

# Impact of Undergraduate Research Conferences on Student Belongingness and Scientific Identity

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## Research Questions

1. How has presenter confidence changed after participation in the Research Celebration?
2. How has presenter ability changed after participation in the Research Celebration?
3. Has participating in the Research Celebration impacted participant feelings of belongingness?
4. Has participating in the Research Celebration impacted participant scientific identity?
5. Is there a difference in presenter belongingness, scientific identity, perceived ability, and confidence between each Celebration event?

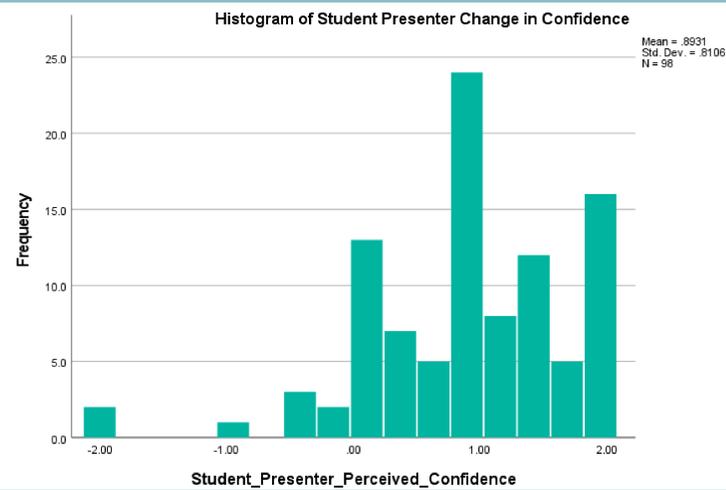
## Background

- Undergraduate research conferences, celebrations, and similar events are common
- Little research on the outcomes related to undergraduate student research presentations (Potter, Abrams, Townson, Wake, & Williams, 2010).
  - Increase in research confidence (Casad, Chang, & Pribbenow, 2016)
  - Development of student identity as scholar (Gumbhir, 2014)
  - Adoption of skills and attitudes more aligned with their discipline (Hill & Walkington, 2016).

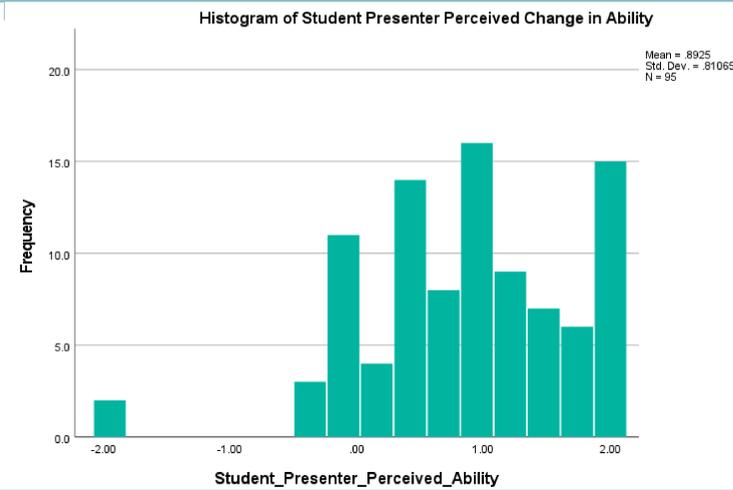
## Methods

- Participants (N=142)
  - 69% Female; 23.9% Male; 1.4% Non-binary
- Presented
  - In person August 2019 (n = 57)
  - Virtual December 2019 (n = 18)
  - Virtual April 2020 (n = 67)
- Academic Level
  - 0.7% Freshpersons
  - 7.7% Sophomore
  - 21.8% Junior
  - 49.3% Senior
  - 15.5% Graduate Student
- College of Major
  - 69% College of Arts and Sciences
  - 1.4% Haile/US Bank College of Business
  - 0.7% College of Education
  - 18.3% College of Health and Human Services
  - 9.9% College of Informatics
- Post-event survey (based on Caprio & Hackey, 2014; Casad et al., 2016; Kneale, Edwards-Jones, Walkington, & Hill, 2013; Potter et al., 2010) on professional skills, belongingness (9 items), scientific identity (8 items), and their experiences during the Research Celebration.

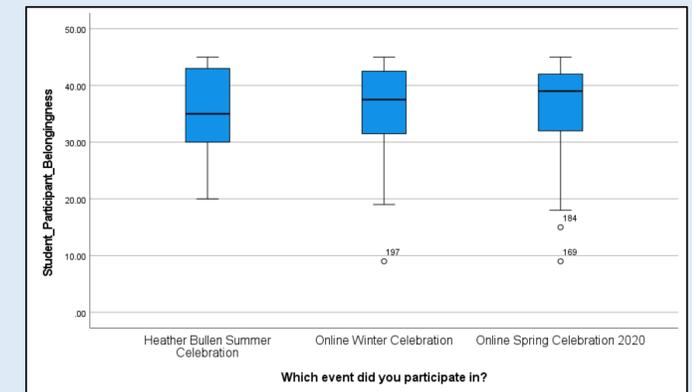
## Results Research Question 1



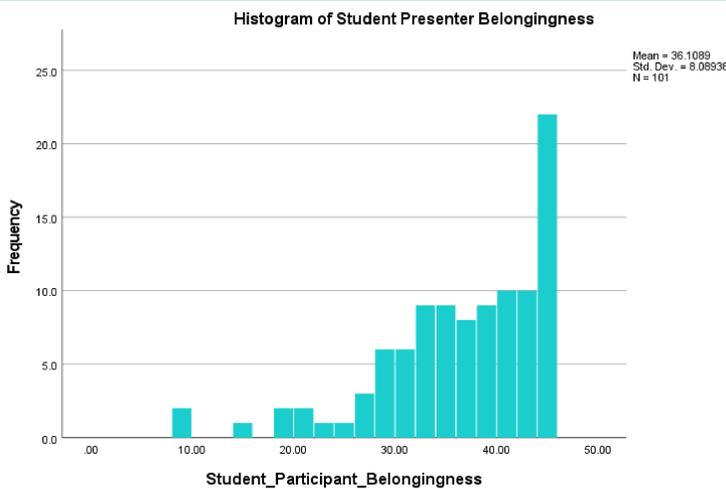
## Results Research Question 2



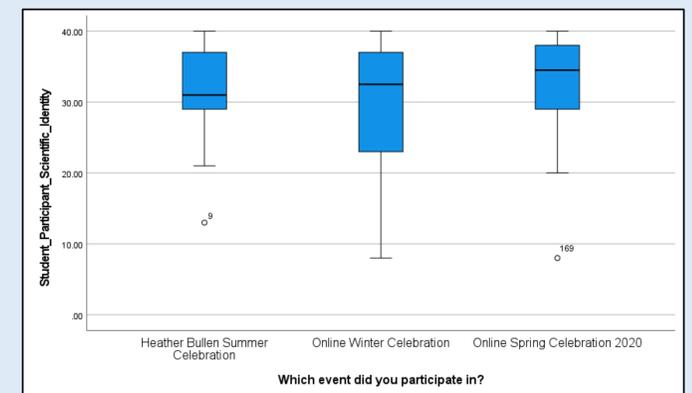
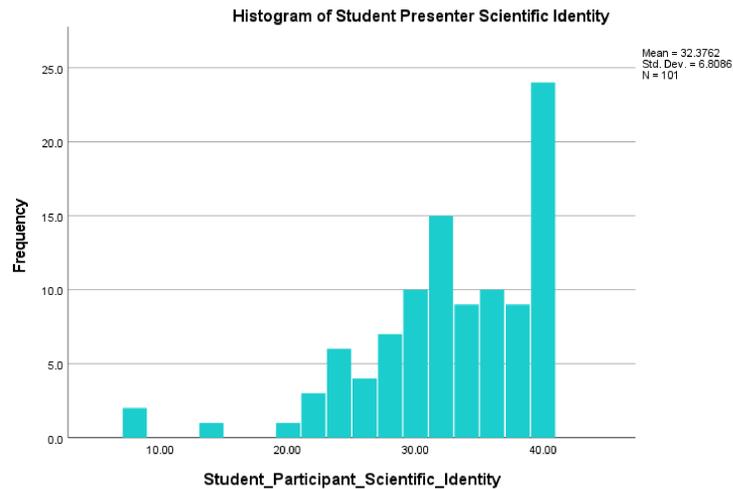
## Results Research Question 5



## Results Research Question 3



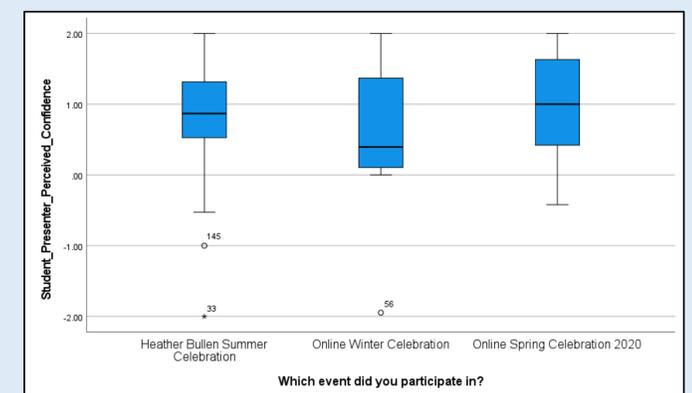
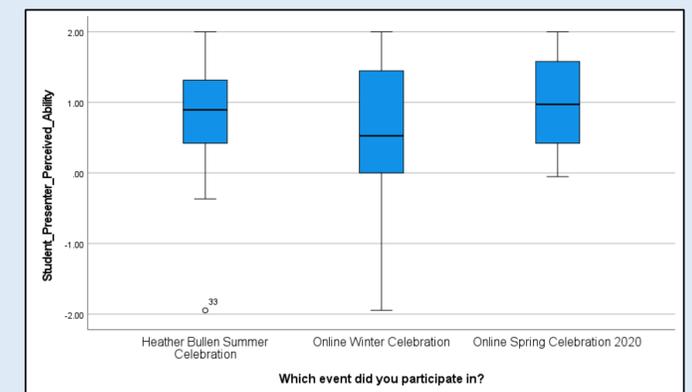
## Results Research Question 4



**Students presenting at Research Celebrations report high Scientific Identity and Sense of Belonging. Students find an increased perception of confidence for and ability in research after presenting. Virtual forum did not impact student perceptions.**

## Conclusions

- Student presenters perceive an **increase in confidence** following a Research Celebration
  - Student presenters perceive an **increase in ability** following a Research Celebration
  - Student presenters report **high\* Scientific Identity** (32.4/40)
  - Student presenters report a **high Sense of Belonging** (36.1/45)
  - No significant difference between Heather Bullen Summer Celebration (in-person), Winter Celebration (virtual), or Spring Celebration (virtual)
- \*high defined as last quartile of possible scores



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