Communicating Research

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Ways to communicate research

- Research Report (Today's lecture)
- Research Paper (Following lecture)
- Poster Presentation (used in conferences) (Following lecture)
- PowerPoint Presentation (used in conferences) (Following lecture)

Research Report

- Ultimately, WHAT you put on paper and HOW you put it there reveals
  - **your knowledge about your topic**
  - **the quality of your thinking**
  - **your standards of excellence with greater clarity.**

- The research report is a straightforward document that sets forth clearly and precisely what the researcher has done to address the research problem or question.
- It must be **well-organized** and **easy to read** so that readers can quickly grasp what the researcher has done and found.

Writing Assistance

- Online Writing Lab (OWL) at Purdue University (owl.English.purdue.edu).
- Go to OWL's website and click on "Site Map"
- It contains links to discussions of a wide range of topics related to writing – for instance,
  - How to argue for a particular point of view.
  - How to enhance sentence clarity.
  - When to use various pronouns and verb tenses.
  - What circumstances to use hyphen.

Learn by Looking

- The best way to understand and appreciate the nature of research reports-and to prepare yourself for writing one-is to look at existing reports.
- Keep in mind that not all published research reports provide good models for novice researchers. Follow your instinct when you read such reports.

Essential elements of a Research Report

- Give readers a clear understanding of the research problem or question and why it merited an in-depth investigation.
- Describe exactly what methods were used in an effort to address the research problem or question.
- Present the collected data with enough precision and thoroughness that they substantiate the interpretations and conclusions that will follow.
- Interpret the data for readers and demonstrate either how the data resolve the research problem of why they *don't* completely resolve the problem.
- Alert readers to the possible weaknesses of the study- for instance, what its design flaws may have been and what assumptions and biases might have affected results and interpretations.
- Conclude by summarizing the findings and connecting them to contexts beyond the study itself – for example, relating findings to current theoretical perspectives or drawing implications for future policies or practices.

Explanation of the Research Problem or Question

- First section of the report provides a statement of the research problem of question and any other information that readers will need to understand it.
- After a few introductory comments that provide background and a rationale for your study, your report should set forth clearly and unmistakably the overall problem or question you have addressed.
- Readers should be able to comprehend *from the report alone* what your problem was and why it was an important one to investigate.
- You may use subheadings to draw readers' attention to the research problem. And any *a priori* hypotheses should be clearly stated early in the report.

Description of Study Design and Data Collection Methods

- Researcher should state whether qualitative or quantitative methods (or both) were used and what particular research traditions were followed – for example, whether the study was a survey, a longitudinal study, a single-group time-series study, an ethnography, a grounded theory study, or some combination of approaches.
- A research report should include a specific section labelled "Methods".
- The research setting, sample, assessment strategies, and procedures should be described with as much precision as possible.
- Ideally readers should know – from this description alone – exactly what was done, to the point where readers could replicate the study and, in most cases, get similar results.

Presentation of the Data and their Analyses

- Extremely important section.
- If you have performed statistical analyses of quantitative data, you should include your rationale for employing the particular procedures you have used.
- It is important for readers to know not only that you used a particular technique but also *why* you used it.
- Throughout the entire research you should remember that the answer to the question *Why?* Is just as important as the answer to the question *What?*
- Often helpful to begin the discussion of the data with an advanced organizer in which you lay our the overall organization of your data presentation.
- For an excellent discussion of what *not* to do when creating graphs and other visual representations of research data, refer to Wainer's (1984) article, "How to Display Data Badly" in the journal *The American Statistician.*

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- Regardless of how you present your data, it is imperative that you present them in enough detail that will support the conclusions you draw.
- If the data are extensive and you choose to present them only in summary form in the main body of the report, you might present them in their entirety in an appendix.
- In this way, anyone wishing to replicate the research effort should be able to reach essentially the same conclusion.

Interpretations of the Data

- To display the data is certainly important, but the *interpretation of the data* is the essence of research.
- Without inquiring into the underlying meaning of the data, no resolution of a research problem or questions is possible.
- Be careful not to go *too far beyond* the data.
- *Correlation does not indicate causation.*
- Research is indeed an exciting quest, but you must never let your enthusiasm interfere with your open-mindedness.
- What is the data *don't* support any expectations you might have had or any predictions you might have made?
- Look again at your methodology and data analyses to see if you can identify one or more weaknesses in what you have done.
- Or may be your expectations and predictions *were* wrong.
- In the final analysis, *your data must speak for themselves.*

Identification of Possible Weaknesses of the study

- Be upfront about any assumptions that may have influenced your methods, analyses and interpretations.
- Acknowledging your biases involves *consciously thinking about* what your biases might be – a process that qualitative researchers call *reflexivity*.
- All those who read the research report should know precisely how far the research effort extended and what its boundaries were.
- Into what relevant areas did the research effort *not* inquire?
- What aspects of the problem were *not* studied?

Summary and Connections to a Broader Context

- Any research report should end by bringing closure to the interpretation of the data.
- In this final section, you should clearly summarise your findings and interpretations relative to your overall research problem or question and to any subproblems and hypotheses.
- You need to address the question, *So What?* In what way does the study contribute to our collective knowledge about some aspect of our physical or biological world or of human experience?
- You might compare your findings with other, previously reported research findings and point out similarities and dissimilarities.
- You might argue that your results either support or disconfirm an existing theoretical or conceptual framework.
- You might offer suggestions for how future research could further advance the fronteirs of knowledge about your topic.
- And if you have developed new methodological strategies or assessment tools to study your problem, you might argue that they are, in and of themselves, valuable contributions to the research literature in your field.

Next class

- Communicating research work through
  - Research paper
  - Conference presentation
  - Poster

Source

Inputs from Practical Research – Planning and Design. Twelfth Edition.
Paul D. Leedy and Jeanne Ellis Ormrod.