Creating community connections through STEM outreach

We found and grew a graduate student-organized outreach mechanism, Present Your PhD, to support community connection and the promotion of scientific literacy and inclusivity of learners of all ages. There is overwhelming support for the value of hands-on, interactive education and its positive influence on memory, retention, and educational impact, which is the basis of Present Your PhD's work. For instance, negative outcomes at any age are recognizable with efforts to demystify and personalize science via widespread programming, face-to-face interactions with scientists, and approachable science journalism.

Our Solution

Education systems today are limited to structures that inhibit creative thinking, exploration, and lasting retention of ideas and concepts. Young learners must be engaged with the ability to motivate, inspire curiosity, and foster supportive environments to overcome obstacles to achieving positive attitudes about STEM research and related fields. Furthermore, society endures a pervasive idea that it is possible – and easy – to separate and distill ideas presented in the media to reflect one's personal beliefs. This confirmation bias then promotes the spread of misinformation and an inaccurate narrative about science. This is a major driver of the widespread lack of science comprehension among adults, resulting in general distrust.

Our Mission

Our mission is to empower young learners, especially young women and underrepresented minorities, to envision themselves as future scientists and to inspire the community to envision themselves as driving partners in research in Science, Technology, Engineering, and Mathematics (STEM) fields.

The Problem

Present Your PhD relies on our Organizers to coordinate our Collaborators and our Presenters. They do the heavy lifting to align schedules and ensure everyone knows where they are going and what materials are needed. This role allows our members to stay active in the organization during busy semesters where they may not have time to present.

Organizers

- Represent diverse STEM fields
- >60 presentations

Collaborators

- 23 total collaborations
  - Predominantly K-12
  - 32% retention rate, avg
  - 59% growth rate, avg
  - 1.74 presentations per collaborator

Find us!

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Find the problem, design a solution, and impact the world.

Present Your PhD

(All photos: Present Your PhD, 2019–2021)

Figure 1: Present Your PhD members reach the most students at schools but get the most per-minute impact with tour groups. In all, PyPhD has reached nearly 5,000 students, where presentations at K-12 schools and junior colleges make up 78%. Per-minute, tour groups afford a slightly better rate than schools at 1.6 students/minute, compared to 1.3.

Figure 2: Present Your PhD consistently maintains collaborations with diverse age groups. (A) PyPhD has worked with 23 different groups in our four semesters, maintaining about 3 collaborations from semester to semester and gaining 5.75 collaborators on average per semester. (B) We reach the widest variety of ages in our interactions with schools, but our audience’s ages diversify greatly when we interact with the community. J. High = junior high, HS = high school.