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Proposal Development Best Practices

Presentation to Plymouth State University

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Session Agenda

- ❑ Proposal Writing under Obama
- ❑ The Proposal Idea
- ❑ Common Writing Mistakes
- ❑ The Review Process
- ❑ Administrative Issues
- ❑ Searching for Funding

Proposal Writing Under the Obama Administration

- We are operating at an unprecedented pace!
 - 30 day turnarounds for applications
 - No commenting on rule making
 - Delaying a day before starting a proposal can be fatal
- Local agendas will trump the Washington agenda.
- Almost every proposal must address workforce and economic impact issues.
- This government is and will be transparent from top to bottom.

Proposal Writing Under Obama

- ❑ Partnerships and collaboration are the orders of the day and we must re-think the way we approach these relationships: mutual benefit, long-term
- ❑ Conflict of interest issues must be reviewed for every project.
- ❑ Infrastructure to review the economic impact of ideas must be developed.
- ❑ Ethics need to take center stage.
- ❑ The role of higher education as regional economic engine, stewards of place, needs to be re-thought and energized.

Funding Priorities

Health Care

Community Service

Access

STEM

Internationalization

Sustainability

Jobs

Energy Energy Energy

Priorities for Sponsored Research

- ❖ Environmental and rural health challenges that impact the economy, quality of life, and biodiversity through biotechnology and agriculture
- ❖ Transformation and impact of teaching and learning at every educational level, and the impact of new technologies on education
- ❖ Undergraduate, K-12 research

Priorities for Sponsored Research

- ❖ Economic development, including partnerships between industry, university, and outreach projects to the community (Broad focus on numerous partnerships that enhance the greater good of society)
- ❖ Life span issues, particularly as they relate to health (Interdisciplinary early childhood education, family literacy, geriatrics)
- ❖ Globalization and internationalization

The Proposal Idea

Approach to a Sound Proposal

Hypothesis

GrantSearch



Identify Funder



Outline
Proposal



(Project Management and Assessment Plans)

Write Proposal
(Budget)

The Hypothesis, Problem Statement or Research Question

- An explanation of the relationship being proposed.
- No more than three to five sentence paragraph.
- Elements include the following:
 - Statement of the research target (evidence of the importance of the issue)**
 - Hypothesis, research question or problem statement (clear identification of the variables and their proposed relationship)**
 - Quantitative/Qualitative criteria for measuring the solution (how the outcome will be measured, not a description of the specific outcome).**

Hypothesis, Research Question, or Problem Statement Defined

A hypothesis is a 'small' cause and effect statement about a specific set of circumstances. It represents an informed belief that a researcher or proposal writer possesses about a research issue before conducting a satisfactory number of experiments that could potentially disprove that belief.

HYPOTHESIS STATEMENT BECOMES

HYPOTHESIS

- ❑ Importance
- ❑ Relationship
- ❑ Assessment

PROPOSAL

Introduction

Background
Problem

Statement

Goals & Objectives
Procedures (research
plan)

Timeline

Assessment

Project Management
Budget
Credentials

HYPOTHESIS STATEMENT BECOMES

ABSTRACT

HYPOTHESIS

PROPOSAL

□ Importance

□ Relationship

□ Assessment

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Outline Your Proposal

- Entire document consistent with funder's criteria and guidelines
- Goals and objectives based on hypothesis statement
 - Goals should divide your project into its logical components.
 - Objectives should speak to goal attainment with a timeline and basis of assessment included.

Develop Reliable Timelines

- Useful to PI
- Tracking Aid to Sponsored Programs
- Required by Federal Agency

The Best Proposals Tell a Story

- Action-based
- Outcome-oriented

Common Writing Mistakes



Clear Writing

- Avoid fuzzy or inappropriate use of words:

The intrinsic labyrinth of wires must be first disentangled.

The liquid contents of the container should then be disgorged via the spout by the operator.

Reviewer Writing Issues

- ❑ Disturb/Irritate
 - Spelling errors
 - Overusing technical terms
 - Using acronyms
- ❑ Confuse
 - Writing overly complex sentences
 - Failing to attend to paragraph coherence issues
 - Using passive voice
 - Including non-parallel lists
- ❑ Diminish Credibility
 - Failing to address criteria
 - Abstract, problem statement, budget disconnect
 - Failing to address assessment and administration
 - Including extraneous information

Words

- ❑ Select strong vigorous words
- ❑ Use familiar words
- ❑ Use gender-neutral expressions
- ❑ Use specialized (technical) words with caution
- ❑ Prefer active to passive voice



Use Simple Wording To Avoid Obscuring Your Meaning

be cognizant of

commence

utilize

facilitate

optimum

should it prove to be the case

with the possible exception of

for the reason that

Modifier Problems

- "Using multiple-regression techniques, the animals in Experiment 1 were..."
- "The determinations were made on samples using gas chromatography."
- "In assessing the damage, the plants exhibited numerous lesions."
- "The spiders were inadvertently discovered while repairing a faulty growth chamber."

Clarity and Simplicity In Sentence Structure

- Average sentence length should be between 18 and 20 words.

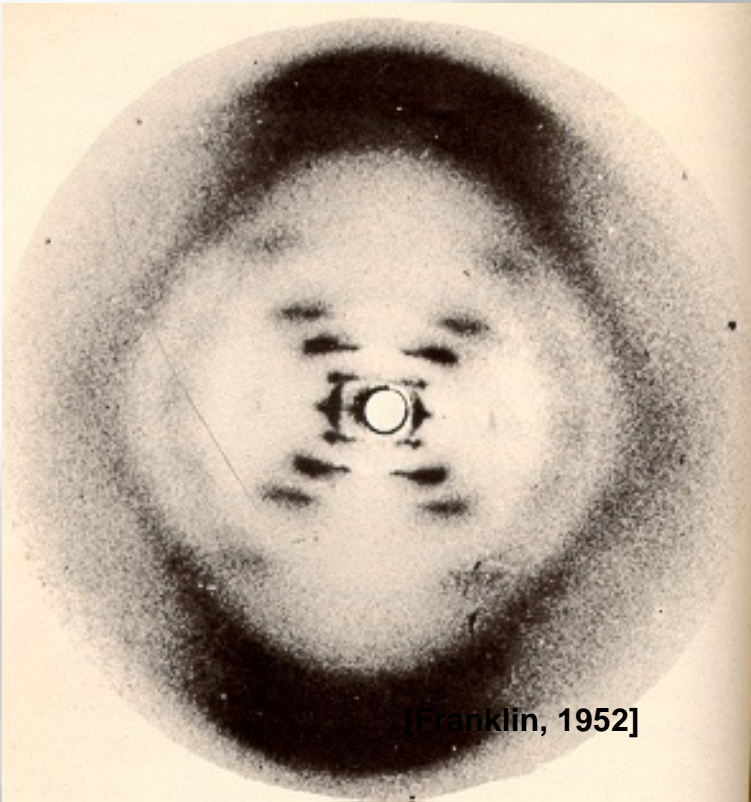
Paragraphs

- ❑ Variation in sentence construction
- ❑ Quality of topic sentence
- ❑ Coherence of information
- ❑ Consistency in verb tense

Use First Person with Caution

- Consistency throughout the document
- Define 'we'

Failing to cite the contribution of others can be a blemish on (or fatal to) your career



James Watson surreptitiously looked at Rosalind Franklin's work



Watson did not give enough credit to Franklin

Source: Alley, M. THE CRAFT OF SCIENTIFIC WRITING, 1996

[Rosalind Franklin's] colleague Maurice Wilkins, without obtaining her permission, made available to Watson and Crick her then unpublished X-ray diffraction pattern of the B form of DNA, which was crucial evidence for the helical structure. In his account of this discovery, Watson wrote,

"The instant I saw the [x-rays] my mouth fell open and my pulse began to race.... the black cross of reflections which dominated the picture could arise only from a helical structure... mere inspection of the X-ray picture gave several of the vital helical parameters."

Source: http://www.physics.ucla.edu/~cwp/Phase2/Franklin,_Rosalind@841234567.html

Successful Proposal Writers

- ❑ Fast
- ❑ Research skills
- ❑ Sales capabilities
- ❑ Written and oral communication skills
- ❑ Ingenuity and flexibility
- ❑ Administrative capabilities (leadership to accounting)
- ❑ Human relations skills
- ❑ Persistence, dedication, patience, and the capacity for hard work
- ❑ Political acumen
- ❑ Integrity

The Review Process



U.S. Department of Agriculture

□ **Grant Review Process**

- RFA is published in Grants.gov/Federal Register
- Panel Manager (part-time employee) is selected
- Program Leader and Manager select review panelists
- Panel review held
- Panel ranks proposals and “panel summary” is given to all to applicants.
- If interested in becoming a reviewer, contact the appropriate Program Leader.



U.S. Department of Education

❑ Grant Review Process

- ❑ RFA is published in Grants.gov/Federal Register
- ❑ Reviewers read applications individually then come together for panel review.
- ❑ Proposals are reviewed and ranked
- ❑ If interested in becoming a reviewer contact the appropriate Program Manager.
- ❑ Requests for reviewers are also made in the Federal Register



U.S. Environmental Protection Agency

□ Grant Review Process

- Program Manager decides to hold an open or simplified (under \$100,000) competition
- Simplified competitions are open to select applicants and not posted.
- For open competitions, RFA is published in Grants.gov/Federal Register
- Project Manger screens applications and selects review panelists
- Panelists review and rank applications
- If interested in becoming a reviewer contact EPA's Office of Grants and Debarment.



U.S. Department of Energy

□ Grant Review Process

- RFA is published in Grants.gov/Federal Register

- Project Manager screens applications and selects review panelists

- Proposals are reviewed by either (determined by Project Manager)
 - Field Reviewers
 - Standing Committee
 - Ad Hoc Committee

U.S. Department of Defense

□ Grant Review Process

- BAA is published in Grants.gov/Federal Register
- Project Manager will request a pre-proposal
- Project Manager will request a full proposal
- Proposals are reviewed by either (determined by Project Manager)
 - Field Reviewers
 - Standing Committee
 - Ad Hoc Committee

Encourage Direct Contact with Agency Program Officer

- ❑ Sound idea summary
- ❑ Get reviewer comments
- ❑ Check on proposal criteria

Find the Criteria for Funding for the Agency You Select

- ❑ Study for a match to your idea
- ❑ Examine repeatedly during the writing process
- ❑ Ask for the detailed format for evaluation that field readers use

Reader Evaluations Formats

- A sound assessment plan

5. Does the proposal have a balance of quantitative and qualitative measures? Does the assessment inform program development? Is there a schedule for assessment? Is the project leadership involved in the data collection and analysis system? Are the people identified as responsible for assessment appropriately trained and qualified.

1..... 2 3 4 5

Understand the Review Process

- Knowing two things is critical
 - the review criteria of the program
 - those who will be reviewing
- Identifying proposal winners and losers is easy for the experienced reader – **become a reader**

Think Like a Reviewer!

Some General Truths --

- Three times as many applications as can be funded
- Help by offering reasons for discarding
 - Poorly written
 - Not funding criteria driven
 - Not coherently laid out
- Help by offering a well written and targeted proposal

“A few proposals always stand out by virtue of the compelling clarity of the writing and overall visual effect of the presentation, regardless of the topic.” — a program officer’s comment

Don't Just Chase the \$

- ❑ Build campus capacity
- ❑ Know community
interests/resources/needs
- ❑ Establish a strategic program
development mindset

Mantra: think globally, act locally

Administrative Issues

Political Issues

- ❑ Are you in a political position to pursue this?
- ❑ Who would provide organizational sponsorship?
- ❑ Are there other programs or persons related to your topic in crucial ways?

Grant Project Management

- Establish Your Team
- Plan Your Budget
- Construct Your Timeline
- Prepare Assessment Strategy
 - Outcomes
 - Benchmarks



Why Pre-planning?

1. Agencies require administrative planning
2. A good plan indicates research competence
3. Hit the ground running when you are funded
4. Facilitates approval process within your institution regarding compliance and other internal matters
5. RIGHT and RESPONSIBLE thing to do when dealing with someone else's money

Establishing Your Team

Team Composition:

- Colleagues from your institution
- Colleagues from other institutions
- Administrative team members
- Finance/Budget personnel (hiring)
- Special equipment and facilities

Budget Planning

- ❑ Determine Source of Matching Funds
- ❑ Existing vs. New Money
- ❑ Soft vs. Hard Match
- ❑ Facility Enhancements

Don't Forget to Account For

- ❑ Travel Expenses
- ❑ Personnel Expenses
- ❑ Equipment Purchases
- ❑ Sub-Contracts



Build a Timeline

- ❑ Realistically think about what and when you can accomplish your goals (the deliverables) in detail
- ❑ Establish outcome/deliverable-oriented benchmarks
- ❑ Breathe life into your proposal



Preparing Project Assessment

- ❑ Describe quantifiable and qualitative outcomes
- ❑ Decide who is in charge of assessment NOW -- do not wait until you are completing your first project appraisal to determine who is managing this integral part of the project
- ❑ Determine how findings will be fed back into the project to enhance and strengthen your progress?

Evaluation and Project Goals/Outcomes/Questions

Source: Russell Pimmel, NSF, GRC presentation on 3/3/07

Definition of Goals, Objectives and Outcomes

Goal (Aims) – Broad, overarching statement of intention or ambition

- A goal typically leads to several objectives

Objective – Specific statement of intention

- More focused and specific than goal
- Includes timeline
- A objective may lead to one or more outcomes

Outcome – Statement of expected result

- Measurable with criteria for success

NOTE: No consistent definition of these terms

Evaluation and Project Goals/Outcomes

- Evaluation starts with carefully defined project goals/outcomes
- Goals/outcomes related to:
 - **Project management**
 - Initiating or completing an activity
 - Finishing a “product”
 - **Student/subject behavior**
 - Modifying a learning outcome
 - Modifying an attitude or a perception

Developing Goals and Outcomes

- ❑ Start with one or more overarching statements of project **intention**
 - Each statement is a *goal*
- ❑ Convert each goal into one or more specific **expected measurable results**
 - Each result is an *outcome*

Goals – Objectives – Outcomes -- Questions

- **Converting goals to outcomes may involve intermediate steps**
 - **Intermediate steps frequently called *objectives***
 - **More specific, more measurable than goals**
 - **Less specific, less measurable than outcomes**
- **Outcomes (goals) lead to questions**
 - **These form the basis of the evaluation**
 - **Evaluation process collects and interprets data to answer evaluation questions**

Remember, Don't Forget To . . .

Keep track of all project priorities so they are all properly assessed!



Ensuring Compliance

- University Responsibilities
 - Guarantees project does not discriminate
 - Insures institution has not been disbarred from federal monies
 - Manages accounting records so no federal money is used to lobby the government
- Project Specific Responsibilities
 - Environmental Impact
 - Hazardous Materials
 - Human Subjects
 - Animal Care and Use
 - Intellectual property
 - Responsible Conduct
 - Reporting Results

Research Ethics

- ❑ Conflict of Interest
- ❑ Plagiarism
- ❑ Problems of Practice (fraud, deception, poor project management, sloppy research practices)

What are Export Controls

US laws that regulate the distribution to foreign nationals and foreign countries of strategically important products, services and information for reasons of foreign policy and national security.

US Export Controls and Responsible Agencies

- ❑ **State Department: Inherently military technologies--International Traffic in Arms Regulations (ITAR)**
- ❑ **Commerce Department: “Dual-Use” technologies (primary civil use) -- Export Administration Regulations (EAR)**
- ❑ **Treasury Department, Office of Foreign Assets Control (OFAC): Prohibits transactions with countries subject to boycotts, trade sanctions, embargoes**

Implications of Export Laws

- No effect on 90% of university research
- But **potential** impact on
 - Ability of foreign students to participate in research involving a controlled technology (mostly under ITAR)
 - Ability to provide services (including training in the use of controlled equipment) to foreign nationals (ITAR, EAR, OFAC)
 - Ability to send controlled equipment to foreign countries (ITAR, EAR, and OFAC)

Searching for Funding Opportunities

Grant Finding Tips

- ❑ Establish Program Officer relationships
- ❑ Agency mailing lists/ press releases
- ❑ Align your ideas with federal priorities
- ❑ Ask campus representative to forward GRC publications.
- ❑ Sign up of GRC Faculty Database

GrantSearch Funding Database

- **Contains grant information on about 1600 ongoing funding opportunities for state colleges and universities - updated continually as program details change**
- **GRC developed this database 25 years ago to keep track of all the ongoing grant programs of the federal government – now contains 500 national foundations.**
- **Faculty database available – sign up to receive funding opportunities directly to your desktop.**

Searching for Private Foundation Funding

The Foundation Center

<http://foundationcenter.org/>

Questions

The word "Questions" is rendered in a large, blue, 3D-style serif font with a white shadow. It is surrounded by several smaller, stylized question marks in the same blue and white color scheme, scattered around the main text.

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