SACRAO 2015 Annual Meeting
Mobile, AL
Sunday, February 1, 2015
1:00 PM-3:00 PM
201A

Workshop
Communicating Research and Best Practices:
Developing Manuscripts for Publication
Presenters

Matthew McCrickard,
Wallace State Community College

Reta Pikowsky,
Georgia Institute of Technology
Discussion Points

• Why get involved?
• How to go about identifying a topic or area to write about
  • Preparing the proposal
  • Developing the outline
• Thoughts before you decide on type of research
• Common types of research designs
  • Quantitative versus Qualitative research
  • Quantitative research
  • Qualitative research
• Literature review
• Submission process
  • When, how
  • Peer review
  • Editing
• Summary of findings and recommendations for best practices
Why get involved?

- There is great wisdom and knowledge among our colleagues in higher education – it is important to share it.
- We need articles to stay current on emerging trends, what others are doing to be successful, what we are learning from research that helps guide our planning.
- We need books to bring together information that you otherwise would not find collected in any other place.
- We need to document and secure for the future our collective wisdom and to describe history as it is unfolding.
- Writing for publication is very enlightening and very enriching:
  - How much you know
  - How much you will learn
### Thought Process

- What’s your passion?
- Where do you find a gap in current research that you feel needs attention?
- Is there a current trend unfolding that you think could be very important for the future?
- Is there an area that has been well addressed, but not for the type of college or university where you work?
- Have you developed locally software, policies, or best practices that you feel could have more universal applicability?
- Have you completed a major project of some kind that provided a lot of what when right and what went wrong lessons?
- Has your campus experienced a major event that you could write about, helping the rest of us know how to better prepare in case we have a similar experience in the future?
Preparing the Proposal

• The proposal should reflect your thinking and design of an original research project.
• It should be sound and compatible with the research interests of the audience you have in mind.
• It should be feasible to complete in a relatively short period of time (1-3 years) period of time.
• The outcome of the proposed research should be new information that can be published in the peer reviewed literature and that will further knowledge in your field.
Preparing the Proposal

• Key elements of a good proposal:
  • Statement of the problem (clear and concise statement about your research topic)
  • Background and relevance to previous research on the topic (describe how the previous work on others led you to propose this research)
  • General methodology you will use (how are you going to gather, interpret, and evaluate your results?)
  • Describe any new or unusual techniques you will use
  • Explain the expected results, significance, and any practical applications of what you discover
  • Literature cited

Source: http://sites.nationalacademies.org/PGA/RAP/PGA_052087
Developing the Outline

The following elements are important to your outline:

1. **Introduction** (explain the issue you are examining and why it is important).
2. **Background/Review of the Literature** (write a description of what is already known about the subject and provide a short discussion as to why more study needs to be done).
3. **Rationale** (provide a description of the questions you are raising and explain how they are related to the larger issues in this area).
4. **Method and Design** (write a description of how you will go about collecting data and testing the questions you are raising: you are not required to come up with any new techniques; and you can look at other articles or publications to determine what methods others are using).
5. **Significance and Conclusion** (describe how your proposal would provide useful information or might lead to improvements in a certain area, or how it would generally benefit the field).
6. **References** (list all references utilized in the process)

Source: http://web.pdx.edu/~dbls/proposals.html
Before you decide on what type of research some important thoughts...

- Select a topic you are either passionate about or very curious.
- According to Stephen Covey, all things are created twice. First, we create things mentally and second there is a physical creation. So, “begin with the end in mind.”
- TLAR – most important statistical term you will ever use. **That Looks About Right**
- Make a plan for how you will complete the manuscript – I suggest the following approach that Ohio State used in the Sugar Bowl...when eating an elephant it’s one bite at a time. One a more serious note, my secret was work on your manuscript every day even if only for an hour...
Common types of research designs

Most rigorous: True Experimental

Quasi-Experimental

Non-Experimental

Least rigorous
Major types of research approaches

• Qualitative – consists of words, observations, and narratives.
  • Analysis of qualitative data might include identification of key words or phrases, themes and concepts.
  • An example would be a focus group where the researcher would analyze a transcript of the conversation for words, phrases, themes or concepts.

• Quantitative – numerical information.
  • Analysis of quantitative data involves use of parametric or non-parametric (this determination is based on type of data – ratio and interval for parametric and nominal and ordinal for non-parametric).
  • An example would be a survey instrument.
<table>
<thead>
<tr>
<th>Qualitative Methods</th>
<th>Quantitative Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods include focus groups, in-depth interviews, and reviews</td>
<td>Surveys</td>
</tr>
<tr>
<td>Primarily inductive process used to formulate theory</td>
<td>Primarily deductive process used to test pre-specified concepts, constructs, and hypotheses that make up a theory</td>
</tr>
<tr>
<td>More subjective: describes a problem or condition from the point of view of those experiencing it</td>
<td>More objective: provides observed effects (interpreted by researchers) of a program on a problem or condition</td>
</tr>
<tr>
<td>Text-based</td>
<td>Number-based</td>
</tr>
<tr>
<td>More in-depth information on a few cases</td>
<td>Less in-depth but more breadth of information across a large number of cases</td>
</tr>
<tr>
<td>Unstructured or semi-structured response options</td>
<td>Fixed response options</td>
</tr>
<tr>
<td>No statistical tests</td>
<td>Statistical tests are used for analysis</td>
</tr>
<tr>
<td>Can be valid and reliable: largely depends on skill and rigor of the researcher</td>
<td>Can be valid and reliable: largely depends on the measurement device or instrument used</td>
</tr>
<tr>
<td>Time expenditure lighter on the planning end and heavier during the analysis phase</td>
<td>Time expenditure heavier on the planning phase and lighter on the analysis phase</td>
</tr>
<tr>
<td>Less generalizable</td>
<td>More generalizable</td>
</tr>
</tbody>
</table>

*http://www.orau.gov/cdcynergy/soc2web/Content/activeinformation/tools/toolscontent/SOC_qual_quant_chart.htm*
Quantitative Research

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clear and specific</td>
<td>• Collection methods allow for limited number of response options</td>
</tr>
<tr>
<td>• With proper analysis, accurate and reliable (TLAR)</td>
<td>• For statistical significance may require complex sampling procedures</td>
</tr>
<tr>
<td>• Easy to communicate results via charts and graphs</td>
<td>• May not accurately describe a complex situation</td>
</tr>
<tr>
<td>• Much data already exists that can be analyzed</td>
<td>• Statistical analysis expertise required</td>
</tr>
</tbody>
</table>
## Analysis of Quantitative Data

### Descriptive/ Central Tendency Analysis
- Range
- Minimum
- Maximum
- Frequency
- Mean
- Median
- Mode
- Standard Deviation

### Inferential
- Correlational
- Comparison of Means
- Regression
Tools of the trade

- IBM SPSS (Statistical Package for the Social Sciences)
- SAS (Statistical Analysis System)
- Microsoft Excel
- Microsoft Access
- SurveyMonkey (www.surveymonkey.com)
- SurveyGizmo (http://www.surveygizmo.com/)
- Checkbox (http://www.checkbox.com/)
- See this website for an article by Eric Leland, February 2011 that compares online survey tools (http://www.idealware.org/articles/fgt_online_surveys.php)
- SISA (www.quantitativeskills.com/sisa/)
- ViSta (www.visualstats.org/)
Welcome to Georgia Tech’s Self-Service Reporting and Analytics!

Launched by the Office of Institutional Research & Planning, this is the central site of official Institute information.

Official census data is used to report to the U.S. Department of Education, University System of Georgia, and to complete surveys such as the U.S. News & World Report, Princeton Review, among many others.

- Enrollment
- Degrees Awarded
- Credit Hours
- Grades (Coming soon)
## Enrollment History

Data was last refreshed on 29JAN15

### Fall

<table>
<thead>
<tr>
<th>College</th>
<th>2010 Fall</th>
<th>2011 Fall</th>
<th>2012 Fall</th>
<th>2013 Fall</th>
<th>2014 Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Architecture</td>
<td>1,097</td>
<td>1,011</td>
<td>875</td>
<td>801</td>
<td>783</td>
</tr>
<tr>
<td>College of Computing</td>
<td>1,762</td>
<td>1,664</td>
<td>1,830</td>
<td>1,974</td>
<td>3,583</td>
</tr>
<tr>
<td>College of Engineering</td>
<td>11,911</td>
<td>12,335</td>
<td>13,009</td>
<td>13,182</td>
<td>13,355</td>
</tr>
<tr>
<td>College of Registrar</td>
<td>990</td>
<td>648</td>
<td>575</td>
<td>600</td>
<td>702</td>
</tr>
<tr>
<td>College of Sciences</td>
<td>2,117</td>
<td>2,121</td>
<td>2,090</td>
<td>1,965</td>
<td>1,856</td>
</tr>
<tr>
<td>Ivan Allen College</td>
<td>1,183</td>
<td>1,085</td>
<td>1,043</td>
<td>877</td>
<td>781</td>
</tr>
<tr>
<td>Scheller College of Business</td>
<td>2,060</td>
<td>2,077</td>
<td>2,128</td>
<td>2,072</td>
<td>2,049</td>
</tr>
<tr>
<td>Total</td>
<td>20,720</td>
<td>20,941</td>
<td>21,557</td>
<td>21,471</td>
<td>23,109</td>
</tr>
</tbody>
</table>
# Qualitative Research

## Strengths

- Issues can be examined in detail and in depth
- Interviews are not restricted to specific questions and can be guided by the researcher in real time
- The framework and direction can be revised as new information emerges
- Data based on human experience can be powerful and compelling
- Subtleties and complexities of the research subjects are discovered more often with this approach
- Data usually collected from a few cases or individuals so cannot be generalized, but can be transferred to another setting.


## Limitations

- Research quality is dependent on the researcher’s skills and can be influenced by his/her personal biases
- Rigor is more difficult to maintain, assess, and demonstrate
- Volume of data makes analysis and interpretation time consuming
- Sometimes not as well understood and accepted by the science community
- Researchers presence during the research, which is often unavoidable, can affect subjects’ response
- Issues of anonymity and confidentiality can present problems in presenting findings
- Findings can be more difficult and time consuming to present in visual formats

Analysis of Qualitative Data

- Get to know your data
  - Read and re-read the text
  - If you have tapes, listen to them several times
  - Write down any impressions as you go along
  - Just because you have the data, doesn’t mean it is of good quality
  - Consider the quality of the data before you begin the actual analysis

- Focus your analysis
  - Review the purpose of your research and what it was you wanted to find out
  - Identify a few key questions that you want the analysis to answer
    - Focus by question or topic, time period or event (you are looking for consistencies and differences in the way the respondents answered the questions)
    - Focus by case, individual, or group
      - One case could be one family, one agency, one individual, or one group

Source: http://learningstore.uwex.edu/assets/pdfs/G3658-12.PDF
Analysis of Qualitative Data

• Categorize the information
  • Categorizing does not involve assigning numerical codes as you do in quantitative analysis where you label exclusive variables with preset codes or values
• Bring meaning to the words by
  • Identifying themes or patterns (ideas, concepts, behaviors, terminology or phrases used, etc.)
  • Organizing them into coherent categories
  • This can be very time consuming, but it is the very crux of qualitative data analysis
• As you go along, you may identify subcategories

Source: http://learningstore.uwex.edu/assets/pdfs/G3658-12.PDF
Examples of Categories (Identified to Sort Responses to Questions)

<table>
<thead>
<tr>
<th>Question</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What makes a quality educational program?</td>
<td>1. Staff (Stf), relevance (Rel), participation (Part), content (Con)</td>
</tr>
<tr>
<td>2. What is the benefit of a youth mentoring program?</td>
<td>2. Benefits to youth (Y), benefits to mentor (M)</td>
</tr>
<tr>
<td>3. What do you need to continue your learning about evaluation?</td>
<td>3. Practice (P), additional training (Trg), time (T)</td>
</tr>
</tbody>
</table>

Source: http://learningstore.uwex.edu/assets/pdfs/G3658-12.PDF
Instruments – Qualitative Research

- The researcher himself/herself (since he or she is actually part of the process of doing qualitative research)
- Survey
- Interviews
- Full participation (the interviewer joins the group)
- Focus groups
- Drawings
- Documentary analysis
- Field observation
- Analysis of videos and other objects

Source: http://www.wisegeek.com/what-are-qualitative-instruments.htm
5 Tips for Writing a Great Survey

**Define Your Objectives.** Figure out the decision or decisions you're trying to make to focus your survey.

**Work Backwards.** Once you've set your objectives, determine the data you need to gather in your survey to make your decision.

**Check for Bias.** Make sure you're not asking leading questions.

**Do a Test Drive.** Send your survey to friends and colleagues for a test run. They'll help make sure your questions and response options are understandable and all your survey logic works.

**Collect Results and Analyze Data.** This is where it gets really fun. The data rolling in from your survey should help you decide what product to launch next, how to raise more money at your next fundraiser, what to do to keep customers coming back, what to serve at your next party and much more.

Survey Design

Ten Important Steps

1. Clearly define the purpose of your online survey
2. Keep the survey short and focused
3. Keep the questions simple
4. Use closed-ended questions whenever possible
5. Keep rating scale questions consistent through the survey
6. Logical ordering of the questions
7. Pre-test your survey
8. Consider your audience when sending survey invitations
9. Consider sending several reminders
10. Consider offering an incentive

Source: https://www.surveymonkey.com/blog/en/blog/2012/04/13/10-online-survey-tips/
Types of Survey Questions

• Multiple choice questions
• Rating scales (Likert scale)
• Comment/Essay Box Question
• Demographic Questions
• Open-ended questions:
  • Open-ended questions are exploratory in nature. As discussed with the “How do you get to work?” question, it allows for the respondent to provide any answer they choose without forcing them to select from concrete options.
• Closed-ended questions:
  • Closed-ended questions come in a multitude of forms, but are defined by their need to have explicit options for a respondent to select from. Each question type does not allow the respondent to provide unique or unanticipated answers.

Source: http://fluidsurveys.com/university/comparing-closed-ended-and-open-ended-questions/
Steps for Conducting In-Depth Interviews

1. Plan – identify stakeholders, identify what information is needed from them, list stakeholders to be interviewed, ensure research will follow appropriate standards.

2. Develop the interview instruments – What to say when setting up the interview, what to say when beginning the interview, what to say when concluding the interview, what to do during the interview, develop a guide that lists the questions and includes an informed consent form.

3. Train the data collectors.

4. Collect the data.

5. Analyze the data.

6. Disseminate the findings.

Source: http://www2.pathfinder.org/site/DocServer/m_e_tool_series_indepth_interviews.pdf
Tips for Effective Interviews

• Questions should be designed to elicit an individual’s experiences and understanding
  • Ask about a specific experience rather than a general topic
• Questions should be broad and open-ended, rather than tailored for a specific type of answer
• Avoid questions that can be answered “yes” or “no”
• Use follow-up questions to encourage expansion of ideas that are most relevant
• Using probing questions that are short and simple to get more depth and detail
• Reframe questions as necessary
• Create a comfortable environment
• Pay attention to the order of the questions
• Questions may be in person or over the phone
• Ideally, all interviews should be recorded
• Avoid biasing responses
  • Don’t share your hypotheses
  • Do not use emotional, loaded, or biased language
  • Be careful about what your behavior conveys to participants

Source: http://www.dism.ssri.duke.edu/pdfs/Tipsheet%20-%20Qualitative%20Interviews.pdf
A qualitative research design is a research plan that includes methods of data collection and analysis:

- Designing the scope (domain of inquiry, coverage and reach of the project; substantive area of inquiry-limits of the research topic and the areas to be researched-the settings)
- Nature of the data (how you will create the data, how will you ensure a fit of the data to the research task? An interesting research question will usually require several strategies for making the data, relying on one technique may produce homogeneous data)
- Read other studies critically, consider whether they were convincing, or not

Source: http://www.sagepub.com/upm-data/13172_Chapter4.pdf
Design – Qualitative Research

- Key factors
  - Establish a purpose, what are you asking and why are you asking it?
  - Determine if the qualitative method is a good fit for your question
  - Nail down the scope of the project
  - Plan the nature of the data, what sorts of data, how much?
  - Think ahead, how satisfying will it be, how robust?

Source: http://www.sagepub.com/upm-data/13172_Chapter4.pdf
Machi and McEvoy (2012) suggest that a “literature review summarizes and evaluates existing knowledge on a particular topic” (p. 2).
Machi & McEvoy’s (2012) Six Steps to Writing a Literature Review

- Select a Topic
- Search the Literature
- Develop the Argument
- Survey the Literature
- Critique the Literature
- Write the Review
Literature Review Process

Assemble

Organize

Analyze Patterns
Summarizing Your Findings

**Introduction**
- Opening and Topic Introduction
- Context and Significance
- Preview / Organization

**Body**
- Tell the story!
- Amalgamation of ideas.

**Summation**
- Review / Reminder about the topic
- Describe the implications
Best Practices Based on Findings

• Out of your findings, particularly in our field, it is expected that there will be some recommendations for best practices based on what you learned from the project.

• Particularly in our field, higher education, it is important to know what is and isn’t working on other campuses and why.

• We can learn from each other’s failures and successes to better serve our local campus communities.

• This is why you need to be involved, do research and publish it – you can help all of us know what is going on out there.
Submission Process

• Look for the “Information for Authors” section

• *The SACRAO Journal* Production Timeline

• Editorial Process – “peer review”

• Where may I go for help?
Resources

References:


• Other potentially helpful reading:
  • *Research in Higher Education*, Journal of the Association for Institutional Research
Questions and Discussion
Connectivity

Conference Guidebook App

• Download Guidebook (free) on your smartphone.
• You’ll have vital conference information plus good intel about nearby entertainment, dining, shopping, and tours in the palm of your hand! The app is available for download for iOS and Android devices. Once you download Guidebook, search for SACRAO2015.

Wi-Fi Access

• Wireless internet is complimentary in the convention center and Renaissance Hotel. You can upgrade to enhanced high speed at the Renaissance for an additional cost. Convention Center Wi-Fi:
  Access Code: SACRAO
  Password: sacrao2015
Contact Information

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