Significance & Innovation

Overview
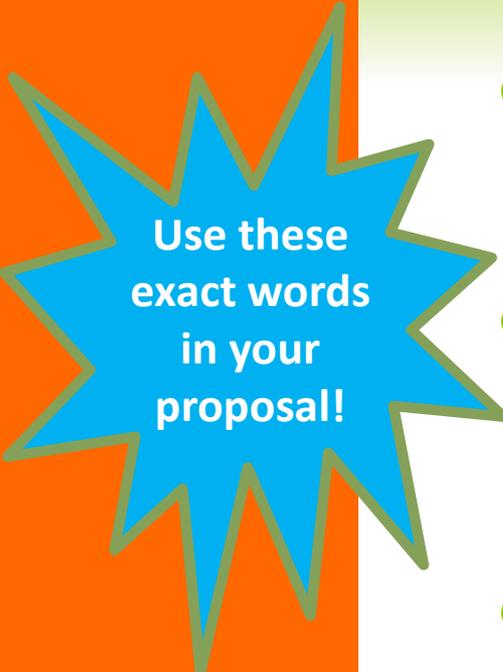
Shelley Gray, Karen Kirk, Bonnie Martin-Harris

Lessons for Success 2014

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SIGNIFICANCE SECTION

Use these exact words in your proposal!

- Explain **importance of the problem** or **critical barrier to progress** in the field that the proposed project addresses

- Explain how proposed project will **improve scientific knowledge**, **technical capability**, and/or **clinical practice** in one or more broad fields (this is innovation)

- Describe **how** the concepts, methods, technologies, treatments, services, or preventative interventions that drive this **field will be changed** if the proposed aims are achieved

CLARITY OF PURPOSE

◎ You must have a clear vision of the significance of your research so that you can convey it clearly, enthusiastically, and concisely to the reviewers

Don't be tentative :*(

Do use words with 'positive valence'

Don't be vague :*(

Words with Positive Valence

improved

original

opportunity

productive

new

important

innovative

creative

exciting

interesting

advanced

constructive

Tentative Stance

if

may

might

hope

could

possibly

perhaps

Vague Terminology

Certain aspects

Overall conceptualization

Some properties

General outcome

Improved understanding

Observed change

Improved outlook

FROM QUESTIONS TO A PROBLEM
(ADAPTED FROM BOOTH, COLOMB, & WILLIAMS, 2008, P. 61)

◎ **Topic:** I am studying how working memory affects word learning in children with specific language impairment, dyslexia, comorbid SLI/dyslexia, and typical bilingual and monolingual English language development

- ◉ **Theoretical Significance** because I want to develop a unified working-memory-based model of word learning

  - ○ **Clinical Significance:** and to develop a comprehensive working memory battery for children

    - ◉ **Potential Practical Application:** so that a working memory battery may be used to tailor treatment protocols for vocabulary instruction and intervention with children

      - • **This is innovative** because no comprehensive working memory battery exists for children

INTEGRATE YOUR STORY INTO THE LITERATURE REVIEW

- Define the problem

- Contextualize the problem and explain why it is significant, citing current research

- Highlight the gaps in knowledge, citing current research

- Explain how your innovative approach will solve this problem

HOW TO CONVEY SIGNIFICANCE

- Explain the problem and what is known about it now

  - Describe how your work contributed to what is known

- Propose the next step and why

  - Described how you are positioned to take this next step

- Situate the problem within a theoretical framework or model and show how solving the problem will impact theoretical and/or clinical progress

GAP IN KNOWLEDGE/ BARRIER TO PROGRESS

In human subjects, it is difficult to determine the links among physiology, vocal function measurement, and perceptual quality because it is not possible to systematically manipulate one and observe the effects on the other

Gap/barrier to progress

Computational and physical modeling are alternative methods for studying the links among physiology, vocal function measures, and perceptual quality

Introduces how proposed study will address this issue

Significance Statement

The proposed research is significant because understanding how specific vocal fold asymmetries contribute to voice quality will lead to improved efficiency of evaluation and treatment of voice disorders that involve vibratory asymmetry

Significance Statement

The **theoretical and clinical significance** accrued across these aims include (1) data-based comparisons of four theoretically-based WM models in children, (2) the development and testing of a new working-memory-based WL model in children, (3) establishing the relationship between WM and WL in monolingual English and bilingual Spanish-English speaking children compared to children with SLI, dyslexia and SLI/dyslexia, (4) a comprehensive description of between- and within-group WL differences in **large, carefully selected typical and clinical groups** and (5) the refinement of a working-memory-based WL battery for future theoretical and clinical research.

SIGNIFICANCE STATEMENT

These studies **address important problems** in the fields of psychology, language science and education, including the need for comprehensive working memory and word learning batteries for children to support valid and reliable assessment and the need to understand deficits underlying poor word learning so that effective treatments can be developed. By completing this research we will **advance scientific knowledge** in working memory and word learning for monolingual and bilingual children with typical development and children with language impairment and **significantly improve the methods** for assessing working memory and word learning in school age children.

INNOVATION

- Explain how the application challenges and **seeks to shift** current **research** or **clinical practice** paradigms (or both!)

- Describe any **novel** theoretical concepts, approaches or methodologies, instrumentation or intervention(s) to be developed or used, and any **advantage over existing** methodologies, instrumentation or intervention(s)

- Explain any **refinements**, **improvements**, or **new applications** of theoretical concepts, approaches or methodologies, instrumentation or interventions

INNOVATION

- Innovation should be woven throughout all sections, not just in the Innovation Section

- Things that are innovative
  - New theory or model (supported by literature)
  - Different application of an existing theory
  - Theory/model from a different field (e.g., engineering) applied to our field
  - Normal theory applied to disordered population
  - New and better experimental or clinical method
  - New and better instrumentation
  - New and better approaches to analysis

INNOVATION

- Things that are <u>not</u> innovative

  - Using 'in vogue' technologies or methodologies that are poorly motivated or are not appropriate for the stage of the proposed research

  - Collecting more data because it would be interesting to know more about XYZ

  - Conducting research because 'very little research has been conducted' in this area or 'very little is known about X'

Innovation Statement

- The proposed project seeks to **shift current working memory paradigms in children** by testing …

- The project seeks to **shift current word learning paradigms in children** by using a comprehensive, newly created battery …

- The proposed **methodology goes beyond typical measures of word learning** to include…

- We **create a novel word learning battery** by manipulating or holding constant factors known to influence word learning including …

- We seek to **shift current research and clinical paradigms** by studying **large, diverse participant groups…**

- This **approach is innovative** because it addresses the pressing need to…

- Our **collaboration is innovative** in that we…

TRY IT OUT…

◉ Turn to your mentor and complete these statements

◉ "My study is significant because…"

◉ "My study is innovative because…"

GRANTSMANSHIP (CONTINUED)

- Use and highlight key words from the grant package and scoring guide

- Clarity of purpose – don't go down a side road – make every word count

- Careful, accurate review of research with appropriate scope and citations

- Use positive valence words

GRANTSMANSHIP

- ◎ Figures can be very effective if they are clear and communicate better than text

- ◎ Define terminology

- ◎ Include white space

- ◎ Edit (and ask others to edit) a paper copy of your proposal before you submit it

- ◎ No typos, no grammatical errors, none!