Day 9: Bringing It All Together

|  |
| --- |
| Day 9 Specific Learning Outcomes |
| 1. **Identify and appreciate the safeguards to the integrity of the research process.** |
| 1. **Critique a conceptual research report.** |
| 1. **Critique a data-based research report.** |

|  |  |  |
| --- | --- | --- |
| Book/Article | Author | Pages |
| *Several articles will be made available during class that we will collectively critique.* | | |

|  |
| --- |
| Class Announcement: Transition & New Focus |
| **Today we will spend time consolidating course concepts. We will look a variety of research reports and, on the basis of the criteria we have developed in this course, offer scholarly critique.**  **Scholarly research reports can have profound impact on society. Thus far in this course we have been making the case that best practices are informed by the wise and judicious application of research findings to particular situations. Don’t miss the importance of adverbs “wise” and “judicious.” Plano-Clark and Creswell tell us that we should “read research to learn new knowledge about topics, to become informed on policy debates, and to find suggestions for improving your practice” (2010, p. 15).**  **The process of bringing things together will utilize several experiential learning exercises, where we join together in (a) passing judgment on the relative merit of a selection of recently published journal articles, (b) we grapple with a fairly recent report that presented conclusions that have had far reaching impact around the world, (c) we wrestle with the real-world consequences to people that motivate us to "get it right".**  **Also today, we will revisit the LIP Capstone, and connect our work in 591 to this important part of your program.** |

Notes: Bringing It All Together

|  |
| --- |
| Theme, Theorists & Concepts |
| * Issues of Credibility |
| * Use, Misuse, and Misunderstanding of Research |

I[[1]](#footnote-1) want to return to the very simplistic framework that we began with way back at the beginning of our course. Locke, Silverman and Spirduso (2010) suggest five basic questions to keep in mind as you approach any quantitative research report. These are:

* What is the report about?
* How does the study fit into what is already known?
* How was the study done?
* What was found?
* What do the results mean? (p. 141)

We also saw that they offered the following basic questions to ask regarding qualitative research reports:

* Is there a clear description of the provenance of the study and what the study is about?
* Is the context in which data were collected described?
* Is there a clear account of what was actually done in collecting data?
* Is there any presentation of the actual data that was collected?
* Is there an explicit effort to summarize data and to articulate one or more conclusions? (pp. 230-231)

We have spent a great deal of time wrestling with the specifics that are so simplistically outlined above, and in so doing, you have developed set of expectations regarding research reports which in turn inform your keen sense of recognition of quality. You have handled many samples of the “genuine” article, and in so doing, your ability to sense potential problems has been simultaneously sharpened.

Before we spend time investigating two specific cases of problematic research reports, I want to take some time to address a fundamental question to all of this: Simply stated, “How can I know I can trust what I am reading?” At issue are three interrelated concerns: Is the research work performed competently? Is it reported honestly? Are the findings presented consistent with what other researchers would conclude (Locke, et al., 2010, p. 12)?

By now you are painfully aware that the reason behind much of the seemingly tedious detail provided in research reports is aimed at addressing the first concern. Great efforts are expended in the publication process to further address all three concerns. As we will see, the final concern introduces an element that can incredibly thorny and distressing.

You will recall that earlier I suggested that you always check the “Peer-Reviewed or Scholarly” box when doing an online search of the literature. Your first line of establishing trust in the quality of a research article is the review process followed in the formal presentation and publishing of research.

Typically, the first opportunity a researcher has to disseminate their work is when their PhD dissertation is defended and subsequently published. The process involved in the successful defense of a dissertation is lengthy and strenuous, to say the very least. In effect, all three questions are addressed by the dissertation committee, which functions, at that stage, as a committee of peers. Beyond that, another first opportunity is to present papers at symposia or conferences. Such papers are typically presented beforehand to a jury of peers who critique the paper with the above three criteria in mind. Journal publication extends the processes of peer review even beyond that of symposia and conferences. Typically, articles submitted for publication are reviewed by peers expert in the field, often blind (the author does not know who the reviewers are or the reviewer does not know who the author is) or double-blind (neither the author nor reviewer are known to each other). This process results in *juried* or *refereed* or *peer-reviewed* articles that are subsequently published. The peer-reviewing process is intended to eliminate work which is flawed in fundamental ways. However, this process is not infallible. Consider this honest statement:

We must caution you, however, that it is not safe to believe that peer review operates with flawless precision as an absolute guarantor of quality in published research. The effectiveness of the peer review system can be no better than the quality of function produced by each part, and, despite the best efforts of editors and reviewers, judgments fail and mistakes do occur. Taken across journals, editors, and reviewers, there is enough residual variability to give all readers cause to be wary and to exercise one final step in quality control—by forming their own judgment about the adequacy of what they read. (Locke, et al., 2010, p. 35).

Be aware that all journals are not equally selective. Every discipline has front-line journals that have the highest standards of selectivity, and equally, every discipline has journals that are remarkable for their lack of selectivity. You can get some insight into what you are dealing with if you check the requirements for document submission that are embedded somewhere in every journal. Often, you can gain insight by looking at who the editors and reviewers are, and finally, the reputation of the journal is important.

The reputation of the author of the article is very important. Academic credentials, academic honors, holding positions of influence, association with major discoveries and longevity in the field are important factors in establishing authorial reputation. These are major considerations in deciding whether a particular author’s work is foundational in a given field.

Another positive indicator of research quality is if the research is funded from a prestigious funding source. Ford, Carnegie, and Pew Foundations meet those criteria, as do studies funded by the National Institute of Health and the National Science Foundation in the United States. The criteria for funding from prestigious funding sources meet or exceed those for prestigious journals. Related, scholarly organizations often provide funds, or at least endorse research studies. In the field of education, the Association for Supervision and Curriculum Development (ASCD) is but one such organization.

As you read research, there are some potential “deal-breakers” to be aware of. First, although no study will be technically perfect, beware of studies with obvious technical problems. The evaluation matrices, particularly for the introduction, methods and results sections, provided by Plano-Clark and Creswell are great places to begin. Studies with numerous technical problems make trust difficult to sustain.

Sampling is one of the technical aspects of research that deserves separate mention. Sampling lies at the very heart of a given research. Two primary issues are at stake here: Does the sample truly represent the population? Does the sample allow for the generalizing of results?

One of the strengths of the development of scholarly literature is the reinforcement of the veracity of findings through replication studies. A number of years ago the world was shaken by the announcement by Pons and Fleischmann[[2]](#footnote-2) of the achievement of a cold-fusion nuclear reaction. The problem was, not a single researcher was able to replicate this, and eventually the researcher’s methods were exposed as flawed.

Clearly, obvious conflicts of interest with the researcher contribute to the breaking of trust. Foundational to the integrity of the research process is that the researcher be an independent, free agent. While it is normal for researchers to find results that are consistent for what was hoped for, trust is violated when the researcher has a personal vested interest in a particular favorable outcome. Locke, et al. correctly observe, “It is when the benefits become tangible rather than just intellectual that there is reason for special caution” (2010, p. 47). For that reason, it is always wise to be cautious about studies released by organizations rather than the study author. Finally, more subtle conflicts of interest emerge when personal biases of the investigator remain unacknowledged and unaccounted for. Included might be issues of theoretical commitments, beliefs and ideological dispositions that influence the research process such that the research itself becomes a tool for advancing the researcher’s personal agenda. Included in this is the accusation that the researcher “found what he/she was looking for.”

Finally, obvious errors either due to carelessness or poor researcher decisions contribute to the erosion of trust. Poor scholarship is in evidence when such errors are sufficient to call into question whether the researcher has even a basic understanding of the field.

Locke, et al. (2010) suggest some important questions to keep in mind when making decisions regarding the merit of research reports you read. These will help to provide another framework that extends what we have developed thus far in our work with Plano-Clark and Creswell (2015). These twelve questions are as follows:

1. Has the paper been peer reviewed for a refereed journal?
2. Is evidence of replication available to support the results?
3. Is a conflict of interest evident for the person(s) doing, sponsoring or disseminating the study?
4. Can the research question(s) be answered with the design and methods used in the study?
5. Is evidence of technical problems apparent in design, methods, or analysis of the data?
6. Are sample composition and size adequate to address the research question(s) asked and to support the conclusions reached?
7. Are the conclusions offered supported by the findings?
8. Is there any indication that the investigator was careless in conducting or reporting the study?
9. Does the author make statements about the study that appear to be examples of a poor understanding of scholarship?
10. Is the author conscientious in frankly drawing your attention to limitations imposed by the design or sample or by compromises made to circumvent problems?
11. Did you find that the report was complete enough for you to form a judgment about each important aspect of the study?
12. Do you understand all of the report, or, in all honesty, do you require assistance with some elements? (p. 51)

**References**

Locke, L, Silverman, S., & Spirduso, W. (2010). *Reading and understanding research* (3rd ed.). Los Angeles, CA: Sage.

Plano-Clark, V. & Creswell, J. (2010). *Understanding research: A consumers guide.* Boston, MA: Merrill

|  |
| --- |
| Assignment Instructions |
| **Immediately after class today, review the assigned readings, the instructor notes, and the PowerPoint(s) for today. Based on your reflections, prepare the following Reflection Brief.**  **Reflection Brief #5 Bringing It All Together (5% of course mark)**  (NB: This assignment is due tomorrow morning at the beginning of class.)  **Prepare a brief (250-300 word) response to the following:**  **As a decision maker who is mindful of Patton’s admonition to pursue the best, by what criteria, from whose perspective I will . . .**  **Please post this reflective brief in the drop box under Day 9.** |

|  |
| --- |
| Assignment Instructions |
| **Assignment # 4 – Formal Literature Review (30% of Course Grade)**  In this assignment you will demonstrate your scholarly inquiry learning by writing a graduate-level literature review. Assignment #4 is focused on the professional interest you have identified and defined in this course and extends the work you did in Assignment #3. Assignment #4 will be your analysis and synthesis of the literature you previously located that is relevant to your research problem. You will now create a synthetic summary of the findings of your review of precedent literature in scholarly prose, fully APA 6 format compliant. The main body of text should be in the 2500-3000 word range (around 10 pages) exclusive of any title page or references.  You might wish to do this on a study-by-study approach, or a thematic approach (Plano-Clark & Creswell, 2015, p. 138-140). Because the number of research studies involved, I suggest that you follow a thematic approach. The final section of this document should be an exhaustive reference list of the sources you have used, formatted to APA 6 format requirements. Further details including the assignment rubric are provided in the Assignment 4 Template document available in MyCourses.  **References**  Plano-Clark, V., Creswell, J. (2015). *Understanding research: A consumer’s guide* (2nd ed.)*.* Boston, MA: Pearson |

|  |
| --- |
| Assignment Grading |
| **Assignments will be graded using the general rubric posted in the course outline for LDRS 591 in MyCourses and the specific reflection brief rubric provided on MyCourses.** |

1. © David Williaume 2016 [↑](#footnote-ref-1)
2. You can get a synopsis of this at http://en.wikipedia.org/wiki/Cold\_fusion [↑](#footnote-ref-2)