

Deciphering the Summary Statement and Responding Appropriately

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Recall.....

- Overall impact score (i.e., priority score) posted on Commons
 - ** = not discussed (i.e., streamlined)
 - Number (10-90)
 - Scores 10-30, Very encouraging, potentially fundable
 - Scores 40-60, Somewhat encouraging, but probably not fundable on this submission
 - Scores 70-90, Considerably less encouraging, less fundable
- Percentile Score
- Summary Statement (will take several weeks)

Now What?

- Program Officer is now your main contact
- If “good score,” move on to Advisory Council Review
 - Option of writing a letter to Advisory Council
- If “poor score,” or if “not discussed” move on to Resubmission (yes, even for “not discussed” proposals)
 - Revise application
 - Write introduction to revised application

“~Good Score”: Letter to Advisory Council

- Opportunity to address reviewer concerns
- VERY IMPORTANT if score is “on the bubble”
- Talk to your program officer for guidance
- Many of the general points about resubmission will apply to this letter
- If not already, familiarize yourself with the strategic plan
(e.g., <https://www.nidcd.nih.gov/about/plans/strategic/Pages/Default.aspx>)

Dear NIDCD Advisory Council:

I am writing to provide additional information related to the above referenced application, which was reviewed by LCOM on 10/15/2012. By way of background, this application aims to ameliorate the substantial vocabulary deficit experienced by Kindergarten children with Specific Language Impairment (SLI) by developing and testing a new treatment. **As noted in the NIDCD 2012-2016 Strategic Plan**, “in children, language impairment and delayed language acquisition are highly significant predictors of future academic, social, vocational, and adaptive outcomes” (p. 32). Although there has been extensive study of the nature of word learning deficits in children with SLI, this well-developed understanding of the problem has not been translated into effective treatments for these children. This application tackles this critical barrier to communication success by developing a hypothesis-driven intervention for children with SLI, **a high priority area in the NIDCD Strategic Plan**. Specifically, we apply the current understanding of word learning deficits in children with SLI to the adaptation of a treatment that has promoted robust word learning in other groups of children (i.e., interactive book reading). Much is known about effective administration of this treatment in other groups of children (e.g., children from low income homes). However, the nature of the deficit in those prior groups of children differs from children with SLI. As a crucial first step in developing this treatment for children with SLI, this application seeks to identify an adequate intensity of the treatment and the best way to achieve that intensity for children with SLI. Moreover, the extent of benefit of the treatment and the variability across children in response to the treatment will be documented. These data will facilitate further development of the treatment to maximize outcomes for children with SLI. Thus, the long-term goal is to develop this treatment into one that decisively improves the vocabulary of Kindergarten children with SLI, preventing future academic failure.

“Poor Score”: Resubmission

- No matter how difficult it may be to shrug off an unfavorable summary statement, “...shrug it off you must, and proceed to a well-written, positive, improved revision” (Ogden & Goldberg, 2002, p. 181)
- Ogden’s Axiom: The reviewer is always right.
 - Axiom Corollary 1: There is nothing to gain and everything to lose by contesting a comment.
 - Axiom Corollary 2: The goal of submitting a proposal is to get funds to support your research.

Deconstruct the Summary Statement

- Enumerate (1), (2), (3)...n, ALL comments, strengths, weaknesses, concerns, etc.
- Organize ALL weaknesses/concerns around or within themes, for example, Theory, Innovation, Significance, Approach, etc.
- Organize ALL strengths around or within themes
- Outline plan to bolster weaknesses and retain strengths
- Talk it all through with your mentors (and possibly an abridged discussion with program officer)

Plan of Attack

- Two tasks:
 - Write a response to the Reviewers' Critiques
 - Make changes to the proposal where appropriate

Response to Critique: Intro Example 1

We **thank the reviewers** for their careful reading of our initial submission. They **noted a number of strengths including**: the potential significant theoretical and clinical impact from differentiating learning processes in child word learning; the innovative application of theories from general learning to child word learning; the experience of the investigator; high productivity during the past funding period; well-controlled experimental design; piloting of the proposed paradigm with the target age group; environment highly conducive to success of the project. **We have retained these strengths and carefully addressed the weaknesses noted by the reviewers** in this revised application. Major changes are summarized below and noted in the Research Strategy by a vertical line in the left-hand margin. *[Relevant sections noted below].*

Response to Critique: Intro Example 2

This application has been revised in response to the XXXX Summary Statement (re NIH/NIDCD 2 R01 DC000523-14A1) October, 2008. As noted in the Resume and Summary of Discussion (p. 1), “Overall, reviewers were quite excited about this proposal.” Critique 1 (C1, p. 2) noted “[the application’s] multifactorial account of X has the potential to significantly improve knowledge about the variables that cause, exacerbate or perpetuate X” ... The P.I. thanks the reviewers for their helpful comments. The present revised proposal contains (1) findings from 8 preliminary studies (5 updated, and 3 new) directly germane to our proposed studies and (2) significant revisions to Specific Aims, Background and Significance and Research Design and Methods. The most salient concerns from the Summary Statement are discussed briefly below.

Response to Critique: Intro Example 3

We appreciate the **uniform enthusiasm** expressed by the reviewers about the **investigative team, innovation, and environment**. At the same time, all reviewers **raised questions about the approach**. Reviewers were **split on the significance** of the work with two reviewers noting high impact but one reviewer being less convinced. Our response to these issues is summarized below with major changes denoted in the text by a vertical line.

Rest of the response grouped issues by approach and significance

Response to Specific Critiques: Investigator

- *Given the complexity of the proposed experiments, **a statistical consultant might be helpful** so that more complex statistical analyses than those proposed could be performed (C2).*
- ***Response:** A statistician, Dr. XxxYyy, has been added. He has been integrally involved in this revision, recommending a more sophisticated analytical technique, mixed effects modeling, **to better handle** random variability, **more elegantly test** interactions with time, and **allow for examination of individual differences**. The overall design and analysis approach have been clarified. [B, C.2.4]*

Response to Specific Critiques: Aims (and link to studies)

- *It isn't clear as to how the last three experiments proposed for AIM 3 relate to the theme of AIM 3. These experiments appear to take the proposal in a new direction not adequately described in AIM 3 (C2).*
- **Response:** While we believe these three experiments are worth doing, we **agree with the reviewer** that they are not tightly linked to AIM 3, and therefore they have been **deleted** from the revised proposal.

Response to Specific Critiques: Significance

- *The proposed model comes directly from the adult literature. It is **not clear that it can be applied to children**(C2, C3):*
 - ***Response:** Although our submission emphasized past application of the model to adult word learning, **studies of general learning in infants and children support the applicability** of these concepts to children. Moreover, **our feasibility data**, which are now shown in greater detail, **demonstrate the applicability** of these concepts to child word learning. [A, C.2.4]*

Response to Specific Critiques: Feasibility/Preliminary Studies

- *It would be **helpful if there were pilot data** indicating if the proposed application of the Z technique to the auditory system is feasible (C4).*
 - **Response:** The revised proposal **provides new pilot** data based on using the Z technique in the AVCN in four animals. These pilot data indicate that the Z **technique is a feasible approach**, at least at the level of the AVCN.

Response to Specific Critiques: Approach

- *There is **no discussion of statistical power** (C1 & C2).*
 - **Response:** General **procedures for estimating power** in multi-level models (our current and proposed approach) **are not established**—literally dozens of papers still appear on the topic every year. With that caveat, using the power computed during noncentrality confidence interval estimation (Smithson, 2001), adjusted for repeated measures (Bird, 2002), **minimum power** is .67, with a mean of .89, using the data for the effects we've found. **More convincing**, we think, than one kind of *estimate* of power is our **ability to detect multiple converging effects using the proposed experimental procedures** (see **Preliminary Studies 3-6** for details).

Response to Specific Critiques: Approach

- ***Generalizability to different levels of socioeconomic status is not (considered) (C2).***
 - ***Response:*** Even though we typically find no difference in SES between preschool-age X and Y (e.g., Johnson, Karrass, Conture & Walden, in press), we plan in our analytical models to take SES into consideration as a predictor variable, as described now under “X” in the present proposal’s Research Design and Method section.

Response to Specific Critiques: Approach

- **Concerns/confusion with the dependent variable (C₁, C₂):**
 - **Response:** Use of accuracy versus reaction time measures for different tasks depends on whether accuracy achieves near ceiling levels of performance, which tends to be the case for real word tasks but not nonword tasks. Feasibility data is shown in more detail to demonstrate our ability to detect differences using these dependent variables even in the face of the typical variability seen in this age group. The revised analysis approach and sample size increases power. [C.2.4]

Remember: Watch your language...

- “There is nothing to gain, and everything to lose, by confrontation” (Ogden & Goldberg, 2002, p. 187)
- “Do not impugn the knowledge of the reviewer” (O&G, 2002, p. 187)
- Take the blame for mistakes, for example, “The PI didn’t state the material clearly, in an accessible-to-reviewer manner...”
- “Adversarial language...is self-defeating” (O&G, 2002, p. 188)

Revising the Proposal

- The revision should be substantive
- Some “sources” of material for revision
 - Summary Statement comments
 - New preliminary data
 - Recent finding from others
 - Colleagues’ or collaborators’ review of SS and/or grant
 - Rethinking methods
 - Refinement, clarification of Aims, Significance, Innovation, Approach
 - Use something like left margin vertical line to highlight revisions

Revising Proposal

- Include new/revised materials to satisfy reviewers' concerns
- You may need to delete some sections to deal with reviewers' concerns
- Do NOT add material that is irrelevant to reviewer concerns (opens you up to new criticisms)
- Do NOT simply do what reviewers suggest
 - Think through whether the suggestion is a good one
 - If the suggestion is not good, think of a better solution to the concern

Get to Work!

- A revision will only receive an improved score if it has been significantly re-written.
- You must spend a nontrivial amount of time writing and re-writing
 - You'll also still need an internal review before re-submission
- VERY important: Set aside enough time to get the job done, and done right
- This means you can NOT wallow in self-pity for too long!

“Worst Case” Scenario: What if A₁ is not funded?

- Still need to deconstruct the summary statement to determine strengths and weaknesses
- Options:
 - Go to a different agency with a different version that retains the strengths
 - Do some preliminary work with internal funding or “free” labor (e.g., student projects)
 - Abandon this particular project

Surviving a worst case scenario

- Many people encounter the worst case scenario. You are not alone.
 - People who are successful over the long run persevere!
- For some people, this roadblock may cause them to question their career path
 - BUT, if you still really care about X, you are still in the right career.
 - Keep going!
 - Find a way around this temporary barrier

Parting words from Ed Conture

- **Above all, listen to the Summary Statement, it may not be singing your song but it is telling you a story and you should be listening. There will be a test, namely, your next submission and review.**