# Grad Slam 2024 Abstract Writing Guide

#### What is an Abstract?

In general, abstracts are short paragraphs (100-300 words) that summarize your topic and preview the findings and impact of your academic or creative project. Abstracts are often used to apply for conferences, competitions, funding, or publication. The goal of an abstract is to inform, interest, and engage the reader enough to approve your project or read your paper.

#### **Grad Slam Abstracts**

When applying to the Grad Slam Competition, you must submit an abstract describing various aspects of your research or creative project. Your abstract will be used to determine if you will be accepted into the Grad Slam Cohort. You must submit your Grad Slam 2024 application by Monday, February 19th.

First, your abstract should have a memorable title. Memorable titles should be clear and accessible to someone outside your field. The audience should have an idea about what your presentation is from the title alone. Be wary of too much jargon. (If you are accepted, you will have a chance to update your title later on.)

### **Example Grad Slam Presentation Titles:**

- Let's Rethink Bilingual Stuttering (Read Example Abstract A, pg. 2)
- Finding Love Online: Exploring the Words that Spark Connection (Read Example Abstract B. po. 3)
- Threads of Resilience: An Undocumented Poet's Tale (Read Example Abstract C, pg. 3)
- Enhancing Network Security through AI-Based Intrusion Detection (Read Example Abstract D, pg. 4)
- The RhD Locus: A Safe Solution for Gene Editing (Read Example Abstract E. pg. 4)

Second, your abstract should be 300 words or fewer. Most abstracts average about 170 - 210 words. You may use first person pronouns, such as "I" or "we," in your abstract. If you have not completed your project, please use the future tense where appropriate. Your abstract should contain the following four elements.

## The Four Elements of Grad Slam Abstracts:

- 1. Describe the topic of your research or creative project
- 2. Explain the importance or need for your research or creative project
- 3. List what steps have you done (or will you do) to complete your research or creative project
- 4. Forecast the potential impact of your research or creative project for your field or other groups

Pages 2-5 show example annotated abstract examples from various fields: (A) Speech-Language Pathology on page 2, (B) Communication Studies on page 3, (C) Computer Science on page 3, (D) Creative Writing on page 4, and (E) Biological Science and Systems Physiology on page 4.

#### Getting Feedback on My Abstract

After you have a first draft, consider seeking feedback from your professor, advisor, classmate or lab mate. You can meet with them in person during their office hours or schedule an appointment via email. Additionally, you can book a 45-minute one-on-one tutoring session at the SJSU Writing Center for advice on your abstract. You're allowed up to two writing center appointments per week, and we offer both online and in-person options. Learn more about each appointment type and create an account to schedule an appointment. The Writing Center operates Monday - Friday during the entire academic year. During January, we offer online appointments only.

## **Annotated Grad Slam Abstract Examples**

This section presents annotated abstract from (A) Speech-Language Pathology on page 2, (B) Communication Studies on page 3, (C) Computer Science on page 3, (D) Creative Writing on page 4, and (E) Biological Science and Systems Physiology on page 4. Three of these abstracts show how to write for completed projects, while the other two guide writing for ongoing projects. Pay attention to how the authors make their content accessible and engaging, with clear and connected sentences.

Example A - Discipline: Speech-Language Pathology

**Status:** Project <u>completed</u> by time of application

Title: Let's Rethink Bilingual Stuttering

**Abstract:** (192 Words)

[1 - Topic] Stuttering is considered normal in small amounts, but when it crosses a certain threshold, it is considered a speech disorder. [2 - Topic] This threshold is well studied in monolingual, English-speaking children, and current practice in stuttering diagnosis relies on comparing rates of stuttering to this threshold.

[3 - Importance/Need] However, this threshold does not necessarily apply to bilingual children. [4 - Importance/Need] Thus, stuttering diagnoses for bilingual children may not necessarily be accurate.

[5 - Steps] In this study, we conducted a systematic review of literature that reports the rates of stuttering in bilingual children without speech disorders. [6 - Steps] This information allowed us to understand the normal levels of stuttering in bilingual children without disorders. [7 - Steps] We found that levels of stuttering in bilingual children had significant variation, without significant correlation to the language the children were speaking in or the children's age. [8 - Potential Impact] This information reveals that our current understanding of stuttering in bilingual children is insufficient to establish a threshold and challenges the lens through which stuttering diagnoses are made. [9 - Potential Impact] Based on the information this study revealed, clinicians diagnosing stuttering in bilingual children should not rely solely on comparing stuttering rates with the monolingual stuttering threshold but utilize a more holistic approach.

## Example B - Discipline: Communication Studies

Status: Project ongoing at time of application

**Title:** Finding Love Online: Exploring the Words that Spark Connections

**Abstract:** (176 Words)

[1 - Topic] My research project will conduct a comparative analysis of language choices made by individuals on different online dating platforms, exploring how language preferences vary across platforms and their impact on users' dating experiences. [2 - Importance/Need] Online dating is growing in popularity and is now one of the most common ways people find dating matches. [3 - Importance/Need] It is critical to understand the role of language in shaping users' success rates in finding the right person.

[4 - Steps] I will collect data from the following online dating platforms: Tinder, Hinge, and Facebook Dating. [5 - Steps] Then I will examine user profiles, messages, and communication patterns. [6 - Steps] Employing comparative linguistic analysis techniques, I will examine language preferences and usage trends across platforms, considering factors such as tone, word choice, and grammar. [7 - Steps] Five user interviews will provide qualitative data to complement the quantitative analysis. [8 - Potential Impact] The outcomes of this research will contribute to a better understanding of language choices in the context of online dating. [9 - Potential Impact] Users will be better equipped with insights to tailor their language use, resulting in improved communication and connection with potential partners. [10 - Potential Impact] Furthermore, this research may have valuable insights for platform developers looking to optimize user interactions.

#### Example C - Discipline: Computer Science

**Status:** Project <u>completed</u> at time of application

Tite: Enhancing Network Security through AI-Based Intrusion Detection

**Abstract:** (200 Words)

[1 - Topic] My research project aims to explore the development of an Artificial Intelligence (AI) powered intrusion detection system for computer networks. [2 - Topic] This system will analyze network traffic patterns in real-time to identify and respond to potential threats and intrusions. [3 - Importance/Need] With the increasing complexity of cyber threats, the need for advanced intrusion detection systems has never been greater. [4 - Importance/Need] This research addresses the critical need for more proactive and efficient network security measures, which are essential in safeguarding sensitive data and critical infrastructure.

[5 - Steps] To complete this project, I have conducted an extensive literature review to understand the latest advancements in AI-based intrusion detection. [6 - Steps] I have also designed and implemented a prototype system for testing. [7 - Steps] In the next phase, I will collect and analyze data to fine-tune the AI algorithm and improve the system's accuracy. [8 - Potential Impact] The successful development of an

AI-based intrusion detection system has the potential to improve network security practices. [9 - Potential Impact] It can enhance the ability to detect and respond to cyber threats in real-time, reducing the risk of data breaches and system compromises. [10 - Potential Impact] Additionally, this research can contribute valuable insights to the field of AI in cybersecurity, benefiting both the computer science community and organizations seeking robust security solutions.

Example D - Discipline: Creative Writing

Status: Project ongoing at time of application

Title: Threads of Resilience: An Undocumented Poet's Tale

**Abstract:** (190 Words)

[1 - Topic] I'm creating a poetry collection that explores the immigrant experience, focusing on personal emotions, challenges, and victories, especially from my perspective as an undocumented Mexican student.

[2 - Importance/Need] This project addresses the need for a poetic voice that intimately depicts the complexities of immigration. [3 - Importance/Need] My aim is to connect deeply with readers, shedding light on what being an immigrant means in the US today. [4 - Importance/Need] This topic is often avoided in daily life because it makes some people uncomfortable, but this can make people like me feel erased.

[5 - Steps] To create my collection, I'll delve into my own immigrant experiences and further contextualize those experiences by conducting extensive research on the broader immigrant narratives.

[6 - Steps] My writing process is informed by Walter R. Fisher's narrative paradigm, Sarah R. Bishop's advocacy work on immigrant storytelling, and other sources from post-colonial scholarship. [7 - Steps] Collaborating and receiving feedback from fellow poets and other undocumented Mexican students will be instrumental in refining the collection. [8 - Potential Impact] My poetry collection will resonate strongly with readers who share similar immigration experiences helping them feel seen. [9 - Potential Impact] It will also help those people interested in understanding us better learn about our complex experiences. [10 - Potential Impact] It also may foster a heightened appreciation of the immigrant journey and underscore the power of poetry in storytelling and empathy-building.

Example E - Discipline: Biological Science and Systems Physiology

**Status:** Project <u>completed</u> by time of application

Title: The RhD Locus: A Safe Solution for Gene Editing

**Abstract:** (280 Words)

[1 - Topic] My research project focuses on utilizing CRISPR-Cas9 genome editing tools to potentially reverse monogenic disorders. [2 - Topic] Monogenic disorders are caused by mutations in a single gene and can be

severe and incurable. [3 - Importance/Need] There are 10,000 known monogenic disorders. [4 - Importance /Need] While some monogenic disorders have treatment options, many of these options are not permanent. [5 - Importance /Need] CRISPR-Cas9 gene editing is a promising new technology that could be used to correct these mutations, but a safe location in the genome for editing is needed. [6 - Importance/Need] The RhD locus is a promising candidate for a safe harbor, as it is disrupted in a substantial portion of the population and not associated with any adverse phenotypic consequences.

[7 - Steps] Specifically, we are investigating the feasibility of using the RhD locus as a genomic safe harbor for gene editing applications. [8 - Steps] I have identified seven guide RNAs (sgRNAs) with the ability to direct the CRISPR/Cas9 nuclease to the RhD start codon. [9 - Steps] We have also constructed two DNA repair templates: one containing a proof-of-principle GFP cassette and another containing the therapeutically relevant FVIII transgene. [10 - Steps] We have successfully delivered the Cas9 expression plasmid and the GFP containing DNA repair template to K562 myeloid-erythroid cells and observed GFP expression from the RhD promoter. [11 - Steps] We are currently working towards validating this locus with a second gene, the FVIII transgene. [12 - Potential Impact] Successful development of the RhD locus as a safe harbor for CRISPR-Cas9 gene editing could have a major impact on the treatment of monogenic disorders, including hemophilia A, sickle cell disease, and beta-thalassemia. [13 - Potential Impact] It could provide a safe and effective way to correct the underlying genetic mutations in these disorders, leading to cures for many patients.

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