Workshop Day 1:

Effective Mentorship in Research Writing

and

Networking Between Institutions to Promote Research Writing

Barbara Gastel
INASP Associate—AuthorAID
Professor, Texas A&M University
bgastel@cvm.tamu.edu

AUTHORAID

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Happy Saint Patrick's Day!

Introductions

- The participants
- The workshop
  - Intended mainly to
    - Help mentors guide PhD students in research communication
    - Foster networking among institutions to promote research writing
  - Also serves as a brief overview of research communication (to use or share)
  - Case-based, interactive

Cases and Presentations: The Research-Communication Context

1. Being an effective mentor or mentee
2. Helping a mentee approach a writing project
3. Mentorship and the publication process

Being an Effective Mentor or Mentee

Case 1: Getting Off to a Good Start

Ann is a new PhD student, and young faculty member Dr. Mary Brown will be her mentor. Each looks forward to the mentoring relationship and is eager to make it work well. However, in the past each has had some not-so-good experiences related to mentoring. What can Ann and Dr. Brown each do to help ensure that this new mentoring relationship succeeds?

Some Suggestions for Mentors

- Establish expectations.
- Balance flexibility and firmness.
- Give mentees chances to join you.
- Give mentees room to discover and grow.
- Be prepared to learn from the mentee.
- Know that no one mentor can provide all.
- Be prepared for the relationship to evolve.
- Other

Some Suggestions for Mentees

- Establish expectations.
- Make the most of meeting time.
- Learn from your mentor's experience.
- Be considerate of your mentor.
- Also be a resource for your mentor.
- Be prepared for the relationship to evolve.
- Follow up (both short- and long-term).
- Other

Case 2: Feedback That Facilitates

Looking back to her own years as a PhD student, Dr. Mary Brown recalls receiving feedback on her writing from her mentor, Dr. Priscilla Potts. Dr. Potts often made brilliant changes in Mary's writing. But after receiving the feedback, Mary would feel so demoralized that she hardly could write for the next week. Now that she is a mentor herself, she feels determined to provide feedback in a more supportive way. What would you recommend to her?

Providing Feedback: Some Suggestions

- Elicit the mentee's perceptions.
- Consider serving a criticism sandwich (praise, then criticism, than praise).
- Express criticisms as perceptions.
- Criticize the product, not the person.
- Discuss ways to improve.
- If feasible, close the feedback loop.
- Other

Mentoring Others in Their Writing: A Few Ideas to Consider

- Emphasize writing as a process, not a product.
- Emphasize revision.
- Offer examples of writing to use as models.
- Share some of your experiences, including challenges you faced.
- Sometimes review writing line by line with the author present.
- Remember to praise as well as criticize.
- Join in celebrating the mentee's successes.

Helping a Mentee Approach a Writing Project

Case 3: The Mired Mentee

Zeke, a PhD student, finished some research two months ago and is writing a paper about it. However, he still has little of the paper written. Zeke admits to his mentor, Dr. Kevin Yates, that he is experiencing writer's block. Dr. Yates knows that other graduate students also have this problem, and he thinks it would be a good discussion topic for writing club. How might mentors introduce this topic in writing club? What suggestions might club members come up with that could help Zeke and others?

Case 4: Too Similar

Beth, a PhD student, has drafted a paper and given it to her mentor, Dr. Robert Jones, for review. Reading the discussion section, Dr. Jones notices a paragraph that seems strangely familiar. On checking, he finds that, except for a word or two per sentence, the paragraph is the same as one in a paper that he has published. How do you suggest that Dr. Jones proceed?

Approaching a Writing Project

Overview

- Establishing the mindset (attitude)
- Knowing the ethics
- Preparing to write
- Doing the writing
- Revising your work

Establishing the Mindset

- Remember that you are writing to communicate, not to impress.
- Realize that those reading your work want you to do well.
  - Journal editors
  - Peer reviewers
  - Professors

    The purpose of their constructive criticism is to help you succeed.

Knowing the Ethics

- Authenticity (not fabrication)
- Accuracy
  - Providing complete data (not only those supporting your hypothesis)
  - Avoiding inappropriate manipulation of images such as photographs
  - Using appropriate statistical procedures

Knowing the Ethics (cont)

- Originality
  - Not republishing the same findings (except under special circumstances, with the original source cited)
  - Not submitting the same manuscript to two or more journals at once
  - Not dividing one small research project into many tiny papers ("salami science" or "cucumber science")

Knowing the Ethics (cont)

- Credit
  - Citing sources of information and ideas (also aids credibility, helps in finding out more)
  - Avoiding excessive use of others' words
    - Recording sources when copying items or taking notes
    - Placing in quotation marks, or indenting, items used verbatim
    - Perhaps drafting some items while not looking at the source materials

Knowing the Ethics (cont)

- Observing copyright and obtaining needed permissions
- Ethical treatment of humans and animals (and documentation thereof in publications)
- Disclosure of conflicts of interest
  - Financial
  - Other

Preparing to Write

- Use published items as models.
- Obtain and review instructions.
- Perhaps consult a style manual—for example:
  - Scientific Style and Format
  - AMA (American Medical Association) Manual of Style
- While you are gathering content, write down ideas that occur to you.

Preparing to Write (cont)

- Do lots of "prewriting"—for example:
  - Stack papers in the order you plan to cite them.
  - List points you want to make.
  - Perhaps make an outline.
- If you're having trouble formulating ideas, perhaps do something else for a while.

Doing the Writing

- Schedule specific times to write.
- Start with whatever part you find easiest.
- Don't interrupt your writing to search for small details.
- Realize that often in writing there is no "one right way" but rather a series of problems with more than one solution.

Revising Your Work

- Note: Good writing is largely a matter of good revising.
- First revise your writing yourself. Then get feedback from others and revise more.
- Consider having an editor help you.
- Avoid the temptation to keep revising your writing forever.

Case 5: Ready for Revision

Using the good suggestions from his fellow writing club members and his mentor, Zeke has overcome his writer's block. He has finished drafting his journal article and has revised it twice himself. Now he is ready for feedback from others, so he shares his newest draft with his group in writing club. How might the group best proceed in reviewing the draft? What aspects of the writing might be worthwhile for the group to address?

Questions to Consider in Revising

- Does the manuscript contain everything it should?
- Does it contain anything it shouldn't?
- Is all the information accurate?
- Is the content consistent throughout?
- Is everything logically organized?
- Is everything clearly worded?

Questions (cont)

- Are points stated briefly, simply, and directly? In other words, is everything concise?
- Are grammar, spelling, punctuation, and word use correct throughout?
- Are all figures and tables well designed?
- Does the manuscript comply with the instructions?

Mentorship and the Publication Process

Case 6: A Variety of Venues

Craig, a PhD student, has completed an epidemiologic study in his home region. When he presents it at a department seminar, the attendees urge him to submit a paper. A classmate suggests sending it to *Science* or *Nature.* The associate editor of the university journal encourages Craig to submit it there, noting likelihood of publication in the next issue. Someone else says to obtain a list of journal impact factors and decide accordingly. Craig seeks advice on the matter from his mentor, Dr. Linda Moore. Dr. Moore notes that writing club will meet this week and suggests asking the group for its thoughts. What points about journal choice would be good to ensure emerge during the discussion?

Case 7: Too Good to Be True

After her paper is rejected by a top journal, Liz, a PhD student, is trying to decide where to submit it next. She receives email from a journal seeking submissions. According to the email, this open-access journal (*The Consolidated Journal of Sciences and Humanities*) has a publication fee of only $99, completes peer review within 2 weeks, and then posts accepted papers within 1 week. When Liz looks at the journal's website, she notes that the editorial board contains many famous scientists, including Marie Curie and Jonas Salk. Liz excitedly tells her mentor, Dr. Arthur Adams, about this journal. How should Dr. Adams proceed?

Case 8: Instruction on Instructions

Don, a PhD student, wants to submit a paper to a journal published by a prestigious society in his field. On looking at the instructions to authors from the journal, he is surprised to find that they are almost 20 pages long. "No one would pay attention to such long instructions," Don says to his advisor, Dr. Peter Clark. "I'm sure the copyeditors at the journal will correct any problems once my paper is accepted." How should Dr. Clark proceed?

Choosing a Target Journal and Using Its Instructions to Authors

Identifying a Target Journal

- Decide early (before drafting the paper). Do not write the paper and then look for a journal.
- Look for journals that have published work similar to yours.
- Consider journals that have published work you cite.

Some Factors to Consider

- Aims and scope of journal
- Audience
- Prestige
- Access
- Publication time
- Use of article-based (continuous) publication
- Ability to post supplementary material
- Publication costs, if any
- Likelihood of acceptance

Some Factors to Consider (cont)

- Impact
  - Impact Factor (from Science Citation Index—Journal Citation Reports)
    - Indicates how much articles in the journal tend to be cited
    - Does not say how much a given article will be cited
    - Not valid for comparison from field to field
    - Changes over time
  - Other impact—for example, on
    - Practice
    - Policy
    - Teaching
    - Media coverage

Moving Beyond Impact Factor: Some Resources

- Article-Level Metrics: A SPARC Primer
  - From SPARC (the Scholarly Publishing and Academic Resources Coalition)
  - Discusses indicators of the impact of individual articles (for example, views, downloads, citations, social-media mentions, news coverage)
- San Francisco Declaration on Research Assessment ("DORA")

Predatory Journals

- "Journals" that obtain publication fees but are not valid peer-reviewed scholarly publications
- Some clues that a journal *might* be predatory (especially if several such items are present):
  - Unrealistically broad scope
  - Unrealistically short stated turnaround times
  - Flashy but poorly crafted, ungrammatical websites
  - Fake metrics
  - Incomplete contact information
  - Inclusion in Beall's List

Using the Journal's Instructions

- Obtain the journal's instructions from its website.
- Read the instructions to authors before starting to prepare your paper.
- Consult the instructions while preparing your paper.
- Check the instructions again before submitting your paper.

Some Questions the Instructions May Answer

- What categories of article does the journal publish?
- What is the maximum length of articles?
- What is the maximum length of abstracts?
- Does the journal have a template for articles? If so, how can it be accessed?
- What sections should the article include? What are the guidelines for each?

Some Questions (cont)

- What guidelines should be followed regarding writing style?
- How many figures and tables are allowed? What are the requirements for them?
- In what format should references appear? Is there a maximum number of references?
- In what electronic format should the paper be prepared?

Case 9: A Shortcut or Not?

June, a PhD student eager to graduate, obtains two interesting results from a study. When she next meets with her mentor, Dr. Lucy Sloan, June says she would like to write a paper about one of the results and another paper about the other, thus completing the two-paper requirement for graduation. How should Dr. Sloan proceed? Might this situation be one to discuss in writing club?

Case 10: Too Great a Barrier?

Fred, a PhD student, submits a paper to a good peer-reviewed journal. When the paper is accepted contingent on revision, Fred feels discouraged. However, his mentor, Dr. Susan White, explains that revisions usually are required, and Fred starts working on the revisions. Fred finds that in general the proposed revisions improve the paper or at least do not harm it. However, he finds that one of the proposed revisions would introduce a major inaccuracy. Alarmed, Fred tells Dr. White that he wants to withdraw the paper and submit it to another journal. How should Dr. White proceed?

Case 11: An Inconveniently Timed Absence

Jill, a PhD student, is first author of a paper that has been accepted by a journal. Jill receives from the journal an email message stating that she will receive page proofs electronically next Wednesday and then will have 48 hours to review them and inform the journal of any errors. However, Jill has long been scheduled to do field work all next week in a region without Internet access. Jill asks her mentor, Dr. Rita Mills, what she should do. How should Dr. Mills proceed?

Publishing a Journal Article

Deciding What (or When) to Publish

- Some factors to consider: quality of the work, extent of the work, interest to others
- Suggestions:
  - Seek guidance in this regard from others in your field who are more experienced in publishing journal articles.
  - Present your work orally first. Doing so can help in deciding whether the work is publishable and in shaping the paper.

Submitting the Paper

- Traditional submission (by mail)—now rare
- Electronic submission
  - Commonly via online submission system
  - Sometimes as e-mail attachment
- Inclusion of a cover letter (conventional or electronic)
- Completion of required forms

Some Categories of Editors at Journals

- Helpful to know because you might interact with each
- Main categories:
  - Editor-in-chief (and sometimes associate editors etc)—concerned mainly with content
  - Managing editor(s)—concerned mainly with administration of the journal
  - Manuscript editor(s)—improve the writing and maintain a consistent style

Initial Screening by the Journal

- For appropriateness of subject matter
- For compliance with instructions
- For overall quality (sometimes)

Peer Review

- Evaluation by experts in the field
- Purposes:
  - To help the editor decide whether to publish the paper
  - To help the authors improve the paper, whether or not the journal accepts it

The Editor's Decision

- Based on the peer reviewers' advice, the editor's own evaluation, the amount of space in the journal, other factors
- Options:
  - Accept as is (rare)
  - Accept if suitably revised
  - Reconsider if revised
  - Reject

Revising a Paper

- Revise and resubmit promptly.
- Indicate what revisions were made.
  - Include a letter saying what revisions were made. If you received a list of requested revisions, address each in the letter.
  - If requested, show revisions in Track Changes.
- If you disagree with a requested revision, politely explain why in your letter. Try to find a different way to solve the problem that the editor or reviewer identified.

Answering Queries

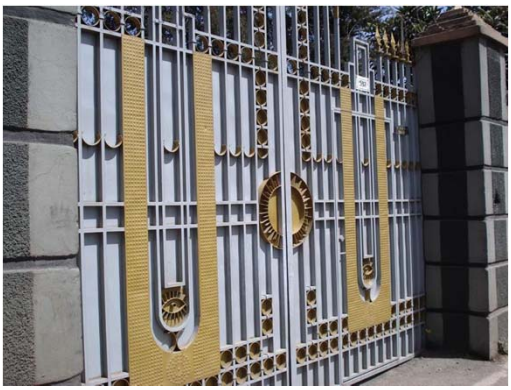
- Queries: questions from the manuscript editor
- Some topics of queries:
  - Inconsistencies
  - Missing information
  - Ambiguities
  - Other
- Advice: Respond promptly, politely, and completely yet concisely.

Reviewing Proofs

- Proofs: typeset material to check
- Review the proofs promptly.
- Some things to check:
  - Completeness (presence of all components)
  - Accuracy (absence of typographical errors in text and references)
  - Placement of figures and tables
  - Quality of reproduction of figures
- Note: This is not the time to rewrite the paper.

Cases and Presentations:
Section-by-Section Mentorship
in Preparing Scientific Papers

The Structure of a Scientific Paper



The IMRAD Format for Scientific Papers

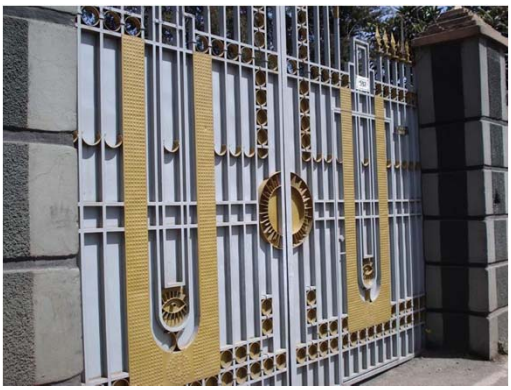
- **I**ntroduction: What was the question?
- **M**ethods: How did you try to answer it?
- **R**esults: What did you find?
- **A**nd
- **D**iscussion: What does it mean?

A More Complete View

- (Title)
- (Authors)
- (Abstract)
- **Introduction**
- **Methods**
- **Results**
- **Discussion**
- (Acknowledgments)
- (References)

Some Other Structures

- With the methods section at the end (IRDAM)
- With a combined results and discussion section (IMRADRADRAD . . .)
- With a conclusions section at the end (IMRADC)
- Other
- Question: In your research area, what is the usual structure of papers reporting research?



Case 12: Title Troubles

Meg, a PhD student, is about to submit a paper to a journal. On rereading the instructions to authors, she notices that she must submit a running title. Puzzled, Meg calls her mentor, Dr. Pam Woods, for advice. How should Dr. Woods proceed?

Title

- The fewest possible words that adequately indicate the contents of the paper
- Important in literature searching
- Should not include extra words, such as "A Study of" or "Observations on"
- Should be specific enough
- Generally should not include abbreviations
- (Running title: short version of title—appears at tops of pages)

Case 13: An Authorship Decision

Mike, a PhD student, is about to submit a paper about some of his research. Department member Dr. Ronald Tracy allowed Mike to use some equipment in his lab in the research, and he now asks to be listed as an author. Mike approaches his mentor, Dr. Ellen Curtis, for advice. How should Dr. Curtis proceed?

Case 14: What's in a Name?

Sarah Smith, a PhD student, is writing a paper. She worries that she will confused with some of the other researchers with the same name, including one in a closely related field. During a meeting with her mentor, Dr. Hildegarde Lukaszewski-Benedetti, she expresses this concern. The mentor thinks this issue will be good to discuss in writing club. What points might be useful to include in the discussion?

Authors

- Those with important intellectual contributions to the work
- Often listed largely from greatest contributions to least
- Head of research group often is listed last
- In some fields, listed alphabetically
- Useful to list one's name the same way on every paper

ICMJE Criteria for Authorship

- From the International Committee of Medical Journal Editors.
- See http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html.

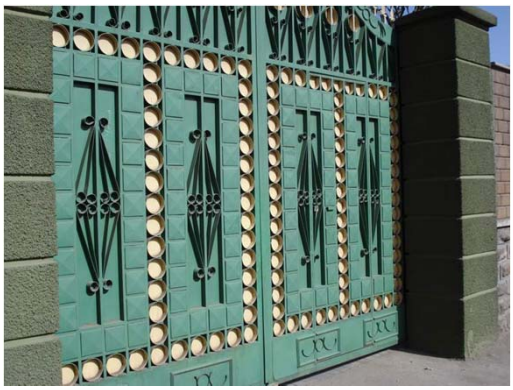
"The ICMJE recommends that authorship be based on the following 4 criteria:

- Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
- Drafting the work or revising it critically for important intellectual content; AND
- Final approval of the version to be published; AND
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved."

Something Fairly New: ORCID

- Stands for Open Researcher and Contributor ID
- "ORCID provides a persistent digital identifier that distinguishes you from every other researcher"
- ORCID identifiers can aid in tracking authors of papers, grants, etc
- See http://orcid.org/

ORCID



Orders of Reading and Writing Sections of a Paper

- People read the sections of scientific papers in various orders.
  - What's your favorite order? Why?
- You can write the sections of a scientific paper in any order.
  - What's your favorite order? Why?
- A convenient order in which to write the sections: Methods, Results, Discussion, Introduction

Case 15: No Madness in the Methods

Tess, a PhD student, is writing a paper on some research that used a variety of methods. Some methods that she used are very well known in her discipline. Some others are not well known but have been described in detail in the literature. And one method was newly developed by Tess herself. Tess asks her mentor, Dr. Sally Stone, how detailed her methods section should be. How should Dr. Stone proceed?

Purposes of the Methods Section

- To allow others to replicate what you did
  - In order to test it
  - In order to do further research
- To allow others to evaluate what you did
  - To determine whether the conclusions seem valid
  - To determine whether the findings seem applicable to other situations

Methods: Basic Information to Include

- In most cases, overview of study design
- Identification of (if applicable)
  - Equipment, reagents, organisms, etc used (and sources thereof)
  - Approval of human or animal research by an appropriate committee
  - Statistical methods

Methods: Amount of Detail to Use

- For well-known methods: name of method, citation of reference
- For methods previously described but not well known: brief description of method, citation of reference
- For methods that you yourself devise: relatively detailed description

Methods: The Words and More

- Should be written in past tense
- In some journals, may include subheads
- May include tables and figures—for example:
  - Flowcharts
  - Diagrams of apparatus
  - Tables of experimental conditions

Methods: A Suggestion

Look at the methods sections of some papers in your target journal. Use them as models.

Case 16: Being Double Sure?

Dr. Willard Wells, a mentor and highly respected clinician, is preparing a paper on a series of noteworthy clinical cases. He shares a draft with his mentee, Ruth, and points out proudly that extensive data on each patient appears in both the text and an accompanying table. "You just can't be too thorough," he says. Ruth isn't so sure, though, about repeating so much information. How should she proceed?

The Results Section

- The core of the paper
- Often includes tables, figures, or both
- Should summarize findings rather than providing data in great detail
- Should present results but not comment on them
- (Note: Some journals, however, combine the Results and the Discussion.)

Verb Tense for the Results Section: Past Tense

Examples:

- A total of 417 samples were analyzed . . . .
- _____ increased, but _____ decreased.
- The median salary of these surgeons was _____.
- Three of the mixtures exploded.
- This difference was not statistically significant.

Results Sections of Papers with Tables or Figures

- How much should the information in the text overlap that in the tables and figures?
  - Not extensive overlap
  - In general, text should present only the main points from the tables and figures
  - Perhaps also include a few of the most important data
- Remember to mention each table or figure. Do so as soon as readers might want to see it.

Mentioning Tables and Figures: Some Writing Advice

- In citing tables and figures, emphasize the finding, not the table or figure.
  - *Not so good*: Table 3 shows that researchers who attended the workshop published twice as many papers per year.
  - *Better*: Researchers who attended the workshop published twice as many papers per year (Table 3).

Results: A Suggestion

- Look at the results sections of some papers in your target journal.
- Notice items such as the following:
  - Length
  - Organization
  - Inclusion of subheads (or not)
  - Number of tables and figures
- Use these results sections as models.

Tables: A Few Suggestions

- Use tables only if text will not suffice.
- Design tables to be understandable without the text.
- Organize each table in a logical way.
- If a paper includes a series of tables, use the same format for each.
- Be sure to follow the instructions to authors.

Figures: A Few Suggestions

- Use figures (graphs, diagrams, maps, photographs, etc) only if they will help convey your information.
- Avoid including too much information in one figure.
- Make sure tha any lettering will be large enough once published.
- Follow the journal's instructions.

Discussion Question

- If you have data that could be presented in either a table or a figure, how do you decide which one to use?

A General Suggestion

- Look at tables and figures in journal articles presenting research similar to yours
  - In your target journal
  - In other good journals
- Use these tables and figures as models when designing your own tables and figures.

Sources of Further Information

- "*Almost* Everything You Wanted to Know About Making Tables and Figures," Department of Biology, Bates College (http://abacus.bates.edu/~ganderso/biology/resources/writing/HTWtablefigs.html)
- Writing and Publishing Scientific Papers, Part 2 (from China Medical Board course), at http://www.authoraid.info/en/resources/details/1065/

Case 17: Nothing To Hide

Jane, a PhD student, has drafted the discussion section of a paper. Her mentor, Dr. Laura Hill, says the draft is good overall but advises Jane to add a section on strengths and limitations of the research. Jane respectfully expresses concern that noting strengths would seem immodest and that calling attention to limitations would increase the likelihood that the paper would be rejected. How should Dr. Hill proceed?

Discussion

- One of the more difficult parts to write, because have more choice of what to say
- Often should begin with a brief summary of the main findings
- Should answer the question(s) stated in the introduction (or address the hypothesis or hypotheses stated in the introduction)

The Discussion: Some Possible Content

- Strengths of the study
  - For example, superior methods, extensive data
- Limitations of the study
  - For example: small sample size, short follow-up, incomplete data, possible sources of bias, problems with experimental procedures
  - Better to mention limitations than for peer reviewers and readers to think that you're unaware of them
  - If the limitations seem unlikely to affect the conclusions, can explain why

The Discussion: Possible Content (cont)

- Relationship to findings of other research—for example:
  - Similarities to previous findings (your own, others', or both)
  - Differences from previous findings
  - Possible reasons for similarities and differences

The Discussion: Possible Content (cont)

- Applications and implications—for example:
  - Possible uses of the findings (in medical care, public health, environmental policy, industry, etc)
  - Relationship of the findings to theories or models:
    - Do the findings support them?
    - Do they refute them?
    - Do they suggest modifications?

The Discussion: Possible Content (cont)

- Other research needed—for example:
  - To address questions still unanswered
  - To address new questions raised by the findings
- Other

Discussion (cont)

- Typically should move from specific to general, rather like an inverted funnel (opposite of introduction)
- In some journals, may be followed by a conclusions section

The Discussion: A Suggestion

- Look at the discussion sections of some papers in your target journal.
- Notice items such as the following:
  - Length
  - Types of content
  - Organization
  - Phrases commonly used
  - Citation of references
- Use these discussion sections as models.

Case 18: An Amorphous Introduction

Ed, a PhD student, proudly shows his mentor, Dr. Rachel Reed, the introduction he has drafted for his paper. Dr. Reed perceives that this introduction includes some good content but that it is at least twice the appropriate length for the target journal and that it has no discernible structure. Ed and Dr. Reed decide together to ask his writing club group to review his draft introduction. What points might be good to include in the group's discussion? How might the group leader elicit these points?

Purposes of the Introduction

- To provide background
  - In order to help readers understand the paper
  - In order to help readers appreciate the importance of the research
- To identify the question(s) the research addressed
  - Sometimes stated as a hypothesis or hypotheses

Length of Introduction

- Articles in biomedical journals: tend to have short introductions (a few paragraphs or less)
- Articles in some other journals: tend to have long introductions
- How about introductions to articles in your research area?

Gearing the Introduction to the Audience

- Papers in relatively general journals: Introduction must provide basic background information.
- Papers in specialized journals: Introduction can assume that readers have more knowledge about the research topic.

Structure of the Introduction

- Introduction typically should be funnel-shaped, moving from general to specific
- A common structure:
  - Information on importance of topic
  - Highlights of relevant previous research
  - Identification of unanswered question(s)
  - Approach you used to seek the answer(s)
  - (In some cases, the main findings)

Overall Structure of a Paper: Like an Hourglass

The Introduction: A Suggestion

- Look at introductions of some papers in your target journal.
- Notice items such as the following:
  - Length
  - Types of content
  - Organization
  - Citation of references
- Use these introductions as models.

When to Write the Introduction

- Sometimes wise to write the introduction last
  - "Until you know what you're introducing, you can't introduce it."
- Sometimes useful to write it first, to help provide focus
- After writing all the sections of the paper, revise the paper as a whole (typically several times).

Case 19: A Reference Request

Gail is a PhD student, and Dr. Clifford Miller is her mentor. Dr. Herman Nelson, another faculty member, has a lab down the hall and does related research. Dr. Nelson hears that Gail is writing some papers and asks her to cite a few of his articles as references, so he will have a higher citation count when considered for promotion. Gail doesn't think the references are very relevant, and she wonders whether she should discuss the situation with her mentor. What would you advise?

Functions of References

- To give credit to others for their work
- To add credibility to your work by showing that you used valid information sources
- To help show how your work is related to previous work
- To help readers find further information

References: Importance of Accuracy

- Studies show that many references are inaccurate.
- For references to fulfill their functions, they must be accurate. Therefore
  - Make sure that you accurately state what the cited material says.
  - Make sure that all information in the citation (for example, author list, article title, journal title, volume, year, pages) is accurate.

Another Reason Your References Should Be Accurate

Often, authors whose work you cite will be your peer reviewers. Inaccurate references to their work will not impress them favorably.

Formats

- Various formats exist for citation in text—for example:
  - Accuracy of references is important (Day and Gastel, 2011).
  - Accuracy of references is important.[3]
- Various formats exist for items in reference lists—for example:
  - Pineda D. 2003. Communication of science in Colombia. Sci. Ed. 26:91-92.
  - Pineda D. Communication of science in Colombia. Sci Ed 2003;26:91-2.

A Reminder

Be sure to use the format that your target journal requests.

- For the citations in the text
- For the reference list

Citation Management Software

- Examples: EndNote, Reference Manager, RefWorks, Zotero
- Allows you to keep a database of references
- In many cases, provides the citations and references in the proper format for your target journal

Placement of Citations

- Ambiguous:
  - This compound has been found in humans, dogs, rabbits, and squirrels (Tuda and Gastel, 1997; Xie and Lozano, 2015; Flores, 2002).
  - This compound has been found in humans, dogs, rabbits, and squirrels.[1,4,7]
- Clear:
  - This compound has been found in humans (Tuda and Gastel, 1997), dogs (Xie and Lozano, 2015), and rabbits and squirrels (Flores, 2002).
  - This compound has been found in humans,[1] dogs,[4] rabbits,[7] and squirrels.[7]

Other Advice on References

- If you haven't read an item, don't cite it.
  - Discussion question: If an article isn't freely accessible online, how might you obtain it?
- Check each reference against the original source.
- Carefully follow the journal's instructions to authors.
- Use other articles in the same journal as models.

Case 20: Aghast at an Abstract

Ken, a PhD student, is about to submit a paper to a journal but obtains an additional result from his study. "It's too much trouble to rewrite the paper," Ken says to his mentor, Dr. Betty Logan. "I'll just add the new result to the abstract." How should Dr. Logan proceed?

The Abstract

- First to be read but last to be revised
- Important: widely read; also gives editors and reviewers their first impression
- Should include the most important points from the paper.
- Should include only material in the paper.
- Should be organized like the paper
- If appropriate, should be structured (with standardized headings)

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