Writing Good Grants/
Writing Grants Well

Summer 2013 Certificate Series
August 13, 2013
As found online.

Note it should be called: How To Write Well
Who Are We?

• Beth Keithly – Associate Director
  – Grant editing
  – Proposal development

• Jazmin Perez – Events and Communication Manager
  – Conference planning
  – Office of Research marketing materials

• The Office of Research Development (ORD) provides services and resources related to funding and grantsmanship as well as works with faculty on proposals.
Timeline for Proposal Submission - Countdown to Sponsor Deadline

Office of Research Development

Planning Phase
- 25+ Business Days
  - Office of Sponsored Projects
  - Planning Phase
    - *Identify funding
    - *Alert OSP of intent to submit
    - *Outline project scope

- 20-25 Business Days
  - *Develop & draft budget
  - *Send draft budget to OSP
  - *Develop draft proposal

- 10-20 Business Days
  - *Edit proposal
  - *Make budget revisions/finalize budget
  - *Send proposal to ORD for editing
  - *Start internal forms

- 5-10 Business Days
  - *Routing and approval of CERT, other forms
  - *Finalize proposal

- 4 Business Days
  - *OSP receives all required proposal elements

- Day 0 Sponsor Published Deadline
  - *Last chance for OSP to submit

The University of Texas at Dallas
Office of Research
What We Are Going to Talk About

• How grant writing differs from academic writing
• What you need before you start applying for grants
• What makes a proposal competitive
  – Avoiding the twelve most common pitfalls
Academic Writing:

- Research centered:
  - Scholarly passion
- Past oriented:
  - Work you have done
- Expository:
  - Explaining to reader
- Impersonal:
  - Objective, dispassionate
- Individualistic:
  - Usually solo activity
- Verbosity rewarded:
  - Few length constraints
- Specialized terminology:
  - “Insider jargon”

World of ideas: Thesis, theme, and theory

Grant Writing:

- Sponsor-centered:
  - Service attitude
- Future oriented:
  - Work you wish to do
- Persuasive:
  - “Sell” the reader
- Personal:
  - Convey excitement
- Team-oriented:
  - Feedback needed
- Brevity rewarded:
  - Strict length constraints
- Accessible language:
  - Broad audience

World of actions: Project, activities and outcomes
Taken together with the findings from the present study that (a) workplace aggression in the primary job was more closely associated with negative work experiences and (b) both situational and individual characteristics played a role in aggression in the secondary job, future research might benefit from a greater focus on the subjective salience of the job as a moderator of the relationship between workplace experiences and supervisor-targeted aggression. Indeed, despite the differential effects of situational and individual difference factors on aggression, it is notable that the individual difference factors exerted a consistent but relatively low-level effect on aggression across contexts, whereas the more salient situational experiences exerted context-specific effects.

The goal of the current proposal is to teach undergraduate students how to investigate biological structures using digital imaging technology. The objectives are to:

1) Develop a laboratory manual with special emphasis on image processing and quantitative methods for microscopy, and including biologically meaningful investigations that apply the protocols

2) Create datasets of serial section slides and digital images as well use commercially available datasets that can be used to teach image processing and quantitative analysis.

3) Use readily available software (NIH Image, ImageJ, Adobe Photoshop and IPTK plugins) to teach image processing and analysis using wireless networked iBook computers directly at the benches in biology laboratories

4) Increase the use of TEM and SEM by reducing the time required to prepare images for analysis.
Grant Writing: Simple and Specific

• If you can’t explain it simply, you don’t understand it enough. - *Albert Einstein*

• One should aim not at being possible to understand, but at being impossible to misunderstand. - *Quintilian*

• Remember the simple sentence:
  – Lying exposed without its blanket of snow, the ice on the river melts quickly under the warm March sun.

• Poor writing means the poor communication of research ideas
  – Too much ambiguity in the research narrative
  – Ambiguity is to proposals what Kryptonite is to Superman
And Now, For Something Completely Different: Buzzwords

• Buzzwords are usually good words that have been used to death. Examples often found in grant writing include:
  – Paradigm
  – Collaborative
  – Proactive
  – Innovative
  – Can you name others?

• Remove the buzzwords from this:
  – My fundamentally novel research will create a transformative synergy critical to your work. It will thereby shift the project to a completely new and insightful paradigm that will enable critical progress, novel solutions and fundamentally insightful leadership modules.
What Makes a Proposal Competitive?

• Significance (important – as defined by the sponsor – area of research)
• Original approach
• Likely to make a significant contribution to the field
• Team has knowledge and experience in the discipline(s)
• Experience in essential methodology
• Succinct, logical, and focused project plan
• Realistic amount of work done for the budget
• Sufficient detail
• Cost effective
Grant Writing

When writing grants (no matter what organization you are submitting to), you must:

- Follow the guidelines
- Make a compelling case for the significance of the research
  - How it impacts the field
  - How it helps the organization – you are applying to fulfill its mission
    - Do your homework. Do you really know the organization’s mission?
- Know how your proposal will be reviewed

Describe

- What you will do
- Why it is important to do it
- The impact
- Why you are the right person to do it
- You have what you need to do it
  - Capacity, expertise, tools
  - Institution infrastructure
Before You Look – Strategic Plan

- Develop your research agenda
  - What topics do you plan to pursue over the next five years?
- Develop your education agenda
  - What are your interests related to education in your discipline?
- Determine the expectations for research funding in your department
  - How is funding counted towards promotion/tenure?
  - External funding or publications more important?
- Find research grant mentors
  - Faculty in your department
  - Friends in other departments
  - Former advisors
  - Friends in other universities
  - Research development officer (hi!)
- Develop a process for identifying specific funding opportunities for now or later
  - Pivot (pivot.cos.com)
  - Many grant programs are recurring with predictable due dates – use this to your advantage
- Identify potential collaborators
- Get to know the Office of Research (and other resources) before you need them
- Determine what you must do to be competitive
  - Do you need to know people in the organization?
  - Do you need more preliminary data?
- Schedule your proposal writing
- Plan to be declined
Developing Your Research Agenda

• Is your research different enough from your graduate advisor’s that you can establish an independent career?
• Do you have a strong publication record that will support your chosen research area?
  – If not, when might you?
  – If the area is new, will your previous publications establish you are qualified for the new area?
• Is your research in an exciting, vigorous, high-impact area of scholarship?
• Is it in an area being funded/likely to be funded by foundations or agencies?
  – Do you know enough about foundations/agencies to answer?

Do not let any of the answers to the above determine your research area. Follow your passion. But know the answers.
Moving To A New (Research) Area

- You may have two or three research interests
  - Dissertation/Postdoc research
  - Fairly new field of that research
    - consider developing a track record by generating preliminary data and publish findings
  - Related but different topic working in collaboration
- Reviewers look closely at your publications, so you’ll need to make a convincing case that some of your prior publications are relevant
Build Long-Range Research Goals

• What do you want to accomplish in your field over the next ten years?
  – What steps will you need to take?
  – What grant funding can help?

• Creating a well-thought-out, long-term research plan will position you to use research funding as a tool to accomplish those goals.
Developing Your Education Agenda

• Many agencies require outreach, education and diversity components
• Select issue to address
  – K-12?
  – Women in your field?
  – Community understanding of your field?
  – What are UTD’s issues?
    • More PhD students in a push to Tier 1
• Research the issue
  – Read educational literature on what has been done
    • NSF MSPnet and ERIC are two good sources
    • Is there an educational journal in your field?
  – Talk to resources on campus
    • SEEC
    • Diversity Office
    • UTeach
    • Women’s Center
• Build a track record
  – Little things work
  – Work with colleagues
Developing a Problem Statement

- A problem statement can also be called an elevator speech. It is a quick summation of your research.
- It is simple, clearly written and very difficult to do quickly.
- What is the problem you are addressing?
  - Include who, what, when, where, and why
  - Do not be so grim that the situation seems hopeless
  - Avoid overstating the problem
  - Add a human element whenever possible
- Who will benefit from your project?
  - Include information about geographic location and numbers whenever possible
  - Avoid overstatement: It is a very rare project that benefits “everyone”
- What barriers exist that have prevented current programs/technology from solving the problem that your project will address?
  - Avoid circular reasoning – the absence of your solution is not the problem you are solving
Developing a Problem Statement

• Begin with a broad statement of the problem, then the current state of the problem. Then begin your research plan.
  – Example: Despite the broad use of database management systems throughout the United States, there are currently no advanced retrieval tools available in the human services. This situation is especially problematic for Child Protective Service employees who investigate more than 10 million allegations of abuse each year. This research project will develop the first-ever search tool for retrieving information from diverse human services databases and will use this search tool to assist investigators.
Your Project on a Napkin

When you are brainstorming your research plan, there is nothing wrong with starting out on a piece of scrap paper. In fact, I recommend it as the rough draft of your logic model.
Logic Model

Certain resources are needed to operate your program

If you have access to them, then you can use them to accomplish your planned activities

If you accomplish your planned activities, then you will hopefully deliver the amount of product and/or service that you intended

If you accomplish your planned activities to the extent you intended, then your participants will benefit in certain ways

If these benefits to participants are achieved, then certain changes in organizations, communities, or systems might be expected to occur

Resources/Inputs  activities  Outputs  Outcomes  Impact

1  2  3  4  5

Your Planned Work  Your Intended Results
Writing a Goldilocks Brief

• Successful proposals **quickly** answer these questions:
  – What research do you propose to do?
  – What is the significance of your research?
  – What will your field/the agency get from your research?
  – What preliminary results validate that you are the person for the job?
  – What barriers/challenges must be addressed for you to be successful?
• Write a 1 to 1.5 page proposal that answers these questions as a practice session
  – In 750 jargon-free words (or less) explain, in a way that is understandable and easily accessible, the following:
    • Research goals and objectives
    • Research plan
    • Significance of the research
    • Impact of the research
    • Prior results
    • Challenges to your research
    • Benefits of your success
• Get someone to read it and give you feedback
• Then, rework based on those comments and consider making it shorter.
Proposal Production Schedule

• Do you have time to write a well-written proposal?
• This is the list of things you need to do:
  – Read the RFP, research the agency, what has been funded and, if necessary, talk to the Program Officer
  – Determine if you have the experience (publications/preliminary data) to be competitive
  – Recruit partners and collaborators if needed
  – If cost share is required, line up where that is coming from
  – Find mentors/reviewers to read your draft proposal
  – Let your Department Head and Office of Sponsored Project Specialist know you plan to apply
  – Brainstorm your project and work on a budget
  – Write multiple drafts of your project narrative
  – Develop other required materials
    • Budget justification
    • Biosketch
  – Finalize budget and route proposal and budget for approval
  – Upload and final check of the entire proposal
  – Submit
Surviving the Writing Process: Get on a Writing Schedule

- Neither “awaiting the muse” nor “binge writing” works
- Studies have shown the best way to write to maximize productivity (number of pages) and efficiency (number of ideas per page) is to schedule a regular block of time and treat it like a class or writing commitment (Krashen, 2002)
Twelve Pitfalls to Avoid

1. Poor fit
2. Poor organization
3. Weak argument
4. Common writing mistakes
5. Murky goals and objectives
6. Unclear project description and work plan
7. Deviating from the guidelines
8. Ignoring review criteria
9. Weak abstract
10. Writing solo
11. Document errors
12. Insufficient editing time
Verify the Match

• The RFP (request for proposals) tells you what the agency is interested in.
  – It contains a list of what you must do to get funded
  – It is non-negotiable
• Develop your funding search skills
  – UT Dallas has a PIVOT account (pivot.cos.com)
• Study program goals and eligibility
• Research what has been funded before
• Use RFP as outline for your proposal
  – Think syllabus
• If you have questions about an RFP, ask

Boilerplate proposals = boilerplate rejection letters
Talking to Program Officers

• Reasons to contact:
  – You have a question about the RFP
    • If the RFP doesn’t make sense to you, you can’t write a successful proposal
  – You want to determine if your project is a fit and get some advice on presenting that idea
    • “Fit” is the key word, not “funded”
  – In some agencies – you need to get to know the Program Officer
    • NASA, NIST, NOAA, Department of Defense
How to Contact a Program Officer

• Don’t be timid – it is their job to help you!

• Start with an email
  – Short summary of research idea and request a phone call/email response
  – Be specific about your question
    • Feel free to reference source of confusion
  – Try again after a week
    • If after several email attempts, you hear nothing, call
      ▪ If that doesn’t work, try another point of contact

• If your research isn’t a fit, ask for a suggestion
Talking to a Program Manager

- Know the role of program officers and the program s/he oversees
- Be concrete and specific
- Make an appointment at your mutual convenience
  - Initial contact should be via email and that may be all you need
    - Prepare a polished program statement and email it to the program officer requesting 15 minutes to discuss it and the program
    - Prepare an elevator pitch for the phone call that explains your problem. You should be able to explain your project in layman’s terms in three or four sentences
    - Prepare a list of questions you want to ask. Then, re-read the program solicitation to ensure those questions are not answered there
- If you do meet in person/by phone
  - Be on time and be prepared
  - Have someone else listen in on the conversation and take notes
  - After meeting, send an email thank-you with your next steps

It is a Program Manager/Officer’s job to help you. But help them. Do your homework before you contact them. They will get back to you….eventually.
And Now, For Something (else) Completely Different: Is it a match?

- The Organization Without a Cool Acronym (O.W.C.A) released a solicitation with a goal “to enhance animal-to-animal communication.” You, a logistic expert and engineer, have been working to miniaturize to pocket size a large device you made that converts all animal sounds to English.
- Should you apply? Why or why not?
Follow the Instructions Exactly

- Read the solicitation several times
  - It’s the small things (font size) that can throw you off.
- Proposals are checked to see if they are correct before anyone looks at the science. **Details matter before the content.**
- If you aren’t sure, ask.
  - OSP/ORD
  - Program Manager
    - Syllabus example
Structure the Proposal

- **Always** follow the format/outline the sponsor gives you
  - But if they don’t give you one
    - Problem statement
    - Project purpose
      - Overall goal
      - Specific objectives (these must fit with the program objectives)
    - Research Design or Work Plan
      - Timeline and activities (graphs help here)
    - Applicant Qualifications and Capabilities
    - Evaluation Plan/Expected Outcomes
    - Budget (Summary and Justification)
Prove Your Project’s Importance

• State your purpose and case for the need
  – Reviewers should know up front the significance
• Think “Op Ed” rather than academic journal
  – Compelling and memorable narrative
    • Ask yourself – how would I feel about reading this on an airplane?
• Cite sources
• Examples (hint: one of these is a bad example):
  – This proposal addresses a priority of the World AIDS Foundation: AIDS prevention in developing countries. Specifically, we propose to conduct a series of five-day AIDS prevention workshops in four cities in Indonesia. The participants will be…
  – More than 17 million Americans suffer from type 2 diabetes, the seventh leading cause of death, with premenopausal obese and diabetic women at particular risk.
  – We posit that estrogens improve over-nutrition and/or angiotensin II (Ang II)-induced INS resistance in skeletal muscle and cardiovascular tissues via decreased S6K1-mediated Ser (P) of IRSs.
Start with the Pitch

The Pitch = The Passion

I. Set the stage – Lay out the problem (“who cares?”)
   A. Get a reviewer interested at the start
   B. Identify the importance – stress the need
   C. Describe the technical challenges to solving the problem and potential benefits

II. State the theme – Your solution
    D. Describe the concept and establish credibility
    E. Describe your project’s fundamental purpose

III. Create a vision (“so what”)
    F. Show how your work will advance the field
    G. Envision a world with the problem solved

This is the opening 2-3 paragraphs of your proposal’s first section (after the abstract) no matter what that section is called (introduction, background, problem statement, significance, aims, etc.)
Sample Pitch: USDA Grant

Intravenous Magnesium as a Treatment Modality for Recurrent Airway Obstruction

I. SETTING THE STAGE

(A) Recurrent Airway Obstruction (RAO) is a progressive, debilitating respiratory disease, occurring in 50% of mature horses, (B) with 5% affected severely enough to result in an end to their working careers or to euthanasia.¹ ² It is a chronic, recurrent condition with clinical characteristics that are well recognized, although its pathogenesis is complex, multifactorial, and currently not well understood. As an indication of industry concern, in June of 2000, 30 of the world’s leading investigators were joined by pharmaceutical companies at a Michigan State University conference devoted entirely to improving RAO prevention and management.³ (C) Further, current management and therapeutic regimens for horses with chronic or severe disease are either not efficacious or are not able to be implemented. (D) For example, drugs commonly used to manage RAO, such as corticosteroids with anti-inflammatory properties and bronchodilators that open the passageways, also stress the heart, adding additional risk to an already debilitated animal.⁴ ⁵ Strategies to remove environmental precipitators such as dust and mold often fail as many horse owners are unable or unwilling to comply with such husbandry recommendations.⁵

II. PROJECT THEMES

(E) With this study, we propose to administer intravenous magnesium to horses with acute and chronic RAO to determine if this treatment improves respiratory function and/or reduces arterial hypertension, without the deleterious side effects of other commonly administered drugs. Recent case reports show magnesium to be efficacious for acute human asthmatics who fail to respond to more conventional therapy.⁷ ⁸ (F) As RAO is increasingly seen as an equine analog to asthma in humans (replacing the previous use of the COPD model),⁹ ¹⁰ and severely affected RAO horses demonstrate many of the same clinical signs as human asthmatics, RAO horses could be equally responsive to this treatment.
Sample Pitch: USDA Grant

Intravenous Magnesium as a Treatment Modality for Recurrent Airway Obstruction

III. VISION

(G) Should the research hypothesis be proved, clinicians will have another viable treatment modality at their disposal, one that is inexpensive, and effective in treating a resistant disease without the damaging side effects of other modalities. (H) Additionally, horse owners and breeders could reduce the significant financial losses caused by the malady, currently estimated at more than $800 million annually in the US alone.¹¹
Assume an Uninformed but Intelligent Reader

- Use clear, accessible language
- Stick with direct statements and active voice
- Avoid insider jargons and acronyms
- Keep in mind – the abstract (especially) must stand on its own and be understood by Congressional members, members of the public, and members of the media

*Have something to say, and say it as clearly as you can. That is the only secret of style.*

- Matthew Arnold (British poet and school inspector)
And Now, For Something (else) Completely Different: Opening

• Congrats, you are an expert on biofuels! Because you are an expert, you are reviewing proposals for a DOE proposal. You have nine proposals to review before the panel.
  – One begins: Biofuels are critical to the national goal of achieving energy independence…..
  – Another begins: Biofuels are an important component of the US’s future energy policy
  – Yet another begins: A critical problem in making biofuels practice is making the glycerol formation in the synthesis process more efficient. Our proposed project will address this problem by using the following…..”

• Which one would you want to read more of? Why?
Passive vs. Active Voice

- It has been demonstrated that....
- The SAP program is being implemented by our department....
- Following administration of the third dosage, measurements will be taken......
- Research clearly shows.....
- Our department launched SAP this year....
- After dosage 3, we will..........
Other Common Writing Problems

• You turn your verbs into nouns
  – Verbs as nouns: Once upon a time, as a walk through the woods was taking place on the part of Little Red Riding Hood, the Wolf’s jump out from behind a tree occurred, causing her fright
  – Verbs as verbs: Once upon a time, Little Red Riding Hood was walking through the woods, when the Wolf jumped out from behind a tree and frightened her

• Your subjects/characters aren’t clear
  – Studies and genes and software can all be subjects/characters.
  – Take some time to determine what your subjects are and what they are doing

• You are heavy on the jargon
  – Don’t make your reader feel stupid

• Overuse of passive voice and metadiscourse
  – Passive: “The subjects were observed”
  – Metadiscourse: “I will show”/“I will explain”
    • Keep this in the introduction
Formulate Specific, Measurable Objectives

• Goal versus objective
  – Goal is a general statement of the project’s overall purpose(s)
    • Our aim with this innovative curriculum is to improve the supply of graduates with National Registry certification
  – Objective is a specific, measurable outcome or milestone

• SMART objectives
  – Specific
  – Measureable
  – Attainable/Achievable
  – Relevant
  – Time bound

• Which is the better objective?
  1. It is anticipated that completion of the new curriculum will result in enhanced student scores
  2. At least 90 percent of course graduates will pass the National Registration Examination
Graphics Tell The Story

- Specify major tasks and timelines; use Gantt charts, calendars, or flow charts
  - Use color carefully and make sure it looks good in black and white
  - Space is usually limited so do not get complicated
  - Don’t use a graphic just to use it, make sure it illustrates your point
  - Doesn’t have to be fancy – SmartArt in Word has some commonly used ones

- If you don’t like graphics, just use a timeline and a logic model
Time Line (Gantt Chart)/Logic Model

The Gantt Chart quickly presents the timeline for your research project. You can do these in Excel. But it shows you have thought about managing your project and how much time you’ll need.

Again, the Logic Model says what you are going to do, how you will do it, the results of the research and the impact of the research results.
Pay Attention to Review Criteria

• Read evaluation standards carefully; then reference them in the project narrative
• Touch all bases – not just the ones you’re comfortable with
• Reviewers use the criteria to score your proposal
Write, Rewrite, and Repeat

• Let a document rest between writing and rewriting
  – Overnight works best
  – Read it out loud

*I'm not a very good writer, but I'm an excellent rewriter* ~ James Michener
Have People Review It: Editor

• Ask a colleague/mentor for comments and suggestions
  – Someone qualified to critique the content
  – Use as many editors as available
• Check your ego at the door
• Allow time for both the critique and for you to rewrite as needed.
• Give editors the solicitation as well
Have People Review It: Proofreader

- Proofreaders edit for form, not content
- Must be someone with no stake in the project
- Learn to love these folks
- Root out inconsistencies in format as well as typos, misspellings, grammar, etc.

I can and will provide this service for you.
In Summary

• Know what you want to do before you start writing
• Each solicitation is different
  – Follow the directions
  – Know the goals of the organization before you write
• Prove you are an expert by:
  – Including details of the problems and references that show you understand the problem
  – Giving a brief background of the science
  – Explaining why you are doing your plan the way you are
• Be specific
  – Specific materials, structures, devices you will use/build
  – Specific methods you will use
  – Specific metrics you will use to determine success
  – Specific milestones you will achieve and when
• Avoid boilerplate information – each section is a chance for you to discuss the project you are proposing. Use it to your advantage
• Describe what each person on the project will contribute and how much time each will spend on the project
• How outsiders can get input/guidance and how you will get that information out
  – A website is not enough
• Get a colleague to read it for the science and an editor to read it for the grammar whenever possible
There’s no right or wrong in language, any more than there’s right or wrong in nature. Evolution is all about restless and continuous change, mutation and variation. What was once ‘meant’ in the animal kingdom to be a nose can end up as an antenna, a tongue, eyes, a pair of lips or a blank space once evolution and the permutation of new DNA and new conditions has got to work……Well it’s the same in language, there’s no right or wrong, only usage. Convention exists, of course it does, but convention is no more a register of rightness or wrongness than etiquette is, it’s just another way of saying usage: convention is a privately agreed usage rather than a publicly evolving one. Conventions alter too, like life.” –

See more at:
Remember: Be Passionate
Contact

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• Information I have you may find useful:
  – Project timelines
  – Problem statement resources
  – Developing concept papers
  – Talking to Program Officers
  – Setting up Pivot profiles (finding funding)
Questions?

• Thanks for listening!
Next in the
2013 Summer Certificate Series

Research Compliance
August 27, 2013
10-11am
CB1 1.106