How to do bigger better research: Collaboration tools for researchers

Chair: Kimberly A. Barchard

Handouts at http://faculty.unlv.edu/barchard/
How to do bigger better research

- Humankind is capable of amazing projects

- But researchers usually work individually or in very small groups
How to do bigger better research

- Benefits and challenges of working together
- Software to facilitate collaborative
  - Data collection
  - Writing
  - Long distance meetings
- Collaborating across institutional boundaries
Better Data, Better Writing, More Perspectives, Meeting Challenges

Kimberly A. Barchard
University of Nevada, Las Vegas

Bettina J. Casad
California State Polytechnic University, Pomona

Wind Goodfriend
Buena Vista University
Benefits and Challenges of Collaborative Research

- Benefits
  - For data collection
  - For writing

- Challenges
Benefits of Collaborative Data Collection

- Access to more resources
- More time-consuming data collection and scoring
- More expensive data collection and scoring
Benefits of Collaborative Data Collection

- Larger samples
- More diverse samples
- Analyses within subgroups
Benefits of Collaborative Data Collection

- More homogeneous samples
  - Allows selectivity in inclusion criteria
  - Increases statistical power
Benefits of Collaborative Data Collection

- Allows specialization:
  - Not everyone has to collect data
Benefits of Collaborative Writing

- More content area expertise
- More perspectives
- More data analysis skills
Benefits of Collaborative Writing

- Multidisciplinary research
  - A signaling pathway in epilepsy
    - Molecular biology
    - Electrophysiology
    - Genetics
    - Behavioral genetics
    - Chemistry

- Broaden our own perspectives
Challenges of Collaborative Research
Challenges of Collaborative Research

- Finding collaborators
  - Previous advisors
  - Previous students
  - Publications
  - Conference programs
Challenges of Collaborative Research

- Creating a sense of community
  - Share pictures and backgrounds
  - Long-distance meetings
Challenges of Collaborative Research

- Disagreements with collaborators
  - To prevent serious disagreements:
    - Get references for potential collaborators
    - Enter relationship slowly and cautiously
    - Establish shared norms and protocols
  - To solve disagreements
    - Establish a plan for resolving disagreements
Challenges of Collaborative Research

- Standardizing procedures
  - Physical space
  - Data collection scripts
  - Data entry procedures
  - Data scoring procedures
Challenges of Collaborative Research

- Obtaining recognition for one's contribution
  - Agree on authorship order early
  - If there are many authors:
    - Create multiple products with varying authors
    - First author, and then alphabetical
Challenges of Collaborative Research

- Changing how we evaluate contributions
  - Authorship order is an impoverished evaluation system
  - Need more information on contributions
    - Provide written summaries of contributions
  - Need more information on project scope
    - Include abstracts on evaluation materials
Challenges of Collaborative Research

- Software tools to facilitate collaboration:
  - Data collection
  - Writing
  - Long-distance meetings
Challenges of Collaborative Research

- Working effectively across institutional boundaries
  - Structures
  - Norms and protocols
Collaborative Research

- Handout discusses additional advantages and how to meet additional challenges.

- It is beneficial and feasible to collaborate in larger groups than you previously had.
Please hold your questions until the end of the symposium