



## **SURVEY RESULTS**



---

## EXECUTIVE SUMMARY

---

### Introduction

Stories of research misconduct in every discipline are posted almost daily on websites such as RetractionWatch,<sup>1</sup> casting a pall over the academic community. Journal publishers are not only redacting papers for reasons of fraud and misconduct, but some are tracking updates as misbehaviors are uncovered. To help reduce these incidents, federal granting agencies are requiring academic institutions to develop some type of formal training to promote ethical and responsible conduct of research (RCR). As universities attempt to identify the training needed to fulfill such requirements, librarians have an opportunity to enhance their roles and maintain their relevance to the university by developing innovative instructional design techniques to enhance both the education and training aspects of RCR issues in the gap areas uncovered at each institution.

The purpose of this survey was to assess research libraries' participation in institutional efforts to train faculty, staff, students, and other researchers in the principles of responsible conduct of research and ethical research practices. It includes questions on the institution's training activities, on training roles currently undertaken by librarians, and on librarians' willingness to expand instruction into the arena of responsible conduct of research. The survey was distributed to the 125 ARL member libraries in May 2013. These results are based on data submitted by 48 university libraries at 47 of the 125 ARL member libraries (38%) by the deadline of June 9, 2013.

### Granting Agency Impact

Federal granting agencies in the United States, such as the National Science Foundation (NSF), are required to

implement the Federal Research Misconduct Policy,<sup>2</sup> which mandates that all participants receive appropriate training as defined by the institution. In Canada, the Tri-Council framework<sup>3</sup> comprising the three primary granting agencies, Social Sciences and Humanities Research Council (SSHRC), Canadian Institutes of Health Research (CIHR), and the Natural Sciences and Engineering Research Council (NSERC), goes a step further and includes fiscal responsibilities as part of the RCR components. To meet these requirements, many universities are developing programs, tutorials, and guides to inform and ensure that their faculty, staff, and students are complying with granting agencies' requirements for responsible conduct of research. The Collaborative Institutional Training Initiative (CITI) Program<sup>4</sup> is becoming a de facto standard for institutional training; in many cases used primarily for the biomedical (treatment of human subjects) component, but also an option for other disciplines. The US Office of Research Integrity<sup>5</sup> maintains links to resources developed by the Office and by universities for RCR training. Complementary to ethics training is the use of case studies in applied ethics education, such as those available from EthicsCore,<sup>6</sup> Online Ethics Center,<sup>7</sup> and the National Post-Doc Association.<sup>8</sup> These policies and resources help define the minimum training requirements, but faculty and students may request additional clarification or assistance from their information professionals on campus.

### Institution-Level Activities

All of the survey respondents report that there are institution-wide initiatives to address academic honesty or RCR. Activities range from online tutorials to for-credit, face-to-face courses. Most of the institutions

(41, or 85%) offer workshops that cover a wide range of RCR topics. These typically are open to all interested attendees, though most university-level activities are aimed at graduate students and post-docs, or anyone participating on a grant-funded project, categories that overlap highly. These workshops tend to be coordinated by campus departments such as the office of research or the graduate school. The respondents identified units with names that include buzzwords such as academic honesty, research integrity, research assurance, research ethics, and compliance. Two-thirds of the responding institutions offer RCR certification.

Medical sciences have a greater emphasis on RCR training, since they are driven by Institutional Review Board (IRB) regulations for research on human subjects and the Institutional Animal Care and Use Committee (IACUC) for treatment of animal subjects. Researchers in these disciplines have had to develop and enforce training for these programs long before the recent requirements mandated by other granting agencies. A search of institutional websites indicates that twenty-nine of the US (74%) and two of the Canadian responding institutions (25%) use components of the CITI Program, many aimed primarily at those participating in human subject research. Not surprisingly, librarians who are hunting for discipline-specific case studies have noted that bioethics is one of the better-developed discipline specialties within research ethics.

Respondents were not asked about the availability, range, or type of college- or department-specific activities. The survey authors assumed those activities are too numerous and too localized to be counted successfully. Many respondents offered comments similar to, "Individual programs vary by school and department," illustrating a library awareness of such activities and their diversity.

### **Library-Level Activities**

Librarians are finding a niche in promoting the responsible conduct of research through a variety of supplemental guides and training, such as offering traditional face-to-face workshops for students, partnering with faculty to design plagiarism-proof assignments, developing seminars and symposia, and creating online guides.

Twenty-five respondents (53%) include information about RCR on the library website. Their comments imply that much of this information is limited to the traditional areas of library involvement: plagiarism, citation, and bibliography management software. Most respondents (36, or 77%) offer training sessions on some aspect of RCR. Course-based instruction sessions and face-to-face workshops are the most common training method (89% and 83% respectively), followed by online guides (78%). Half of the libraries offer online tutorials. The majority of respondents have been providing this training for more than three years.

As with website information, the most frequently covered topics in library sessions include citing and citation management software, and avoiding plagiarism. Ethics, data management, and responsible authorship comprise the second tier of topics covered. Other topics mentioned include intellectual property, specifically patents and copyright. Data management sessions are being held at some libraries, and are expected to increase as grant agency requirements are codified. These sessions will be opportunities to include the "why" and "responsible" aspects as well as "how to" manage and share data.

Most sessions are initiated by course instructors, or are general sessions devised by librarians. Librarians are collaborating most frequently with specific departments or colleges, the graduate school, undergraduate centers, and centers for research. The largest group of initiators of these sessions is instructors requesting course-specific training, followed by librarians, labs, and administration. Comments reveal that many sessions are requested during orientations, and one library reports that, "We are frequently contacted by graduate students because they are not receiving sufficient support ... on how to teach academic integrity, detect cheating and plagiarism, and document such breaches..." Two-thirds of the respondents prefer to tailor RCR training sessions to audience or discipline type; one-third find general-audience sessions adequate.

Comments in response to several questions include "it depends" and demonstrate flexibility through a typical assortment of offerings, such as orientation for one group, seminars for another, course-based

for some, and open sessions. The randomness is best expressed in the comment, “Given that RCR incorporates many areas, there isn’t really any single or simple answer for who it initiates sessions, what the topics are, or when they happen.”

The most frequent activities among libraries currently offering some level of RCR training include: incorporating plagiarism prevention in citation management workshops; developing guides; and pointing to university-level requirements, activities, and sources. No unusual marketing and publicity techniques were uncovered, but collaborative publicity, such as blasts from both the library and from the graduate school, seems to boost attendance.

### **Evaluation Results**

Few libraries are conducting pre- or post-tests with RCR activities, though quizzing or pre/post tests are perceived as valuable aids to priming attendees to the learning objectives. Assessment exercises are more likely to be conducted when attendees receive certification or other formal credit.

Those who use quizzes have learned that attendees appear to be less knowledgeable than expected in the areas of when and how to cite resources, how to paraphrase properly, plagiarism, data management and data sharing, ethics of authorship, copyright and fair use, and how to search effectively & efficiently.

Further workshops/topics most frequently requested by attendees are avoiding plagiarism, data management/sharing/ownership, and responsible authorship and publication practices. Graduate students who serve as teaching assistants are requesting support in teaching academic integrity.

About one third of the respondents are planning to add workshops, either on subtopics such as data management, or tailored to specific audience groups such as international students.

### **Models**

Successful models include a multi-faceted approach, in which RCR elements are offered as distinct activities, incorporated in small bits into established instruction sessions, included in or linked from guides, offered through individual appointments, and delivered through online tutorials. Subject guides can include

links to relevant university policies and websites. Libraries may provide individual consultations to faculty and students as well as general workshops. Some libraries have succeeded in obtaining time during orientations and seminars, which can be altered to discipline-specific examples and which may be marketed by the academic departments as required activities for graduate students.

### **Why Libraries Are Not Conducting RCR Training**

The responding libraries that are not conducting RCR training gave a number of reasons why not. Some do not consider RCR a library responsibility since training is handled at the university level. Others are not yet experiencing a demand for training, have insufficient staffing or expertise, or acknowledged that they are conducting plagiarism/citation training but hadn’t considered these topics as part of RCR. One hadn’t considered RCR as a route for librarians before receiving the survey.

### **Conclusion: How Can Libraries Help**

“We see our role as filling in any gaps in the institutional RCR training, which primarily occur in the area of plagiarism and proper citations/citation management systems.”

The goal of this project was twofold: to assess and communicate the depth and variety of RCR sessions provided by ARL libraries; and to enable librarians who perceive gaps in university-based training to successfully initiate RCR training sessions or to incorporate RCR aspects into existing events.

The survey responses demonstrate that librarians have been involved in plagiarism awareness education for years, providing standalone training via workshops or tutorials and incorporating segments into course-based instruction. But librarians may not perceive plagiarism awareness as a component of the larger topic of Responsible Conduct of Research, which is largely relevant to researchers and the graduate student level or higher. Typically, librarians’ services have focused on the how-to or instructional aspects of academic and research integrity, rather than the conceptual and educational aspects. As such, librarians may not have been asked to play a larger role in the past. But the need to meet funding agency

requirements, lack of self-expertise identified by faculty, and a growing realization of the gaps in both the practical and conceptual aspects of RCR have opened the door for librarians to expand their service offerings from plagiarism awareness and citation management to also include ethics case study selection, data management and sharing, and responsible authorship practices.

As libraries strive to remain relevant to the university, the area of RCR offers opportunities to support the research community in helping meet the expectations of training that are now required by granting agencies. Although CITI and IRB/IACUC online training sessions are becoming the de facto requirement for ethics training, gaps remain in the thoroughness of training provided. Research indicates that conversations need to be held more than once, e.g., at the discipline/department/lab levels.<sup>9</sup> Faculty are unequipped or don't have time for engaging discussions with their post-docs and graduate students.

Tips for librarians to help fill in gaps in RCR training include:

- Continue training in librarians' traditional strengths in the how-tos and practical aspects, such as citing and citation management.
- Include high concepts and critical thinking skills within training workshops.
- Coordinate training in plagiarism awareness with course instructors, writing centers, graduate schools.
- Link citing/plagiarism training activities to university-level RCR training advertisements and events.
- Provide or raise RCR awareness at undergraduate and early graduate levels in ethics education, including identification of relevant case studies for courses or departments; include both academic integrity and research integrity.
- Embed RCR aspects within course-integrated instruction.
- Offer RCR awareness geared toward international students, whose cultural differences in topics such as plagiarism imply a deeper level of training is needed.

- Brace for increased training in the data management component, because librarians have the skill sets for the tasks, the need will increase, and librarians are likely to be asked for assistance.

Librarians may be surprised to learn that many aspects of RCR training fall within their comfort level, and the Selected Documents section illustrates several guides that are being used successfully by other librarians. One strategy is to market the traditional workshops of plagiarism and citing under the broader banner of RCR and thus to open the door to expanding into other RCR facets as appropriate. Another strategy is to expand our activities from the task-oriented content of avoiding plagiarism and how to cite to the educational scope of establishing the context and importance of why we cite and its value in academic integrity and research integrity, as has been proposed elsewhere.<sup>10</sup>

Training in RCR can be incorporated into several levels of campus activities. From identifying case studies to leading discussions to conducting workshops that create awareness, librarians can increase their comfort levels as they progress through activities in applied ethics education and demonstrate a relevant role within the research university.

## Endnotes

- 1 Retraction Watch <http://www.retractionwatch.com>
- 2 Federal Research Misconduct Policy <http://ori.dhhs.gov/federal-research-misconduct-policy>
- 3 The Interagency Advisory Panel on Research Ethics (PRE), 2013, <http://ethics.gc.ca/eng/index/> and the Tri-Council Policy Statement (TCPS-2) <http://ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/Default/>
- 4 CITI: Collaborative Institutional Training Initiative <http://www.citiprogram.org>
- 5 ORI: the Office of Research Integrity <http://ori.dhhs.gov/>

- 6 Ethics CORE (Collaborative Online Resource Environment) <http://nationalethicscenter.org/>
- 7 OEC: Online Ethics Center for Engineering and Research <http://www.onlineethics.org/>
- 8 National Postdoctoral Association. 2010. "Responsible Conduct of Research (RCR) Toolkit." <http://nationalpostdoc.org/rcr-toolkit>
- 9 Council of Graduate Schools. 2008. "Best Practices in Graduate Education for the Responsible Conduct of Research." <http://www.cgsnet.org/publication/1246/c16fd57bafc3eb0d42a3d7b9f5779cea>
- 10 Caravello, Patti Schifter. "The Literature on Academic Integrity and Graduate Students: Issues, Solutions, and the Case for a Librarian Role." *Public Services Quarterly* 3, no. 3–4 (October 2008): 141–71.





## SURVEY QUESTIONS AND RESPONSES

---

The SPEC Survey on Responsible Conduct of Research Training was designed by **Michelle Leonard**, Science & Technology Librarian, and **Denise Bennett**, Engineering Librarian, at the University of Florida. These results are based on data submitted by 48 libraries at 47 of the 125 ARL member libraries (38%) by the deadline of June 9, 2013. The survey's introductory text and questions are reproduced below, followed by the response data and selected comments from the respondents.

---

News reports from the research community routinely include stories of plagiarism, falsification, and fabrication of data, as well as journal publishers' updates on redacted papers due to research misconduct. To counter such activity, federal granting agencies in the US and Canada are requiring that institutions receiving grants must ensure that participants have received appropriate training as defined by the institution. In response, universities and other research institutions are developing programs, tutorials, and guides to inform and to assure that their faculty, staff, students, and researchers are complying with granting agencies' requirements for responsible conduct of research (RCR), which now includes data management practices.

A scan of academic websites indicates that most RCR training is being conducted outside of libraries. Often it is centralized through the graduate school or the office of research, though libraries may be tapped to identify resources and have been conducting workshops on avoiding plagiarism and proper citation practices for a long time. The next leap from plagiarism prevention training is to request that librarians conduct responsible conduct of research training. Librarians can promote RCR through a variety of educational efforts including traditional face-to-face workshops for students, partnering with faculty to design plagiarism proof assignments, developing research ethics symposia, and creating online resources.

The purpose of this survey is to assess research libraries' participation in institutional efforts to train faculty, staff, students, and other researchers in the principles of responsible conduct of research and ethical research practices. It includes questions on the institution's training activities, on training roles currently undertaken by librarians, and on librarians' willingness to expand instruction into the arena of responsible conduct of research. Data and documentation will serve to inform librarians of their peers' activities and to provide links and templates for reuse.

Some institutions may have multiple libraries that provide RCR instruction, for example science and medicine. Because they may handle the material differently, we will accept separate responses from as many libraries as wish to complete this survey so that we may get as complete an understanding of current policy and practice as possible. But, a response from each library that provides RCR instruction at your institution is not required. If more than one library is responding, please submit separate surveys.

### Definitions

For the purposes of the survey, **Responsible Conduct of Research** can be broadly defined as the ethical and responsible practice of research in the following areas:

- Data management, sharing, and ownership
- Conflict of interest and commitment

- Research on human subjects
- Research on animal subjects
- Avoidance of research misconduct
- Responsible authorship and publication practices (such as avoiding plagiarism, citing sources, acknowledging contributors, obtaining permission for reuse, etc.)
- Mentor/trainee responsibilities
- Peer review
- Collaborative science

**Research Misconduct** is typically defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. Research misconduct may also include mismanaging grant funds and providing false information in grant applications.

## INSTITUTION-LEVEL RCR INFORMATION

---

### 1. Are there institution-wide initiatives regarding academic honesty or responsible conduct of research? N=47

Yes	47	100%
No	0	0%

If yes, please indicate the type of initiative. Check all that apply. N=47

Student code of conduct	39	83%
Certification in RCR (e.g., from Office of Research)	31	66%
Honor code	16	34%
Other initiative	20	43%

Please briefly describe the other initiative. N=20

College Board on Academic Honesty

Data management, sharing, and ownership. Conflict of interest and commitment. Research on human subjects.  
Research on animal subjects. Avoidance of research misconduct. Responsible authorship and publication practices.

Human subjects certification

In compliance with Canada's Tri-Council framework, the university has recently implemented a new procedure "Investigating a Breach of Research Integrity" effective March 28, 2013. The new procedure creates a mechanism for ensuring that university researchers are held accountable to Responsible Conduct of Research standards. [Tri-Council refers to the three primary granting agencies: Social Sciences and Humanities Research Council (SSHRC), Canadian Institutes of Health Research (CIHR), and Natural Sciences and Engineering Research Council (NSERC).]

Information on academic integrity and avoiding plagiarism and related topics is available at the NuWrite/Northwestern's Online Writing Resources. Other areas within the university host sites on academic integrity, for example, the Office of the Provost and The Graduate School, among others.

Institutional Review Board – Certification

Lectures and website

Mandatory online ethics training, mandatory online IRB certification

Office of Research Assurance is primarily responsible for RCR.

PHIL 6000: Responsible Conduct of Research: a for-credit course is available to all graduate students (and some post docs). There are also some departmental training programs. As of March 4, 2013, the following academic programs have an approved in-house RCR training approach for their doctoral students (completing one of these approaches replaces the need for taking PHIL 6000).

- Applied Physiology—PHIL 6010: Biotechnology and Research Ethics
- Biology—BIOL 8106: Tools of Science
- Biomedical Engineering—PHIL 6010: Biotechnology and Research Ethics
- Building Construction—BC 8100: Research Methodology
- Chemical & Biomolecular Engineering—ChBE 6003: Chemical Process Safety and ChBE 8801: Introduction to Research (both courses are required)
- Chemistry—CHEM 8902: Information Resources for Chemists and Biochemists
- Earth and Atmospheric Sciences—EAS 6000: Introduction to Research and Responsible Conduct
- Psychology—PSYC 8900: Special Problems in Experimental Psychology-RCR
- Public Policy—PUBP 8801: Dissertation Starter Course (2 semesters)

Plagiarism School

Research Ethics Office within the Office of Research Services, VP Research and Innovation; Institute of Social Research; Senate Policies. Academic Integrity through the Teaching Commons. (There are web resources and online tutorials.)

Research Misconduct Policy, Conflict of Interest Policy, Financial Conflict of Interest on Federal Grants Policy, Responsible Conduct of Research Training Requirement for Students/Post-Docs.

Researchers wishing to receive ethics approval for their project need to complete the Government of Canada's Tri-Council Policy Statement 2 Course on Research Ethics (TCPS 2 CORE). This is an online course administered by the government of Canada. Once successfully completed, the candidate will get a certificate that must be attached to any ethics approval request. All researchers involved in a project must complete the course. The university also recently introduced an online Research Integrity Course that is delivered through Desire2Learn. The university also participates in the Network of Networks (N2): Clinical Research Resources through collaboration with the Collaborative Institutional Training Initiative (CITI) Program with the University of Miami. N2 makes a variety of educational resources available to Canadian Clinical Researchers/Investigators, REB members, clinical research coordinators, research assistants, and other research support staff and students. CITI training includes Good Clinical Practice (GCP), Biomedical Human Subjects Research, Responsible Conduct of Research. Researchers are also required to adhere to the RCR framework set out by Canada's research granting agencies—Canadian Institutes of Health Research (CIHR), Natural Sciences and Engineering Research Council of Canada (NSERC), and Social Sciences and Humanities Research Council of Canada (SSHRC). This new framework is an umbrella document that describes agency policies and requirements related to applying for and managing agency funds, performing research, and disseminating results. It also outlines the process that institutions and agencies follow in the event of an allegation of a breach of agency policy. The university is in the middle of revising and approving a new policy on Responsible Conduct of Research and Responsible Conduct of Research—Code of Research Ethics. There is a policy on academic fraud as well.

The university has RCR training available in various ways, but no certification that I could find.

The university Office of Research & Economic Development offers occasional workshops but the majority of training is through a free online course.

There is an institutional mandate that individuals involved in federally funded research projects receive training (if required by the funding agency). Sponsored Programs maintains a list of courses that satisfy the requirement, and they also maintain a list of self-directed training opportunities.

University-wide policy on Scholarly Integrity; training program through a research ethics office with campus-wide scope

Websites on those issues; policies and guidelines

Workshops

**2. Does your institution (besides the library) offer workshops on RCR topics to its faculty, staff, students, and/or researchers? N=48**

Yes	41	85%
No	7	15%

If you answered Yes, you will skip to the section **Institution RCR Workshops**.

If you answered No, you will skip to the section **Library-level RCR Information**.

---

## **INSTITUTION RCR WORKSHOPS**

**3. Please indicate which topics are addressed in RCR workshops offered by your institution. Check all that apply. N=40**

Ethics/academic integrity	35	88%
Avoiding research misconduct	33	83%
Responsible conduct of research overview	32	80%
Responsible conduct of research complete	26	65%
Avoiding plagiarism	25	63%
Responsible authorship	22	55%
Data management	21	53%
"How to cite" and citation styles	17	43%
How to use bibliography management software such as Endnote, Refworks, Zotero, etc.	15	38%
Other related topic	13	33%

**Please briefly describe the other related topic. N=12**

Annual symposium, ethics of animal research/animal care and compliance

Collaborative research, conflicts of interest, environmental and laboratory safety, human subjects research, humane use and care of vertebrate animals in research, peer review, responsibilities of mentors and trainees, science and engineering in society

Conflict of interest, peer review, collaborative research

Copyright, fair dealing and moral rights in a university context; Scientific misconduct

Data security; copyright/publication agreements

Departments and colleges sponsor programs specific to their disciplines.

Diverse workplace, grant management, conflict of interest, intellectual property

Human subjects, intellectual property and patenting, copyright, conflict of interest, peer review

I don't know all the topics covered. There is required training for all principal investigators.

I know there are initiatives in many faculties and departments but since we are not part of them I cannot describe adequately their content (what is included and what is not).

Our institution includes the library, and the library offers bibliography management software training. Other sessions are offered by the university's Office for Research. There is a website devoted to RCR, and it is hosted by the Office for Research Integrity. Groups of training include: animal subjects research; grants management & research administration; grantsmanship; human subjects research; research safety; responsible conduct of research. The latter covers collaborative institutional training initiative; integrity in biomedical research; ethics in biological sciences; public health: ethical issues in clinical research; responsible conduct in neuroscience; taking responsibility for responsible conduct of research; teaching research ethics. Individual areas may also list related training. The above may not be comprehensive.

There are online modules or other voluntary online tools offered to help meet NSF and NIH requirements.

**4. Are these workshops available to all departments/programs/groups or directed only to specific groups? N=40**

Available to all	28	70%
Directed to specific groups	12	30%

**If directed to specific groups, please identify them. N=9**

Graduate and postdoctoral students

Graduate students, although others may attend if there is room.

It is actually a mix. There are programs available to all, and there are programs targeted to specific departments and groups.

Mainly for graduate students, but also available to some post-docs and some undergraduates doing research.

Participants must be affiliated with the university.

Principal investigators on grant-funded projects

Required for post-docs and grad students funded by NSF, but open to all post-docs and grad students.

Some offerings are directed to graduate students.

Tends to be ad-hoc workshops directed at teaching assistants, graduate students, new faculty, and then any groups that may require specific instruction so that they might in turn teach academic integrity and citation methods to their students (i.e., teaching assistants related to a specific discipline, course with chronic problems related to academic integrity).

#### Additional Comments N=6

Available to all though targeted to medical personnel, animal & human research, and related.

Both exist: some initiatives are general seminars offered by the School of Graduate Studies and some initiatives are directed to specific groups (organized by and for faculties, departments).

Ethics, avoiding research misconduct, RCR, and data management offered to clinical research faculty and staff.

Individual programs vary by school and department.

Primarily for faculty and graduate students.

The answer to this question is "both available to all" and "directed to specific groups." Specific groups include, for example, Driskill Graduate Program in the Life Sciences; IBiS graduate students & Evanston campus post-docs; Public Health; Neuroscience. Sessions are available to all and, in some cases, directed to specific groups.

#### 5. Is there an institution-wide committee or unit that coordinates these workshops? N=39

Yes	28	72%
No	11	28%

#### If yes, please identify the committee and briefly describe its members. N=28

Coordinated by the Office of the Vice President for Research.

Dean of Graduate Studies

Graduate and Postdoctoral Studies in conjunction with Teaching and Learning Services

Graduate Research Ethics Programs Director

Human Studies Program has a director and several IRB coordinators.

Institutional Review Board (IRB), comprised of faculty members and IRB staff members.

More than one group, but shared responsibility among Undergraduate Studies, Vice Chancellor for Research, Sponsored Research Departments.

No single committee. There are committees for various parts of the topics.

Office for Research/Office for Research Integrity

Office of Research

Office of Research Administration, a university-level administrative unit

Office of Research and Creative Activities (ORCA). Composed of a director, assistant director, and the associate academic vice president for research.

Office of Research and Sponsored Programs

Office of Research Services; also some faculties have research offices that offer sessions.

Office of the Vice Chancellor for Research

Office of the Vice President for Research

Office of the Vice-President of Research & International, Office of Research Ethics & Compliance, and Student Affairs-Student Advocacy.

Rackham Graduate School and our IRB

Research Compliance and Biosafety, Writing Center, Thesis Office

The Graduate School, headed by the Assistant Dean for Academic Affairs

The Homewood Institutional Review Board, in conjunction with the Graduate Affairs Office, offers the training. According to the HIRB website, "the members of the HIRB include faculty with expertise in various academic disciplines and a member from the community that is unaffiliated with the university. The primary concerns of at least one member are nonscientific. The diversity of HIRB members' expertise and experience enables them to represent the academic disciplines in the divisions served by HIRB, community views and attitudes, and nonscientific perspectives when evaluating the acceptability of proposed research."

The Office of Research Ethics

The RCR Education Advisory Committee (RCREAC) is composed of representatives from schools and colleges of the university with students participating in RCR instruction programs.

The Research Ethics Advisory Committee is led by an RCR Officer and consists of 11 faculty members from the main campus and the health sciences campus. Three offices take care of ethical issues on campus. For main campus faculty and graduate students: Responsible and Ethical Conduct of Research. For main campus graduate students: Office of Graduate Studies. For Health Sciences Center: Institute for Ethics. We also have an IRB office.

The Scholarship and Research Integrity office in the Office of the Vice President for Research coordinates the SARI@PSU program. The development of specific RCR programs for graduate students is left to individual departments and colleges, but SARI requires that the programs be created. SARI also \*lightly\* monitors a requirement that faculty take a certain number of SARI/RCR classes and workshops every two years. This is independent of the required ISB certification and training for all researchers. SARI coordinates general RCR-programming through contacts in each college.

There is a campus office for "Research Education and Oversight," with five staff members.

There is a Research Integrity Unit within the campus Office of Research and Innovation.

Vice Provost for Research Office

**6. Please enter any additional comments about institution RCR workshops you would like to share.**  
**N=8**

Most of the "workshops" are online tutorials or courses.

Much of this is managed through either the library or the Office of the Vice President for Research.

ORCA trains campus deans and department chairs on responsible conduct of research on a yearly basis. Faculty who wish to conduct research must complete three online modules (Online Ethics Tutorials) created by the Center on Materials and Devices for Information Technology Research with support from the National Science Foundation.

The institution offers courses, online resources, and seminars.

The Office of the Vice Provost for Research is the central agency on campus regarding RCR but individual schools, departments, and centers also provide their own workshops, training sessions, classes, etc.

The training can be done either online via Collaborative Institutional Training Initiative (CITI), or in-person in an 8.5 hour, discussion-based course offered 4 times/year.

Training is provided through the Collaborative Institutional Training Initiative (CITI).

We have a program for bioethics, Office of Research Integrity, and Office of Legal Counsel that all provide varying levels of support.

## LIBRARY-LEVEL RCR INFORMATION

---

### 7. Is information about RCR available on your library's website? (Such information could range from how-tos to case studies to guidelines for reporting observed problems.) N=47

Yes	25	53%
No	22	47%

Comments N=12

As part of a LibGuide.

Citation management, copyright information, plagiarism prevention

Consists of info about Endnote.

Finding it can be a challenge.

Health Sciences Library reports "not directly." University Library offers training in bibliographic tools (e.g., EndNote) and, during graduate student orientation, copyright session. These latter are on our website. Library guides provide links to writing resources noted in previous question.

Our subject guides include links to the appropriate university policies and websites on those topics. We also offer a lot of information about bibliographic software and citing sources but not from the angle of ethical conduct.

Piecemeal, as it comes up in a variety of areas in which the Libraries provide services.

The Libraries has a LibGuide that addresses plagiarism and copyright issues.

The library mainly focuses on citing and plagiarism.

Very general information on avoiding plagiarism in some subject guides. No formal web pages or guides specifically on the responsible conduct of research.

Very little is available, primarily about plagiarism and not recently updated.

We have information on how to use citation tools and links to sources for citation examples. We also have information on how to avoid plagiarism, which links to a required plagiarism tutorial for undergraduates offered by the university. There is information on data management, basics of copyright, and links to library staff who can help navigate questions or refer to other sources.



8. Does your library offer training on RCR topics to faculty, staff, students, and/or researchers? N=47

Yes	36	77%
No, but we plan to	1	2%
No	10	21%

If you answered Yes, you will skip to the section **Library RCR Training: Methods**.

If you answered No, but we plan to, you will skip to the section **Library RCR Training Plans**.

If you answered No, you will skip to the section **No Library RCR Training**.

---

## LIBRARY RCR TRAINING PLANS

9. Please indicate the methods your library plans to use to deliver RCR training. Check all that apply.  
N=1

Incorporate RCR topics into course-based library instruction sessions

Face-to-face RCR-specific workshops

Online tutorial

Online guides

When you click the Next>> button below, you will skip to the section **Additional Comments**.

---

## LIBRARY RCR TRAINING: METHODS

10. Please indicate the methods your library uses to deliver RCR training. Check all that apply. N=36

Incorporate RCR topics into course-based library instruction sessions	32	89%
Face-to-face RCR-specific workshops	30	83%
Online guides	28	78%
Online tutorial	18	50%
Printed handouts/guides	14	39%
On demand video	6	17%
Other training method	6	17%

Please briefly describe the other training method. N=6

Detecting Plagiarism Workshops for faculty

Live, online workshops

Plagiarism and research ethics are incorporated into the Library 110 course offered each semester.

The Libraries provides individual consultation to faculty and students on RCR topics (legal issues, copyright, patent searching, etc.)

We offer an elective 1-credit seminar to graduate students on searching and using information sources. This seminar addresses in part ethical use of information.

Webinar

**11. Please indicate how long your library has used each applicable RCR training method. N=36**

Training Method	More than 3 years	1–3 years	In planning stage	N
Incorporate RCR topics into course-based library instruction sessions	29	3	—	32
Face-to-face RCR-specific workshops	22	7	1	30
Online guides	23	6	1	30
Online tutorial	10	8	4	22
Printed handouts/guides	11	2	1	14
On demand video	2	3	6	11
Other training method	5	2	—	7
Total Responses	33	21	8	36

**12. Please enter any additional library RCR training methods information you would like to share. N=3**

At the library, we currently offer EndNote/Zotero/Mendeley workshops but not necessarily in the context of RCR. In the past, sessions on copyright and fair use have been offered. In terms of training plans, we plan to offer Data Management Tips & Tricks. Regarding the training method, the above is an estimate; not clear on the exact length of time these methods have been offered. Online tutorial is something we hope to plan/offer.

The online tutorials are subject or class-based and they include information on plagiarism and citation practices as well as information on IL skills, e.g., searching skills, appropriate subject resources, etc.

The science librarians' expanding involvement in plagiarism prevention led to a National Science Foundation grant to develop an online game, GAP (Gaming Against Plagiarism) focusing on plagiarism, falsification of data, fabrication of data in the STEM disciplines. Work on this game brought us in contact with other units on campus, and we suddenly found ourselves conducting the Avoiding Plagiarism Seminars managed by the Dean of Students Office for Student Conduct and Conflict Resolution. We were also invited to work with the I-Cubed grant serving on the Ethics and Mentoring Subcommittees and co-sponsoring programming such as an Ethics Symposium. Science librarians developed an Introduction to RCR workshop and a guide to sources, focusing on aspects such as case studies. The Intro to RCR workshops taught us that discipline- and audience-based sessions are likely to be more effective than general workshops open to anyone. For example, beginning graduate students appear intimidated and reserved in general workshops, while experienced graduate students have many questions and opinions to offer. Faculty who attend the general workshops are likely to request department-level sessions on the spot or to inform their colleagues that librarians are willing to lead RCR sessions, leading to future invitations. Getting invited to present on one or more RCR topics at graduate student seminars has frequently led to subsequent invitations—to discuss other RCR topics, to repeat each semester, or to present on traditional library services such as database selection and searching techniques. Through being willing to tackling topics that are unfamiliar to faculty, we seem to have established credibility in traditional as well as untraditional areas of strength.

## LIBRARY RCR TRAINING: WORKSHOP CONTENT AND AUDIENCE

---

### 13. When designing RCR workshop content, does your library focus on a general or a targeted audience? N=31

We prefer to tailor to either audience type or discipline	12	39%
Content designed for a general audience works well for all	10	32%
We prefer to tailor to an audience type	5	16%
We prefer to tailor to a discipline (department, lab, course, etc.)	4	13%

Comments N=11

#### **We prefer to tailor to either audience type or discipline**

We do both general and targeted, for different purposes.

We offer both general and tailored instruction on RCR topics.

We provide general sessions, but we prefer to tailor to audience.

#### **Content designed for a general audience works well for all**

Really depends on the topic.

#### **We prefer to tailor to an audience type**

Tailored to graduate students.

We've tried to offer a variety of workshops where the same content gets delivered but for student assistants/faculty, we present the material as a "mock workshop" that they can copy, adapt to their needs, and intersperse the slides/quizzes with discussion about trouble-shooting, particular issues or challenges, and alternative approaches.

Workshops aimed at faculty/graduate students.

#### **We prefer to tailor to a discipline (department, lab, course, etc.)**

We do a mixture of workshops for general audiences as well as for specific disciplines.

#### **Additional Comments**

At this point, we do not offer specific workshops.

Depending on which RCR topic, we provide general audience, demographic-specific, and discipline-specific content.

We do not offer specific workshops on RCR but as mentioned under previous questions, some of our instruction workshops (general workshops or course related workshops) include some elements of RCR (mainly ethical use of information).

### 14. Are workshops open to all interested attendees, or are they limited to specific groups? N=30

Open to all interested attendees	23	77%
Limited to specific groups	7	23%

Comments N=18

### **Open to all interested attendees**

Again, we offer both.

Both actually apply, depending on group targeted.

Both, depending on the workshop. Some are drop-in on a topic of interest to a general audience. Others are for a specific course.

Health Sciences Library notes that workshops are open to all, except when a workshop is developed/tailored to a specific medical audience.

The answer is actually both, for different purposes.

The answer is actually both. We offer training to both general audiences and specific groups. We have some general workshops on citation management that are open to general audiences; other times topics are customized to be included in specific course-related instruction or RCR-specific training. The only consistent RCR-specific training we offer is for the required RCR training for art history graduate students.

The plagiarism sessions are required of all students.

The workshops for most workshops given by the University Libraries are open to all interested students; however those given by the Law Library are limited to specific groups.

Unless invited by a specific group!

We offer both open sessions and sessions limited to specific groups.

We've tried to tailor it to specific groups but lately the attendance has been low (for students that is), therefore we make it an open, drop-in set up.

### **Limited to specific groups**

Any RCR training is part of more general bibliographic instruction and would be limited to class.

I.e., the class for whom the session was prepared.

The RCR workshops offered through the graduate school are intended for PhD candidates, but they are open to others attending as space is available.

We offer workshops to graduate students in partnership with the Office of Graduate Studies. Faculty are welcome to attend and have shown up to our workshops.

While the workshops were originally intended to be open to all interested attendees, their branding as graduate workshops limited attendance to a specific group. Thus, in 2013, the Libraries has re-branded the workshops as Research Workshops and begun to promote them to all attendees.

### **Additional Comments**

Both, depending on the workshop.

Sometimes open; sometimes specific.

15. Please indicate which topics are covered in RCR workshops for each applicable audience. Check all that apply. N=34

Topics	General audience	U-grad students	Graduate students	Post docs	Faculty	Researchers	Support staff	N
How to use bibliography management software such as Endnote, Refworks, Zotero, etc.	22	25	33	26	27	26	19	34
"How to cite" and citation styles	17	27	27	14	13	13	8	33
Avoiding plagiarism	14	24	20	9	9	8	5	29
Ethics, academic integrity	10	18	20	10	7	7	4	21
Responsible authorship	9	6	16	11	10	8	6	17
Data management	6	1	13	13	13	13	6	15
Responsible conduct of research overview	4	6	10	7	4	5	1	10
Avoiding research misconduct	3	3	8	6	4	6	2	8
Responsible conduct of research complete	2	2	5	3	2	2	1	5
Other related topic	1	1	2	2	2	2	2	3
Total Responses	24	29	34	28	30	28	21	34

If you selected Other related topic above, please specify the topic and the applicable audience.  
N=3

Copyright and rights management for images is the specific topic of an RCR workshop for art history graduate students. Please note that the citation/bibliography are addressed in general workshops that are not necessarily branded as RCR related. Those topics and plagiarism are addressed upon request in course-related instruction.

NIH's Public Access Policy: post docs, faculty, researchers, support staff.

We have copyright-specific workshops open to the public, aimed at faculty and researchers, on a variety of topics. We also provide copyright-specific workshops to departments, research groups, and courses as requested.

Additional Comments N=2

The above depends on the faculty/department. Some faculties/departments have a required information literacy component in which RCR is covered more extensively by the library/librarian.

To date, our data management services have been offered to faculty one-on-one, with the exception of an annual summer data management institute.

16. Please indicate which topics are covered in RCR workshops for each applicable discipline. Check all that apply. N=32

Topics	Humanities	Social sciences	Sciences	Medical sciences	Other discipline	N
How to use bibliography management software such as Endnote, Refworks, Zotero, etc.	30	30	30	21	4	32
"How to cite" and citation styles	29	29	27	19	4	31
Avoiding plagiarism	25	25	23	14	4	26
Ethics/academic integrity	18	19	19	14	3	21
Data management	12	14	15	8	2	17
Responsible authorship	11	12	13	11	3	16
Avoiding research misconduct	6	7	9	6	1	11
Responsible conduct of research overview	6	7	9	5	1	11
Responsible conduct of research complete	3	3	5	4	1	6
Other related topic	1	—	1	—	—	2
Total Responses	30	30	30	21	4	32

If you selected Other discipline above, please specify the discipline. N=4

Engineering (2 responses)

Engineering, if not considered part of science; Fine arts, if not considered part of humanities; Library science.

Law

If you selected Other related topic above, please specify the topic and the applicable discipline. N=1

Humanities: copyright and rights management.

17. Please enter any additional RCR workshop content and audience information you would like to share. N=6

Also do some patent searching instruction, which incorporates concepts of intellectual property and intellectual property ownership.

The above depends on the faculty/department. Some faculties/departments have a required information literacy component in which RCR is covered more extensively.

The Libraries may be doing RCR workshops in the future for the medical sciences and sciences by subject librarians on an "as requested" basis.

We rarely have these topics and audiences cleanly separated out like this. Often, training incorporates speakers from beyond the Library, or references materials beyond the library. The library is one channel, but not necessarily the exclusive channel on most of these topics and to most of these audiences. We do have an entire group dedicated to

data management support services, and while it lives within and is staffed by the library, it works closely with many other units to be effective in RCR.

We're assuming that "workshops for each applicable discipline," above, means workshops specifically aimed at particular disciplines. Almost all of our instruction sessions with students in discipline-specific environments at least briefly address citation and bibliographic software. The copyright workshops that we offer (targeted for faculty & researchers, open to all) are pre-approved for credit in the responsible conduct of research from the Research Education and Oversight office. One focuses on using third-party materials, the other on managing one's own ownership rights. We also occasionally (zero-to-two times a year) run public sessions open to the entire campus community on issues related to scholarly publishing, or new frontiers in research. These are also usually pre-approved for continuing education credit (required of all PIs) in the responsible conduct of research via the Research Education and Oversight office. We offered a wide slate of data management sessions when the NSF first instituted its requirement of having a data management plan. We don't currently offer those as regularly scheduled sessions, but some subject librarians offer them from time to time for their departments. We anticipate ramping up that training again as regulations to implement the OSTP memo are put into place.

While we have not couched our workshops in terms of RCR, we have for many years conducted workshops on the topics noted above and incorporated them into course-related instruction.

---

## **LIBRARY RCR TRAINING: COLLABORATION**

### **18. Does your library collaborate with other individuals or groups in your institution, such as faculty or administration, to offer these workshops? N=35**

Yes	24	67%
No	11	31%

#### **If yes, with which agencies do you collaborate? Check all that apply. N=24**

Specific colleges/departments	19	79%
Graduate school	14	58%
Undergraduate center (e.g., honors, research, summer program, etc.)	14	58%
Sponsored Research	9	38%
International Student Center	9	38%
Dean of Students	7	29%
Other agency	12	50%

#### **Please specify the other agency. N=12**

Academic Learning Centre, Graduate Students Association

Assistant Vice Chancellor for Research Compliance in the Office of the Vice Chancellor for Research and Graduate Education

Campus Center for Excellence in Writing and Research, Division of Undergraduate Education

Foreign Programs Office

Graduate Student Government Association

ITS, Information Technology Services, e.g., the central computing division.

Office of Post-doctoral Affairs, Residential Life (housing), Distance Education and Learning Technologies Applications (DELTA)

Office of Vice President for Research (separate of Office of Sponsored Research at our institution), also Institutional Review Boards (which fall under Office of Vice President for Research).

Teaching and Learning Services

The Law School Library collaborates with Law School administrators when devising training for the L.L.Ms in American Law.

University Writing Center

We collaborate primarily with the Office of Graduate Studies to offer workshops. Other collaborations tend to be course integrated.

**19. Who initiates these sessions? Check all that apply. N=31**

Requested by faculty for courses	27	87%
Topics and dates are chosen by librarians	24	77%
Requested for departments or labs	17	55%
Requested by institution administration	13	42%

**Comments N=7**

Answers apply to the Health Sciences Library. For University Library, sessions for bibliographic tools can be initiated by a class, or offered as part of an orientation program.

Classes are offered every few months on the main & health sciences campuses.

Really varies a lot by topic.

Requested by other campus partners (Housing, Graduate School, DELTA, and others from time to time).

These differ from department to department and library to library.

We are frequently contacted by graduate students because they are not receiving sufficient support from faculty/ departments on how to teach academic integrity, detect cheating and plagiarism, and document such breaches to ensure a productive case before the Appeals Committee.

We work with the Office of Graduate Studies to set dates for workshops. We work with individual faculty to schedule instruction for their classes.

**20. Are these sessions tied to specific events, such as orientation sessions or required classes/seminars? N=30**

Yes	21	70%
No	9	30%



**If yes, please briefly describe the type of event(s). N=20**

Answer is yes and no for both University Library and Health Sciences Library. Yes for orientation classes and, for Health Sciences, also for lab meetings.

As mentioned, often orientation sessions, major theses courses, etc. But, they are also offered outright for those who are seeking support without being tied to a specific curricular point.

As noted in previous responses, the only consistently offered RCR-specific/required training is copyright/rights management for art history graduates.

For the JDs, the plagiarism sessions are connected with orientation. For the foreign students, they are connected with seminars. Other sessions are offered on a voluntary basis.

General (open) workshops, orientation sessions, classes, seminars

Graduate student orientation, first year undergraduate writing course

In general, orientation sessions at the beginning of academic years or semesters. Also, in the School of Public Health, the required class, Introduction to Biomedical information. This class is required for all Masters in Medical Science students.

In some faculties/departments there are required courses, others may be orientation sessions.

Most of the time, but can be open.

New student orientation; TA training; individual class sessions by request or as part of the curriculum. Also provide general sessions.

Orientations

Orientations, classes, & seminars

SKILLSETS workshops from Graduate and Postdoctoral Studies and Teaching and Learning; Undergraduate research programs (Arts/Science/Engineering)

Some tutorials and sessions are embedded in the orientations for students and the first year student curriculum.

Sometimes. The Authorship class is offered during the RCR/PHIL 6000 course. Citation management software is offered at graduate orientations for some departments.

Sometimes, such as orientations, Open Access Week

Sometimes. We often discuss citation and bibliographic management software at department orientations, if a Libraries representative is included (that varies widely). Sometimes we offer sessions during overall graduate orientation, or orientations via the international student center, and undergraduates get information from the Libraries (including brief mention of bibliographic software, etc.) during undergraduate orientation.

The library workshops are part of a larger set of workshops offered by the Office of Graduate Studies. We work with individual faculty to schedule instruction for their classes, some of which are required.

Yes, some are linked to required classes.

Yes, we have done some workshops during a "TA Day" a few years ago but nothing systematic since. We also try to schedule workshops during reading week mid-term to attract struggling students.

**21. Please enter any additional RCR training collaboration information you would like to share. N=3**

Collaboration with the Office of Research is in the planning stages for the library's research data services program.

Given that RCR incorporates many areas, there isn't really any single or simple answer for who initiates sessions, what the topics are, or when they happen. Some may be tied to curriculum, some are tied to research policy, while some are ad hoc for process improvement.

The Research Education and Oversight office does not offer any regularly scheduled continuing education sessions, but all PIs are required to obtain a continuing education credit in the responsible conduct of research every three years. The Libraries Data Management workshops (when offered) and copyright workshops are the only regularly scheduled RCR-credit sessions on campus, though other groups and departments offer their own one-off sessions.

---

**LIBRARY RCR TRAINING: PUBLICITY**

**22. How does your library publicize RCR training opportunities? Check all that apply. N=35**

Library website	34	97%
Institutional administrative channels	19	54%
Departmental/college/academic unit websites	16	46%
Campus newspaper	3	9%
Other publicity channel	18	51%

**Please specify the other publicity channel. N=18**

Advertised as part of Office of Graduate Studies workshops directly to all graduate students.

As mentioned above, we do not have specific RCR workshops. We do not offer specific workshops on RCR as mentioned before but some of our instruction workshops (general workshops or course related workshops) include some elements of RCR. Our general workshops are publicized on our website.

Departmental newsletters

Depending on the training session, email to specific constituent groups, posters & digital signage (in libraries and in department locations), advertisement in the campus newsletter, Twitter (any one of a number of accounts), Facebook, and word of mouth. Workshops pre-approved for RCR credit are listed on the Research Education and Oversight website, and get a lot of registrations that way.

Facebook, Twitter, blog

Graduate student and departmental listservs, on plasma displays in library

Health Sciences Library also uses email communication to registered library users, and School of Medicine faculty and students. At University Library, website and special contact with classes is used to advertise bibliographic tools sessions.

Listservs

Multiple email lists, electronic billboards, bulletin boards, library outreach channels, orientation presentations and flyers

RCR website

Social media, including Facebook and Twitter

Twitter

Twitter, Blog

Twitter, Facebook, student associations, e-mail newsletters

University news (not the campus paper, but online daily news)

University-wide email announcement, posters in various areas of the library

Website and email messages from Graduate and Postdoctoral Studies and Teaching and Learning Services

Word of mouth or via various other networking methods (i.e., courses, labs, etc.)

## WORKSHOP EVALUATION

---

23. Has your library used either pre- or post-tests to measure workshop participants' KSA (knowledge, skills, attitudes) about RCR topics? N=34

Yes	11	32%
No	23	68%

If yes, please indicate the type of test. N=11

Pre-test or questionnaire	3	27%
Post-test or questionnaire	1	9%
Both pre- and post-session test or questionnaire	7	64%

Please briefly describe what you have learned from the test results. N=6

**Attendees appear to be more knowledgeable than we expected in the areas of:**

Attendees think they know how to search well.

**Attendees appear to be less knowledgeable than we expected in the areas of:**

Authorship, data management, sharing data, plagiarism

Copyright, fair use, ethics of authorship, plagiarism. International students, in particular, are surprised at how much needs to be cited.

Using the library, how to cite properly, how to search effectively & efficiently

When and how to cite

When and how to cite resources, how to paraphrase properly, the responsible use of copyrighted materials

**Attendees appear to have learned:**

Attendees become aware of the pitfalls of plagiarism and take much greater care when writing subsequent papers.

Authorship, sharing data, plagiarism

Graduate students seem to pick up much about open licensing and open access.

How to cite, that there are databases & how to search them.

That plagiarism has a wide definition.

#### Additional Comments N=7

All of the answers above only refer to the Medical School Library. Only the Medical School Library uses pre- or post-tests to measure workshop participants KSA.

Much confusion about copyright and plagiarism, particularly with regard to music and adaptation vs. academic materials.

Not all libraries conduct pre- and post-session evaluations.

Some of the undergraduate sessions, especially during orientation, have done informal pre- and post- quizzing. Some of the copyright sessions do informal pre-quizzing. Most of the time this is less a data-collection tool than a pedagogical device. People are better at retaining information when they are primed with a quiz, and/or when they have specific points reinforced afterwards. As such, we don't really have data to report out. Most people appear to be about as knowledgeable about library services or copyright issues as we expect, which is to say, not very.

The Office of Graduate Studies administers a questionnaire after the workshop. Students are typically satisfied and have learned the skills they came to learn.

This is very difficult to answer given that it is not done systematically across all RCR areas. Library workshops are less rigorously assessed, and often either voluntary or tied to a course. These are typically assessed with questionnaires afterwards, some evaluating what was learned, and some asking participants to rate what they felt they knew before against what they feel they know after. Many of the RCR sessions run by the Office of the Vice President for Research are tightly tracked for compliance and audit purposes. Those incorporate more of this type of assessment.

We are implementing this next year.

#### 24. Have workshop attendees requested more information or further RCR training? N=26

Yes	20	77%
No	6	23%

If yes, please indicate the type of information or training they have requested. Check all that apply.  
N=20

Type of Information	U-grad students	Graduate students	Post docs	Faculty	Researchers	Support staff	General audience	N
Avoiding plagiarism	8	8	6	9	3	3	2	14
Data management	1	11	10	8	9	4	3	13
Data sharing	2	9	8	8	8	3	2	11
Data ownership	1	10	8	7	8	4	2	11

Type of Information	U-grad students	Graduate students	Post docs	Faculty	Researchers	Support staff	General audience	N
Responsible authorship and publication practices	3	8	5	6	3	2	2	10
Peer review	—	3	1	2	2	1	—	4
Collaborative science	—	1	1	2	2	—	—	3
Conflict of interest	—	2	1	2	1	1	—	2
Avoiding research misconduct: fabrication, falsification	2	1	1	1	1	1	—	2
Mentoring	—	2	1	1	—	—	—	2
Research on human subjects	—	1	1	1	1	1	—	1
Research on animal subjects	—	—	—	—	—	—	—	—
Other topic	—	3	3	3	2	1	—	5
Total Responses	8	19	15	16	14	6	4	20

**If you selected Other topic above, please specify the topic and applicable audience. N=5**

Graduate students: EndNote, R

Post-docs & grad students: intellectual property. Faculty: avoiding plagiarism for their undergrads and grads.

Graduate students, post-docs, and faculty: Overview of the appeals committee process, including instructions on documentation and evidence gathering re. plagiarism/academic misconduct.

Graduate students, post-docs, faculty, and researchers: citation management.

Faculty, researcher, and support staff: Occasionally, copyright workshop attendees request, in follow up survey responses, for more information on specific topics (quite often, topics covered in one of the other copyright workshops.) We don't have any other data of workshop attendees requesting specific training, but we do receive requests via email or in-person conversations for trainings on bibliographic software, data management/sharing/ownership, or more publishing issues, from time to time.

**Additional Comments N=3**

More bibliographic management training.

People do ask for the other subjects, but not of the library. For example, the peer review piece and the collaborative science education would be supplied by the faculty or the research team, not the library.

I answered based on library areas, which are mostly focused on data management, sharing, and ownership, and which there is growing demand for at this time. Faculty also request training often for students in the areas of avoiding plagiarism and responsible authorship and publication practices. The other areas are largely covered by the Office of the Vice President for Research, and it is unclear if they have demand for more training.

25. Are attendees at library RCR workshops/seminars awarded any certification? N=31

Yes	8	26%
No	23	74%

If yes, does the certification come from the institution or the library? N=8

The institution	4	50%
The library	4	50%

Comments N=7

**The Institution**

Pls who attend workshops pre-approved by the Research Education and Oversight office receive a continuing education credit in the responsible conduct of research.

The Preparing Future Leaders "Season Pass" certification is awarded by the Graduate School.

We just sign their "passport" so they have a record that they attended.

**The Library**

Graduate and postdoctoral students who take the MyResearch library seminar series offered as part of SKILLSETS receive a certificate signed by the Dean/Director of Libraries and the Dean of Graduate and Postdoctoral Studies.

Only the medical library provides certification. The other libraries do not.

The library is certified to give Royal College of Physicians and Surgeons of Canada continuing education credits.

We only offer certification for our annual summer data management institute.

---

**NO LIBRARY RCR TRAINING**

26. Please briefly explain why your library does not offer RCR-related training. (For example, it is not in your institutional mission, library can't add another assignment to staff workload, don't think library staff have the expertise/don't know how to get started, perceived lack of interest by institution, etc.) N=11

At University Library, we currently offer EndNote/Zotero/Mendeley workshops but not necessarily in the context of RCR. In the past, sessions on copyright and fair use have been offered. In terms of training plans, we plan to offer Data Management Tips & Tricks/data management training. The methods above refer to the bibliographic training sessions that we currently offer. We plan to continue to use these methods for those sessions. Most RCR training is done via the university's Office for Research.

Have always relied on IRB to provide this, have not conceptualized instruction on plagiarism, etc., as part of this effort.

It is already covered under a different umbrella of the university.

Lack of expertise

Lack of sufficient staff; other avenues exist on campus that provide this training.

No demand, no staffing

RCR-related training is mandated by the institution as part of the Canada Tri-Council framework.

The library has not considered responsible conduct of research training as a library responsibility before receiving this SPEC survey.

The Office of Research Administration offers the expertise and breadth of information necessary for all researchers' RCR needs.

This is more of a very recent university-wide initiative and the library has not taken the lead on this as yet.

We do cover plagiarism lightly when requested in our information literacy sessions. We also have an old LibGuide. We also teach tools such as EndNote which the university has a site license.

## **FUTURE LIBRARY RCR TRAINING PLANS**

---

### **27. Please indicate the library's plans for developing RCR training workshops and supporting materials in the near future. N=43**

#### **Workshops N=42**

We're planning to add workshops	13	31%
We expect to hold steady with current workshops	8	19%
We're planning to develop workshops	3	7%
We're planning to incorporate RCR topics into other instruction activities	3	7%
No workshops planned at this time	15	36%

#### **Comments N=13**

#### **We're planning to develop workshops**

Expanding workshops to support undergraduate research; new workshops for international students.

#### **We're planning to add workshops**

Currently planning to develop data management workshops for graduate students in engineering.

Planning sessions on rights management, copyright, and publishing agreements for graduate students expecting to defend within a year. These would be offered through the graduate school as an optional offering. We are also developing some online training—either videos or tutorials—related to data management for the sciences.

Plans are under way to develop a "personal data archiving" workshop.

The answer is actually "we are planning to develop..." and "we are planning to add..." Health Sciences Library plans to add, and University Library plans to develop workshops.

We are working to make our plagiarism training more robust.

We expect to increase data management workshops for certain, and will likely continue increasing attention to avoiding of plagiarism as well. Other areas are less certain, and less in the scope for the library.

Workshops targeting plagiarism education for international students.

### **We expect to hold steady with current workshops**

We have a suite of workshops/seminars that we offer periodically as demand arises.

We will probably ramp up data-related training as the OSTP memo is implemented; we may ramp up publishing/author rights trainings for that, as well. But we'll also maintain existing efforts where subject librarians provide training to students and faculty in their departments (especially on citation, bibliographic software, and basic research ethics) as they choose to (or are requested to) do so.

### **No workshops planned at this time**

No specific workshops planned at this time other than what we are doing. That said, the School of Graduate Studies is preoccupied with plagiarism issues and we will probably be collaborating on developing training material for the prevention of plagiarism and other academic fraud.

We do offer copyright workshops, but that is only a small part of the whole.

### **Other**

A group is doing a needs assessment of grad students.

### **Supporting Guides N=41**

We're planning to grow our supporting guides	15	37%
We expect to hold steady with current guides	8	20%
We're planning to develop supporting guides	5	12%
No supporting guides planned at this time	13	32%

### **Comments N=7**

#### **We're planning to develop supporting guides**

We will likely develop guides as part of the new online curriculum we are developing.

#### **We're planning to grow our supporting guides**

Data management pages

Plans are to grow guides and to develop guides. For University Library, note that some LibGuides link to the institution's documents on avoiding plagiarism.

We hope to develop more expertise in this area in the near future.

We're planning to create a "data management planning" video tutorial.

#### **We expect to hold steady with current guides**

Of course, updated/revised/expanded/deleted as needed.

#### **No supporting guides planned at this time**

While we have no RCR guides planned at this time. I expect both the current plagiarism LibGuide and the animal research one are likely to be updated in the coming year.



## ADDITIONAL COMMENTS

---

### 28. Please enter any additional information that may assist the authors' understanding of RCR training activities at your library and/or parent institution. N=16

Endnote workshops are held almost monthly at the main and health sciences campuses.

IRB provides ethics of research training through CITI tutorial and data management center offers consultations on data issues.

Most of this is done at the university level and not the library level, and even there the program is in its infancy.

Most RCR content covered by our libraries occurs in course-related instructional sessions, or through self-paced online tutorials.

Principal investigators on NSF projects have to certify that their students and post-docs met the RCR requirements.

RCR training could possibly come out of the strategic planning that we are doing now but as yet it is not planned.

RCR training is adequately covered by the institution's Office of Research and within academic departments for ethics and research methods training. The library collaborates on training when appropriate (particularly for citation methods, use of bibliographic management tools, and academic integrity), as part of its instruction program.

RCR training is largely the carried out by the Office for Research/Office for Research Integrity. The libraries offer the workshops referred to elsewhere in this document, and there are plans to add workshops in the near future.

The Libraries assumed responsibility for these workshops when there was a shift in university administration (the committee that first developed the senate policy of academic integrity has lapsed and there is no administrative access to the online materials). As well, the "teaching" department for the university has also restructured and they're only now starting to relaunch the academic integrity component. The Libraries received university funding to develop an online learning module for academic integrity. As well, the two librarians deliver library workshops. There is no additional administrative support or leave time given to develop/deliver/evaluate these workshops. It is part of normal workload and it contributes to our "service" component of our tenure process.

The responses to this survey encompass several discipline specific libraries within our library system. Not all libraries offer all types of RCR training indicated in the responses.

The university is now offering RCR training through CITI. The GAP Avoiding Plagiarism online game is available to students, and offers a certificate of completion.

Training and communication about these topics will be developed and offered jointly with other campus offices, including Research Administration, Human Subjects, and Undergraduate and Graduate Studies.

Training materials and related resources for the university research community include an introduction to the Tri-Agency Framework (slides or recorded presentation), the university's policies and procedures related to RCR, the Tri-Council Policy Statement Online Tutorial, and procedures specific to financial disclosure.

We do have a librarian serving as a non-scientific, alternate member on the Institutional Animal Care and Use Committee. She does assist with literature searches where ethics might be involved but does not interpret them.

We see our role as filling in any gaps in the institutional RCR training, which primarily occur in the area of plagiarism and proper citations/citation management systems.

We would like to do more with RCR, but lack staff with expertise to provide assistance and training.

## RESPONDING INSTITUTIONS

---

University of Alberta  
Boston University  
Brigham Young University  
University of British Columbia  
University of Calgary  
University of California, Irvine  
University of California, Los Angeles  
University of Chicago  
University of Colorado at Boulder  
Duke University  
University of Florida  
Georgia Institute of Technology  
University of Hawaii at Manoa  
Indiana University Bloomington  
University of Iowa  
Iowa State University  
Johns Hopkins University  
Kent State University  
University of Kentucky  
University of Louisville  
McGill University  
McMaster University  
University of Manitoba  
University of Massachusetts, Amherst

University of Michigan  
University of Minnesota  
University of Missouri  
Université de Montréal  
University of Nebraska—Lincoln  
University of New Mexico  
North Carolina State University  
Northwestern University  
Ohio University  
University of Oklahoma  
University of Pennsylvania  
Pennsylvania State University  
Purdue University  
University of Rochester  
Rutgers University  
Southern Illinois University Carbondale  
Syracuse University  
Texas A&M University  
Texas Tech University  
University of Virginia  
Virginia Tech  
Washington State University  
York University