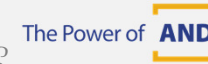




Comparing Undergraduate Research Experiences to a Multi-Mentor Lab: A survey

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THE VALUE OF UG RESEARCH

- Undergraduate (UG) research fosters development of research skills (Landrum & Nelson, 2002; Lei & Chung, 2009)
- Skills gained by undergraduate students who completed a mentored research program include (Petrella & Jung, 2008):
 - Understanding of the research process
 - How scientists work on problems
 - How to implement lab techniques
 - How to analyze and interpret data
 - Ability to integrate theory & practice
- Working with a research mentor provides an opportunity for undergraduates to connect with faculty (Landrum & Nelson, 2002)
- Non-academic skills, such as managing obstacles, working independently, self-confidence also result from UG research (Petrella et al., 2008)

RESEARCH QUESTION

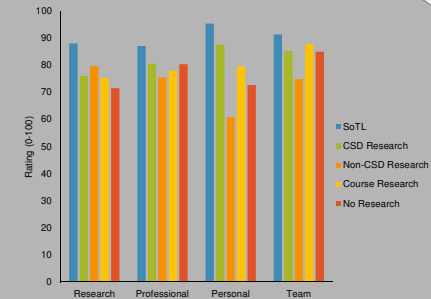
- How do students with experience in SoTL Lab compare to students who have completed traditional student-faculty research (e.g., one-on-one projects), students who have only completed a research course, and students who have done no research on the following measures:
 - Research skills
 - Professional development
 - Personal development (i.e., confidence, connections with CSD faculty)
 - Team-based skills

RESULTS

- MANOVA results for omnibus test were significant ($F=3.07, p=0.035$)
- No significant differences in the Research Skills Category across all groups
- The SoTL Lab Group scored significantly higher than the CSD 235 Group in Professional Development Category. No other comparisons were significantly different.
- The SoTL Lab Group scored significantly higher than the Non-CSD Research Group, CSD 235 Group, and the No Research Group in the Personal Development Category
- No significant differences in the Team-Based Category across all groups

CHALLENGES TO UG RESEARCH

- Students require significant hands-on training throughout, but especially early in the process (Coker & Davies, 2006)
- Faculty time availability can limit the number of students and productivity
- Use of structured time followed by unsupervised work time can be effective for mentoring (Karsai, et al, 2011)
- Team-based research manages time and productivity, as well as creates a research community (Karsai, et al., 2011)
- Students may not see the full research process for projects that span years

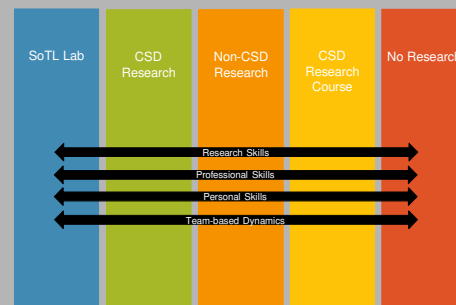


WHY SoTL?

- The Scholarship of Teaching and Learning (SoTL) is research to evaluate aspects of teaching and learning to develop evidence-based teaching practices (Boyer, 1990; Schulman, 1993).
- Students are familiar with teaching & learning from everyday exposure
- SoTL projects can often be completed in shorter time-frames, to allow students to experience the entire research process

METHODS

- Survey with quantitative & qualitative items
- Completed by 74 CSD students
- MANOVA
- IV: Research experience type
- DV: Types of skills gained



SoTL LAB

- SoTL Lab is a research lab focused on teaching & learning research
- Students work in teams of two-to-three on assigned projects
- Multiple faculty mentors participate; each research team has a primary mentor, but also can access other mentors
- Faculty-student, student-student, and faculty-faculty collaborations occur
- Being mentored while also providing mentoring to others helps students gain professional research skills and behaviors, as well as providing psychosocial support and promoting career advancement (Anderson, Tenenbaum, Ramadorai, & Yourick, 2015).

FUTURE DIRECTIONS

- Deeper analysis of Professional Development Category and Personal Development Category.
- Relationship between academic standing, experiences, and perceptions
- Analysis of qualitative data

DISCUSSION

- Self-efficacy for Research Skills was relatively high in all groups
 - Overestimation could be a factor in the No Research Group
 - Post-bacc students may have research knowledge from courses in other fields
- In depth research experience seems to be a factor in Professional Development
 - SoTL Lab offers opportunities to discuss the field in a different way than a research class
- Personal Skills skewed toward CSD research experiences
 - Questions related to SLP field and CSD department
 - Students in the research course have much larger student-faculty ratio, so have fewer opportunities to connect
- Team-Based Skills showed no significant differences across all groups
 - CSD department encourages collaboration in the classroom
 - Non-CSD research group is the lowest among all; this could indicate that research within the department differs from other departments
- In each experience, participants' peers have different levels of skills and experience
 - SoTL Lab participants have peers with higher skills.
 - CSD & Non-CSD Research is generally conducted in small groups/one-on-one
 - CSD Research course participants are generally underclassmen with fewer overall experiences