Office of Research
Research Development and Support Series

Writing the One Pager: The Shortest Path to Success

Lora Arduser, A&S Associate Professor, Professional Writing
Bob Hyland, A&S Assistant Professor-Educator, Rhetoric and Prof Writing
Thursday, October 25, 2018
Baldwin Hall, Room 661
Overview

Introductions
Our Experts

- Lora Arduser, A&S Associate Professor, Professional Writing
- Bob Hyland, A&S Assistant Professor-Educator, Rhetoric and Prof Writing
Office of Research Resources

Office of Research Web Site (research.uc.edu)

Office of Research How2 (researchhow2.uc.edu)

Research Directory (researchdirectory.uc.edu) – Ohio Department of Higher Education – Ohio Innovation Exchange (OIE)

SPIN (research.uc.edu/funding/spin)

Limited Submissions (via web portal (rsrch-webserver.uc.edu/)) Two types – faculty research nominations and research proposals; Selection process dependent on type.
Office of Research Initiatives

Internal Funding Opportunities

Collaborative Research Advancement Grants Program
  Track 1: Pilot Teams
  Track 2: Strategic Teams
Faculty Bridge Program
Science Engineering + Art Design (SE+AD) Advancement Grant
Core Capability Development Grant Program
Core Equipment Grant Program
University Research Council
  Creative & Performing Arts Cost Support Program
  Humanities and Social Sciences Cost Support Program
  Faculty Research Cost Support Awards Program
  Graduate Student Stipend and Research Cost Awards for Faculty-Student Collaboration
  Undergraduate Student Stipend and Research Cost Awards for Faculty-Student Collaboration
# Research Development and Support Series

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<td>Writing the One Pager: The Shortest Path to Success</td>
<td>Thursday, October 25, Baldwin 661, 4:00 to 5:30 PM</td>
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<td>Building your Team: Undergrads, Graduate Students, and Postdocs</td>
<td>Tuesday, October 30, UHall 454, 3:30 to 5:00 PM</td>
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<td>Research Support – UC Infrastructure (R)</td>
<td>Thursday, November 1, TUC Room 427, 9:00 to 10:30 AM</td>
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<td>How to Navigate the IRB doing SBER</td>
<td>Thursday, November 8, TUC 400A, 10:30 AM to 12:00 PM</td>
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<td>Working with Industry/Foundations</td>
<td>Wednesday, November 14, UHall 454, 1:00 PM to 2:30 PM</td>
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<td>How to Work with Local and State Governments</td>
<td>Friday, November 30, TUC 425, 10:30 AM to 12:00 PM</td>
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<td>Arts &amp; Humanities in the Age of Impact</td>
<td>Monday, December 10, DAAP 8220, 11:30 AM to 1:00 PM</td>
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Help us improve!

https://www.surveymonkey.com/r/WTOPFall2018
Writing the One Pager –
The Shortest Path to Success!
1984
Tagamet®
$1,000,000,000/yr

Zantac®
$1,000,000,000/yr

Endoscopy
$1,000,000,000/yr

Source: http://discovermagazine.com/2010/mar/07
Problem solved, right?

Nope, response to letters came up crickets!
1985
Dr. Marshall came to the U.S. . . .

NIH and FDA fast-track knowledge transfer of Dr. Marshall’s findings

“Guinea-Pig Dr. Experiments on Self and Cures Ulcer”
The Nobel Prize in Physiology or Medicine 2005 was awarded jointly to Barry J. Marshall and J. Robin Warren "for their discovery of the bacterium Helicobacter pylori and its role in gastritis and peptic ulcer disease".
Key Points

• Don’t give yourself an ulcer about it, but beware the curse of knowledge

• Remember to periodically get the aerial view

• Practice creating your scientific/technical story for various audiences
Telling a Compelling Research Story
First step in telling a story: Know your audience

“I can’t write without a reader. It’s precisely like a kiss—you can’t do it alone.”
— John Cheever

“Speech belongs half to the speaker, half to the listener.”
— Michel de Montaigne
What to know about your audience

- What expectations does your audience have about the subject? About you?
- How is your audience likely to see and/or understand the topic or issue?
- Are there conflicting beliefs or concepts that will have to be dealt with, and how will you deal with them?
- Are familiar explanations trite or boring? (Beware the curse of knowledge.)
- Does the audience have firsthand experiences that you can draw on to illustrate points in your discussion?

(Katz & Penrose, 2010, p. 204)
Why communicate with other fields and the public?

• Budgets are decreasing, competitive funding environments are increasing so we have to convince people with the money as well as scientific peers

• A democratic society requires its citizens to be informed about the issues that confront them
Who is your audience?

- Journalists?
- Educated/interested general reader
- Government/policy makers?
- NIH program officers?
- NEH review board members?
- Local companies offering grant opportunities?
Elements needed for good stories

1. Make that audience care by telling a story that matters (i.e., significance)
   - Have I done something new and interesting?
   - Is there anything challenging in my work?
   - Is my work related directly to a current hot topic?
   - Have I provided solutions to some difficult problems?
2. Give your story a structure your audience can follow (i.e., organization)
3. Engage your audience with a compelling language
Elements needed for good stories

1. Make that audience care by telling a story that matters (i.e., significance)
   - Have I done something new and interesting?
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What sticks with an audience

- Simple
- Unexpected
- Concrete
- Credible
- Emotional (make people care)
- Stories
Appeals

Appeals of wonder

Appeals of practicality
Narrating significance

"A new generation’s tale of the struggles of light and dark, virtue and evil has begun with the death of Han Solo. In a Galaxy where First Order and the Resistance are fighting against each other in a war, the heroine, Rey, had the Force awaken within her.

What will happen to the galaxy when Rey and the only remaining Jedi knight, Luke Skywalker, meet? Kylo Ren has fallen to the Dark Side of the Force and killed his father, Han Solo. As a successor of his grandfather, Darth Vader, and a high ranking enforcer in the First Order, where will his ambition lead him to?

Furthermore, Kylo Ren’s mother, the leader of the Resistance, Leia, Poe, Finn, and BB-8, will embark on a new mission! The story has finally begun and it will lead to a mysterious climax!"

Image source: http://www.imdb.com/title/tt2527336//
“Denise Faustman, MD, PhD, is Director of the Immunobiology Laboratory at the Massachusetts General Hospital (MGH) and an Associate Professor of Medicine at Harvard Medical School. Her current research focuses on discovering and developing new treatments for type 1 diabetes and other autoimmune diseases, including Crohn's disease, lupus, scleroderma, rheumatoid arthritis, Sjögren's syndrome, and multiple sclerosis. She is currently leading a human clinical trial program testing the efficacy of the BCG vaccine for reversal of long-term type 1 diabetes.

Positive results from the Phase I study were reported in 2012.” Source: http://www.faustmanlab.org
Elements needed for good stories

2. Give your story a structure your audience can follow (i.e., organization)
**Scientific article structure**

- Introduction
  - Theoretical framework
  - Previous work
  - Research question
  - Hypothesis
- Methods
  - Design
  - Techniques
- Results
- Discussion
  - Summary
  - Interpretation
  - Criticism
  - Implications

*Image source: Kenyon Biomedical Writing Institute*
Structure for all fields

- Opening
- Challenge
- Action
- Resolution

General
Specific
Specific
General
Other structures

A,B,T

LDR

LD
And, But, Therefore

- Across an entire document
- First paragraph
  - Research article introduction
  - Grant proposal specific aims page

Image source: Kenyon Biomedical Writing Institute
Many papers and talks are structured as lists

• We already know this
• And that
• And this other thing
• And we did this
• And then we did that
• And look at Figure 1 and Figure 2 and all our pretty tables
• And we think it all means this
MOLECULAR STRUCTURE OF NUCLEIC ACIDS

A Structure for Deoxyribose Nucleic Acid

We wish to suggest a structure for the salt of deoxyribose nucleic acid (D.N.A.). This structure has novel features which are of considerable biological interest.

A structure for nucleic acid has already been proposed by Pauling and Corey^1^. They kindly made their manuscript available to us in advance of publication. Their model consists of three intertwined chains, with the phosphates near the fibre axis, and the bases on the outside. In our opinion, this structure is unsatisfactory for two reasons: (1) We believe that the material which gives the X-ray diagrams is the salt, not the free acid. Without the acidic hydrogen atoms it is not clear what forces would hold the structure together, especially as the negatively charged phosphates near the axis will repel each other. (2) Some of the van der Waals distances appear to be too small.

Another three-chain structure has also been suggested by Fraser (in the press). In his model the phosphates are on the outside and the bases on the inside, linked together by hydrogen bonds. This structure as described is rather ill-defined, and for this reason we shall not comment on it.

We wish to put forward a radically different structure for the salt of deoxyribose nucleic acid. This structure has two helical chains each coiled round the same axis (see diagram). We have made the usual chemical

A Structure for Deoxyribose Nucleic Acid
Watson J.D. and Crick F.H.C.
Nature 171, 737-738 (1953)
Another story structure: LD

• Lead
• Develop

Most important

Less important
Another story structure: LDR

• Lead
• Develop
• Resolve

Most important

Less important

Very important
Elements needed for good stories

3. Engage your audience with a compelling language
Adapting content for specialized audiences*

- Narration
- Examples
- Definition
- Analysis
- Comparison
- Graphics

*This means anyone not in your specific discipline or subdiscipline. The person may be a specialist – just not in your field.
Paragraphs

• Write coherent paragraphs with a strong topic sentence (or sentences)
• Maintain a constant perspective and/or shift perspective with linked sentences

• Types of paragraphs
  • List with constant subject
  • Story with linked subjects
Best-selling novels are often described as “page turners.” Best-cited papers and best-funded proposals are the same. They draw readers in and lead them through the story – they flow. A break in that flow can derail a reader and abruptly change a piece from a “page turner” to a “re-turner” with a rejection letter attached.

Sentences

1. **Precision/Simplicity/Conciseness**: Choose concrete words that clearly convey your ideas. Avoid jargon or explain it.

1. **Agent/action**: Make the agent (central character) the subject and the action the verb. Put the subject and verb close to each other.
Examples

• Why is it valuable to write to this other audience?

• Who are they?

• What do you do in writing or don’t do when writing for this particular audience?
Your goals and implications paragraphs

• Maximum = 200 words
• Content
  • What is the goal of your project?
  • How do you pursue that goal?
  • Why does it matter?
• Functions
  • First or last paragraph of Introduction
  • First or last paragraph of Discussion
  • Specific aims page of grant
  • Research statement for job or grant application
  • Website blurb
  • Elevator pitch for a grant program officer phone call