more competence in the area of "grey ethics"
  - Outright misconduct is much more uncommon than questionable behavior that involves stretching standards.

• **Voluntary or mandatory?**

• **Move towards more mandatory training?** Especially regarding the common areas of
  - General training in good research practices
  - responsible use of human participants in research
  - responsible use of animal subjects in research
  - conflict of interest
  - managing research data and records
  - other specialist research integrity areas
Central Issues 2/2

- **Re-focusing approach?** Much training focuses on how to make better ethical decisions yourself, but it would be important for trainers to learn how to manage the ethics of others, i.e. how to lead on this issue (Treviño in Henderson 2007)
  - Ethics in project management training
  - How to create strong ethical research climates and understanding psychological aspects of misconduct
- **Widening scope?** Rather than training specific groups of academic, more emphasis may be paid to developing integrity at a systems level (e.g. institutional ethical climate, instilling a culture of integrity across the institution)
Thank you!
References


• Canadian Secretariat on Responsible Conduct of Research (2014). *Activities of the Secretariat on Responsible Conduct of Research 2011-2013*. Ottawa, ON.


• Lofstrom, E., Trotman, T., Furnari, M. & Shephard, K. (published online June 26, 2014). Who teaches academic integrity to students and how do they do it? Higher Education. DOI 10.1007/s10734-014-9784-3


Case: Canadian Secretariat on Responsible Conduct of Research

• **Workshops**: 11 regional events involving >900 participants from over 200 institutions.
  • Goals:
    – raising awareness of RCR and guidelines
    – Assisting researchers and ethics boards in the implementation of the "TCPS2" (policy statement)
• **Online tutorial**: for students, faculty, research ethics boards
• **Webinars**: Members of the Secretariat address key topics in the policy statement. These in-depth examinations have been recorded and posted on the website (>6200 live & recorded views)
• **Policy statement interpretation services**
Training of trainers Conference 2014 Annapolis, MD

"The conference is for individuals in research-oriented disciplines and professional societies who teach at levels ranging from undergraduates through to faculty and professionals. ... Both new and experienced instructors of research ethics will benefit from attending."

Contents:

• Research Integrity: national issues and local challenges
• Teaching responsible conduct responsibly
• Approaches to teaching RCR
• Designin, implementing ans establishing RCR training programs
• Evaluating instructional impact
• Cultural issues in teaching RCR
• Active learning and using videos to teach RCR
Graduate students as integrity tutors

• We know from prior research that peer behavior has an influence on students’ ethical behavior.
  • Although a high % of undergraduate students agree that cheating is unethical, a significant number found cheating to be socially acceptable -> Peer pressure may work against the students own moral evaluation of a situation. (e.g. Smyth & Davis, 2004; Kidwell & Kent, 2008 Iyer & Eastman, 2006)
  • Utilising older peers as integrity tutors may have the potential to improve student integrity
Case: Residential tutors as ethics/integrity trainers

Zivcakova et al., 2007 on Canadian residential tutors and off-campus leaders of a variety of fields as ethics/integrity tutors:

• The residential tutors felt somewhat prepared in terms of the content, but lacked the tools, knowledge and skills to successfully convey the message.

• They were unable to fully utilise the opportunities to encourage discussion about integrity (and to involve the students).

• The tutors felt that the information should have been conveyed by experienced professors in a formal setting.

• Tutors were uncomfortable with the dual role of tutor and faculty imposed on them.