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Measuring the research readiness of academic and research librarians : A project report of the Institute for Research Design in Librarianship (IRDL)

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LMU|LA

ARL Assessment -- 08/04/2014

Agenda

- Brief Background on IRDL
- IRDL Goals and Objectives
- Assessment Plan for IRDL
  - Research proposals pre- and post-workshop
  - Social network analysis
  - Curriculum evaluation
  - Confidence pre- and post-workshop
- Confidence Scale
- IRDL Scholars in audience please stand!

Background on IRDL

- Grew out of a December 2010 survey conducted by Brancolini and Kennedy
- Surveyed academic librarians regarding their research experience, research confidence, and perceived barriers to conducting research
- Article published in *C&RL* 2012*

*Kennedy, Marie R. & Brancolini, Kristine R. (2012). "Academic librarian research: A survey of attitudes, involvement, and perceived capabilities." *College & Research Libraries* 73(5): 431-448.

IMLS Grant to Fund IMLS

- Submitted grant proposal to create a learning experience and support network for academic and research librarians
- Funded by IMLS Laura Bush 21st Century Librarian Program, 2013-2016

IRDL Summer Workshop

- 87 applicants for 2014; selected 25
- Each applicant submitted a proposal for a research project to be completed during 2014-2015 academic year
- Centerpiece of the program is a nine-day summer research "bootcamp" for academic and research librarians
- Convened on the LMU|LA campus June 15-26, 2014

IRDL Goals and Objectives

- Goal: Increase the number of academic librarians with specific research skills in conducting and disseminating the results of research
- Objectives:
  - Host a nine-day research workshop in the summer, with two instructors to provide the research curriculum and one-on-one consultation
  - Supplement with pre-workshop activities and ongoing support for the year

Addressing Librarian Needs

- Foster an environment of collegiality and support in the research process
- Provide instruction in areas needed to complete the research design for a project developed by each participant
- Encourage the dissemination of research through publication or presentation
- Instill confidence in Institute Scholars about the research process by providing clear instruction on each step

Assessment Plan for IRDL

- Results of assessment of Year 1 will inform changes for Year 2
- Four-part assessment plan:
  - Scoring of research proposals pre- and post-IRDL workshop – completed July 28-29
  - Social network analysis – completed on last day of workshop
  - Mastery of curriculum content – pre- and post-tests throughout the workshop
  - Confidence – administered survey right before workshop began and at the end

Other Evaluation Activities

- External reviewer from Colorado State Library who was on site for three days; interviewed instructors and participants
  - Identified from participants factors that contributed to learning
  - Identified from participants suggestions for improvement
  - Perceived outcomes from participants
  - Recommendations for improvement
- Survey of participants, incorporating feedback from external reviewer; sent out July 31

Research Question: Confidence

- Did participation in the IRDL Summer Workshop 2014 increase the confidence of participants with regard to completing the steps in the research process?

- Rationale: The psychological literature suggests that self-efficacy (confidence) might be an important factor in encouraging academic librarians to undertake research.

- Hypothesis: We predicted that the detailed confidence survey will identify gaps that will be addressed by the Institute, thus increasing each participant's confidence.

Confidence

- Important factor identified in the literature and in the 2010 survey
- 2010 survey provided less granular data than we wanted
- Chavez ran a factor analysis on original scale to determine which questions actually provide useful information
- Deleted one component ("Identifying research partners, if needed") but greatly expanded remaining questions

IRDL Confidence Scale

- 1 = Not at all confident
- 2 = Slightly confident
- 3 = Moderately confident
- 4 = Confident
- 5 = Very confident

Asked 38 questions in eight categories, with at least two questions in each categories.

Question Categories

1. Turning a topic into a question that can be tested (3 questions)
2. Designing a project to test your question (6 questions)
3. Performing a literature review (5 questions)
4. Gathering data (11 questions)
5. Analyzing data (5 questions)
6. Reporting results written (4 questions)
7. Reporting results verbally (2 questions)
8. Determining appropriate reporting (2 questions)

Preliminary Results

- Participants scored significantly higher on the confidence scale post-IRDL workshop
- The means across all 25 were:
  - Time 1 = 91.16
  - Time 2 = 144.52
- The Paired Samples t Test was significant at < .0005 (SPSS reports as .000)

This result is not surprising, but what do the individual questions reveal?

Time 1 (Immediately before IRDL)

- The scores on individual questions ranged between 1.28 and 3.8.

- The lowest average score was for Q5.4: Knowing which statistical test(s) to run.

- Rounding out the lowest five questions:
  - Q5.3: Identifying which statistical package may assist you in analyzing your data. (1.44)
  - Q4.8: Knowing how to design a focus group (1.64)
  - Q4.3: Determining how many members of a population to include in your study (1.68)
  - Q6.4: Knowing how to report the results of the statistical test(s) you may have run (1.88)

Time 1 (continued)

- The highest average score (3.88)
  - Q3.4: Using relevant keywords to discover literature about your research topic
  - Q6.3: Knowing how to apply a style guide
- Rounding out the highest five questions:
  - Q3.3: Identifying appropriate information sources in which to conduct your literature review (3.52)
  - Q3.5: Determining if a piece of literature is an appropriate source for your research question (3.44)
  - Q7.2: Knowing how to adapt your written research paper for an oral presentation (3.12)

Time 2 (immediately after IRDL)

- The scores on individual questions ranged between 2.72 and 4.48.
- The lowest average score was on the same question 5.4: Knowing which statistical test(s) to run
  - However, the average increased from 1.28 to 2.72. It was the only score below 3.
- The highest average score was on Q3.4: "Using relevant keywords…," which was one of the two highest scores in Time 1.

Comparison Time 1 and Time 2: Lowest

Time 1	Time 2
Lowest Averages	
• Q5.4 = 1.28	2.72
• Q5.3 = 1.44	3.4
• Q4.8 = 1.64	3.84
• Q4.3 = 1.68	3.52
• Q6.4 = 1.88	3.04
Average = 1.584	Average = 3.304

Comparison Time 1 and Time 2: Highest

Time 1	Time 2
Highest Averages	
• Q3.4 = 3.88	4.48
• Q6.3 = 3.88	4.4
• Q3.3 = 3.52	4.28
• Q3.5 = 3.44	4.4
• Q7.2 = 3.12	4
Average = 3.568	Average = 4.312

Other Changes from Time 1 to Time 2

Eleven questions scored above 4. None scored above 4 on Test 1. In addition to the questions noted previously:

- Q1.1: Turning your topic into a research question (from 2.96 to 4.08)
- Q1.3: Determining if your research topic makes a contribution to the field, based on the relevant literature (2.8 to 4.16)
- Q2.2: Identifying other research studies similar to yours in order to examine the methods used (3 to 4.4)

Time 1 to Time 2 (continued)

- Q2.3: Exploring research designs that are appropriate for your question (2.28 to 4.24)

- Q3.2: Determining how your study can contribute to the existing literature (2.92 to 4.04)

- Q6.2: Knowing the components to construct a traditional social sciences journal article (2.32 to 4.16)

Use of the Confidence Data

- Will use in conjunction with other data gathered to:
  - Make changes to the IRDL summer workshop
  - Plan pre-workshop activities
  - Address remaining concerns throughout the coming academic year
- Other relevant data are scores on proposals, recommendations of external reviewer, and feedback from participant survey

Questions, comments, suggestions?

- For additional information about IRDL:
  - http://irdlonline.org

- Background article:

Kennedy, Marie R. & Brancolini, Kristine R. (2012). "Academic librarian research: A survey of attitudes, involvement, and perceived capabilities." *College & Research Libraries* 73(5): 431-448.

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