

Student Perceptions of Participation in Extracurricular Undergraduate Research

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Disclaimer

This is an update from this material that was presented last year. It was never published because there was not enough data.

The manuscript has been submitted to JASA for review and will hopefully be published there.

Purpose

SIUC is a research institution (Carnegie R2)

- Aviation Management has been called a signature program in the past, but we do not engage many of our students in undergraduate research.
 - Some of our toughest competitors encourage their students to conduct independent research.
- Why are we not doing this?
 - What do those who have engaged in undergraduate research outside the classroom think about the experience?

Research Questions

1. What are the experiences of undergraduate aviation students at SIUC who engage in extracurricular research?
2. What is the perceived educational value in engaging in extracurricular research to undergraduate aviation students at SIUC?
3. What support or hindrances from the university, the department, or faculty, are perceived by undergraduate aviation students at SIUC engaging in extracurricular undergraduate research?

Literature

Undergraduate research can improve a student's success in their chosen academic programs (Desai et al, 2008; Lopatto, 2003; Silva et al, 2004; Wood, 2003).

Undergraduate research provides a taste of graduate level education to show if it is something an individual student wants to pursue (Desai et al, 2008; Lopatto, 2004; Russell, Hancock, & McCullough, 2007)

Methodology

Qualitative study

- semi-structured interviews conducted with the handful of SIUC Aviation Management and Flight students that have conducted extracurricular undergraduate research.
 - Interviews were audio recorded, with permission, and transcribed
 - After transcriptions were checked for accuracy, the original audio file was deleted.
 - Transcripts were coded using closed (a priori) and open coding schemes

Limitations and Delimitations

Limitations

- Small participant pool
- Researcher could not recruit directly because of preexisting relationship with participants

Delimitations

- Short data collection period chosen to not excessively burden participants.

Results

Overall three participants from the pool responded and agreed to be interviewed.

- Initially, only one participant from the pool responded and agreed to be interviewed
 - Not enough to work with from a research perspective
 - Study period reopened with HSC approval
 - An additional two more participants responded and agreed to be interviewed for a total of three.

Results: Research Question 1

Student Experiences:

- Overall Positive experiences
 - “I am loving what I am researching and that makes all the difference in the world.”
 - “It was very worthwhile. Even if we didn’t gain anything, it was very exciting.”
- Challenges:
 - Time management
 - Balancing coursework, research, and personal lives
 - Lack of basic research knowledge
 - Lack of exposure from courses
 - No previous research opportunities

Results: Research Question 2

Educational Value:

- Continuing Education: Graduate school
 - “I think eventually, I definitely want another degree, a master’s degree, and so I saw it as an opportunity to get a head start, or get a preview into what that would look like, to see if that’s something I really want to do.”
- Personal improvement
 - “There’s a lot of self-accountability, like I said. The work needs to be done and you need to find the time to do it, and that’s something that, again, certainly improved my time-management skills because I had a lot on my plate to start with.”

Results: Research Question 3

University Support:

- Department Level Support:
 - Generally very positive
 - “I think this is the environment that has encouraged me the most and supported me the most. I wholeheartedly think that the flight program and the management programs have some of the best faculty that the 141 environment has ever seen.”
 - “Once I decided on the project and other faculty members became aware of the project, it gave me a lot of motivation that they thought it was something worth, you know, worth doing and worthwhile...”
- Hindrances:
 - The lack of a research methodology course was the most common university / departmental support problem that was brought up by the participants.

Results

Open Codes:

- Philanthropy
 - “... I still think that the value of undergraduate research extends well beyond the research itself. ... I’m giving back to a program that has given so much.”
- Personal Improvement
 - “...better understanding of the industry as a whole...”
 - “...it honed my time management skills and made me work harder because I'm holding myself accountable, not someone else.”

Discussion and Conclusions

The limited data provided still sheds light on the perspective of undergraduate students engaged in extracurricular research.

- Evidence of:
 - Improved learning
 - Improved student buy-in
 - Potentially improved retention – usefulness and pride
 - Potentially improved coursework and scholarship

Questions

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Thank You

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