



Writing the research proposal: Chemistry 419/519

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wac
c4w
writing initiatives
webmail
efs

I'm new to the University of Alberta, having come from the University of Western Ontario where I was Director of the Program in Writing, Rhetoric, and Professional Communication in the Faculty of Arts and Humanities. In my new position here I'll be working with faculty and students across the university as part of the Writing Across the Curriculum initiative. I will also be working with students and faculty in the Department of English and Film Studies.

I am the author, co-author, or editor of five books and 29 articles, including Writing Instruction in Canadian Universities. My current research interests include the development of doctoral student writing, writing assignments across disciplinary fields, and rhetorical approaches to text encoding. Currently I serve as co-Vice-President of the Canadian Association for the Study of Discourse and Writing (CASDW) and a member of the Executive Board of the Canadian

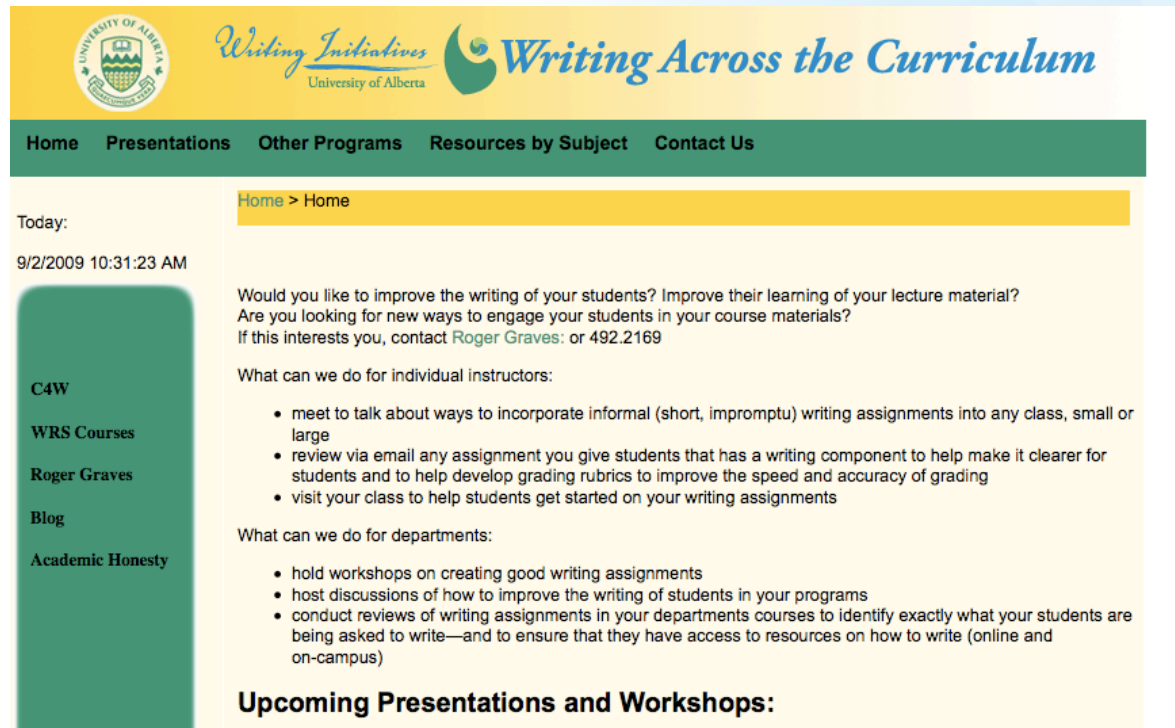
Recent presentations
This page contains links to pdfs of slides displayed at presentations I've given.

Books
This page displays the covers and descriptions of books I've authored, co-authored, or co-edited.

Blog: Thinking About Writing
A new blog on writing-related issues

<http://www.ualberta.ca/~graves1/index.html>

Writing Across the Curriculum



The screenshot shows the homepage of the Writing Across the Curriculum website at the University of Alberta. The header features the University of Alberta logo, the text "Writing Initiatives University of Alberta", and the main title "Writing Across the Curriculum". A green navigation bar contains links for Home, Presentations, Other Programs, Resources by Subject, and Contact Us. The main content area includes a breadcrumb trail "Home > Home", a timestamp "Today: 9/2/2009 10:31:23 AM", and a sidebar with links for C4W, WRS Courses, Roger Graves, Blog, and Academic Honesty. The main text asks if the user wants to improve student writing and provides contact information for Roger Graves. It also lists services for individual instructors and departments, and mentions upcoming presentations and workshops.

UNIVERSITY OF ALBERTA
Writing Initiatives
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Writing Across the Curriculum

Home Presentations Other Programs Resources by Subject Contact Us

Home > Home

Today:
9/2/2009 10:31:23 AM

C4W
WRS Courses
Roger Graves
Blog
Academic Honesty

Would you like to improve the writing of your students? Improve their learning of your lecture material? Are you looking for new ways to engage your students in your course materials? If this interests you, contact [Roger Graves](#): or 492.2169

What can we do for individual instructors:

- meet to talk about ways to incorporate informal (short, impromptu) writing assignments into any class, small or large
- review via email any assignment you give students that has a writing component to help make it clearer for students and to help develop grading rubrics to improve the speed and accuracy of grading
- visit your class to help students get started on your writing assignments

What can we do for departments:

- hold workshops on creating good writing assignments
- host discussions of how to improve the writing of students in your programs
- conduct reviews of writing assignments in your departments courses to identify exactly what your students are being asked to write—and to ensure that they have access to resources on how to write (online and on-campus)

Upcoming Presentations and Workshops:

<http://www.humanities.ualberta.ca/WAC/>

The writing process

Getting started

- Explore the assignment
- Make rough notes
- Pick a tentative topic

Getting feedback

- Make an appointment at the writing centre for later in the week
- Get feedback on your draft/revise

Revising

- Work on style and lower order concerns
- Proofread, consult checklist for assignment

Getting organized

3 pages

- **Introduction and Context:** importance of the problem; strong statement of aim [thesis]
- **Background:** elaborate on the research area; give preliminary results (describe what has been done)
- **Research Plan:** Rationale; General objective & specific aims; Specific aim 1 (elaborated); Specific aim 2;
- **Significance**
- **References:** List all references you have cited in your text (page 4)

Invention ideas: originality

Writing is social: talk to others

1. Extrapolate from existing papers
2. Combine ideas from two existing papers in the area
3. Build on existing techniques—improve them
4. Apply a technique from one area to another area
5. Switch techniques while examining the same biological system

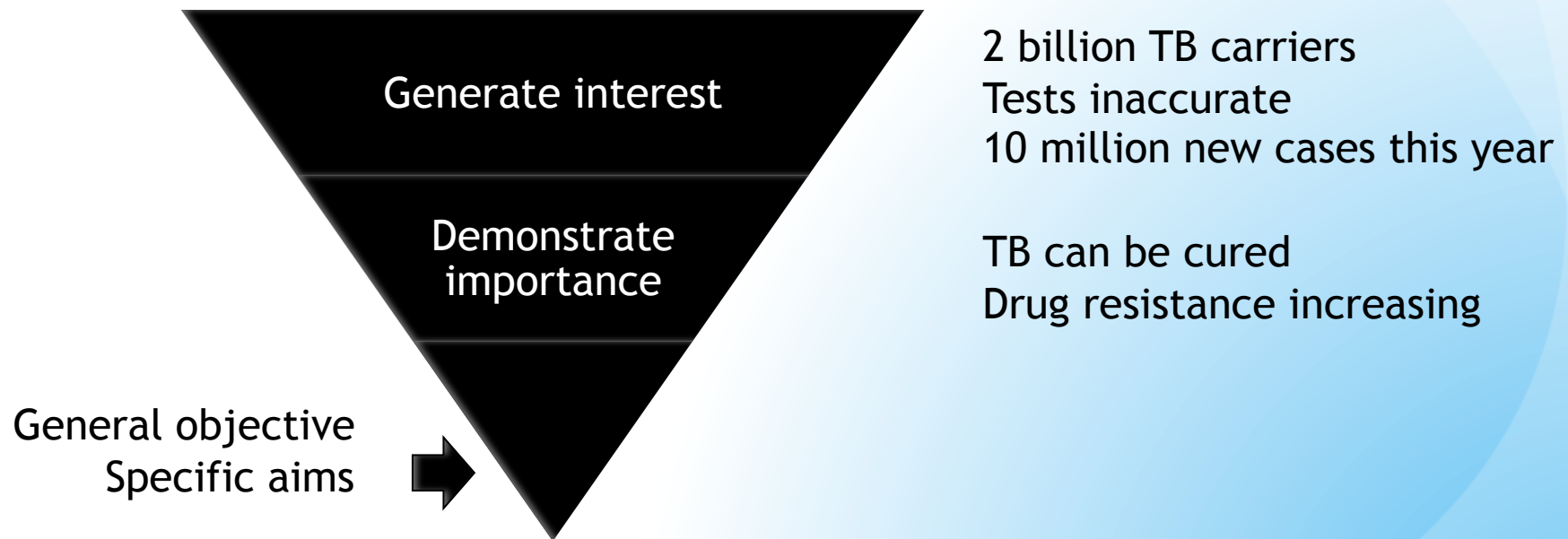
Possible topics: TB

- TB



Introduction

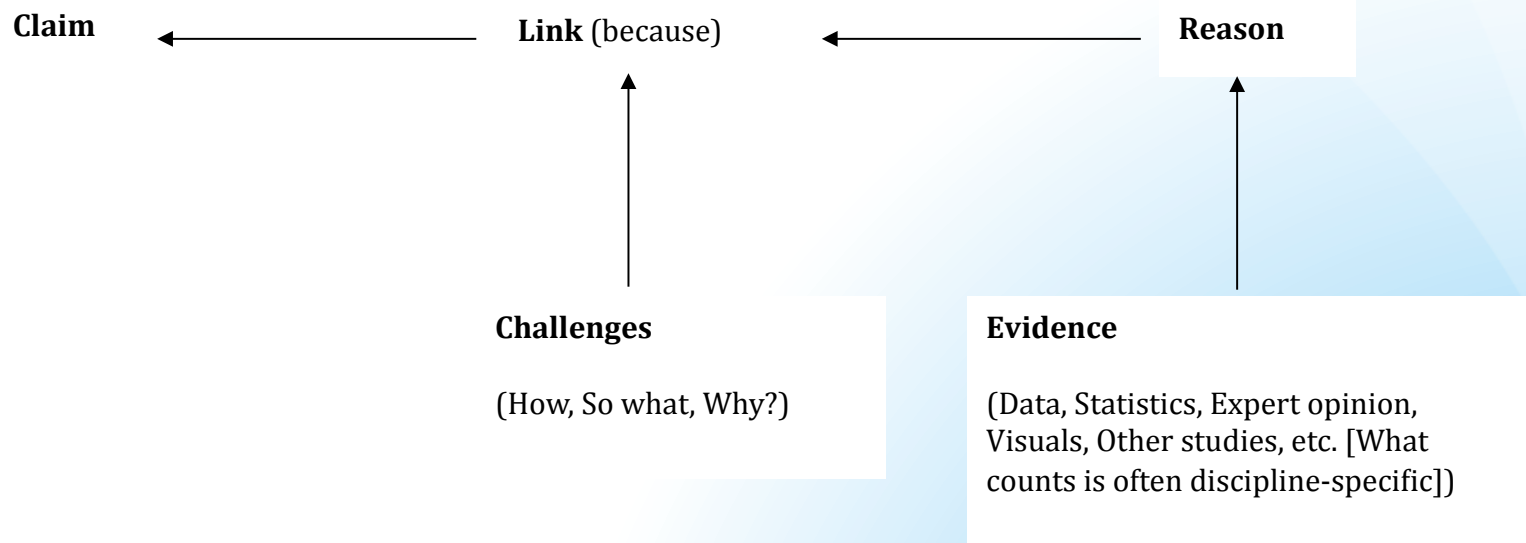
- Use the inverted funnel approach: start general, then move to specific aims of this research



Background & Preliminary results

- Big questions in the field
- Hedge your claims: “most research in TB . . .”
- Refer to existing research to create a context for your work
- Narrow down from big picture to specific unanswered (before you) questions
- Make the argumentative move: “Although approach Y solved some problems with TB, the approach we propose here will extend diagnosis rates to over 90% accuracy”

Informal Argument and Academic Writing

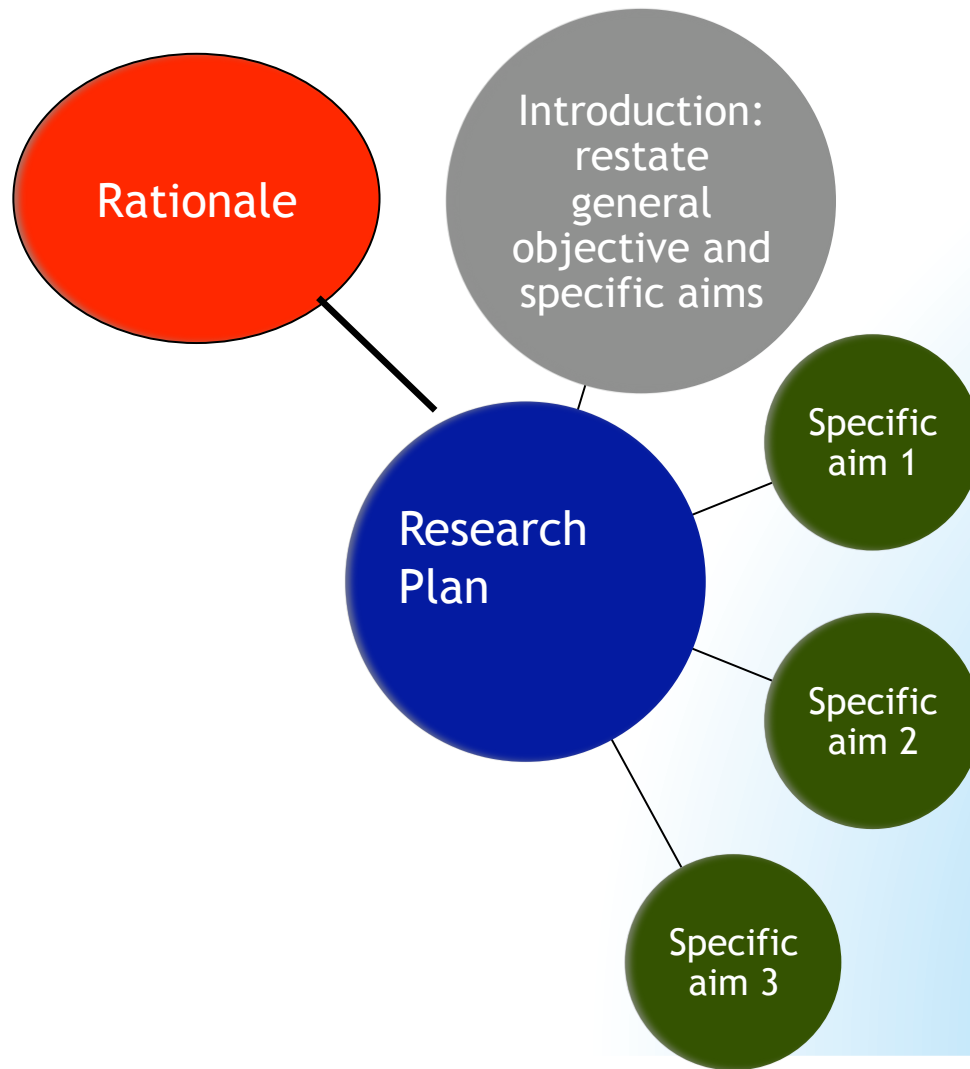


Ex. [this study] will be a unique scholarly contribution as very few studies genuinely combine oral history and the documentary record.

Make the move

- Write a one sentence claim about your project—the general objective

Research plan



Specific aim 1

- Expected outcomes (what will your experiments tell you?)
- Potential problems (brief)
- Alternative strategies (brief)
- Techniques (not too detailed)
- Timelines (in months)

Significance

- Additional implications of your work
- 
- A decorative graphic consisting of several overlapping, semi-transparent blue circles and arcs, creating a soft, abstract shape on the right side of the slide.

Argumentative “moves”

- “moves” are like tacit questions that grant writers answer
- Moves are a way to organize the proposal
- Moves create a narrative

Narrative

“A problem exists of social and research importance (territory). Some research already exists, but there is also clearly an absence of research in a particular area (gap). The researcher(s) is/are well prepared (means) to address the problem (goal) by conducting the following study (methodology).”

Territory

- Research territory refers to current research issues or problems
- “Real world” territory refers to social problems or issues
- Connect the two territories: a real world problem exists for which a research area can propose a solution

Example

- “[this study] will also be of interest beyond the academic community. The project grows out of the initial steps taken by the office of the Treaty Relations Commission of Manitoba (TCRM). . . It is essential to know the history of agriculture in First Nations communities in order to understand what the barriers have been and how they may be removed.”

Gap

“As a general class, stochastic imperfect information games with partial observability are among the hardest problems known in theoretical computer science. This class includes many problems that are easy to express but are computationally undecidable [20, 38].

In practice, writing a program to play a legal game of poker is trivial, but **designing and implementing a competent poker player** (for example, the strength of an intermediate human player) **is a challenging task**. Writing a program that also adapts smoothly to exploit each opponent’s particular playing style, betting patterns, biases and tendencies is **a difficult learning problem.**”

Goal

- States the aim, general objective, chief contribution of the study
- This move responds to the gap or problem identified in the proposal
- “My study seeks to address this void in the demographic literature”

Example

- “The principal goal of my study is to address these and other related questions and to uncover the underlying social demographic and socioeconomic factors responsible for the recent fertility rise in Alberta.”

Objective strategies

- Nominalizations (a verb changed into a noun)
 - We investigated the problem to see . . .
 - A problem investigation showed . . .

Nominalizations remove agency, creating an objective tone

They can improve conciseness.

Warning: Overuse of nominalizations can confuse and bog down a reader's understanding

Passive Voice

- Linguistic construction that places the object in the subject position
 - We investigated the problem (active voice)
 - The problem was investigated by us (passive voice)
- Create objectivity, improve conciseness
- Mitigate blame, emphasize processes over agents
- **Warning:** Overuse can make prose boring or difficult to process

Signposting

- Techniques that provide a framework or conceptual map for the document (headings, bulleted or numbered lists, etc.)
- Help to organize the information for the reader
- Help reader retrieve specific information later

Example of signposting

Research plan/Methodology

1. Rationale
2. Specific aims
3. Significance