LEARNING FROM PEERS TO MAXIMIZE THE IMPACT OF ENGAGEMENT

ARIZONA INTERNSHIP STUDY 2014

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THE PROJECT

- In FY 2013, AZSGC conducted a unique peer STEM engagement study to enhance our capacity to identify, recruit and engage underrepresented students.

- Our new approach? Learn from peers what works and what does not!

BACKGROUND

- Workforce development has been AZSGC's highest priority since grant inception
- Undergraduate Research Internship Program
- Since 1990 AZSGC has supported 2263 undergraduate students in mentored internships
- Statewide, diversity varies widely on our campuses and recruiting is a major challenge!

BACKGROUND

- At UA, we've been reasonably successful.
  - Since 1990 engaged 1,148 undergraduates, 46% women, 24% underrepresented minorities.
  - Since 2006, the percentage of underrepresented students has risen to 28%.
  - To date, 90% of UA Interns go on to STEM advanced degrees and/or workforce.
- Our challenge: How can we do better?

2013 OPPORTUNITIES

- Learned of LeadLocal, a Tucson company specializing in creating solutions for local groups
  - Use a leadership development program pairing emerging community leaders with high-potential interns
  - "Lean Startup" (Eric Ries, 2011), a participatory, user-centric research approach to shorten time, minimize costs, and increase project success.
  - Co-wrote proposal for project utilizing their methods to improve our Internship program & grow diversity

2013 OPPORTUNITIES

- Needed funding!
- UA introduced strategic plan with “100% student engagement” goal and no direction
  - UA deans of Science & Agriculture/Life Sciences willing to support our project with potential to:
    - improve practices of the UA/NASA internship program (benefits many of their students who participate)
    - provide *market research-backed* model for other campus organizations wishing to recruit and successfully engage underrepresented students

PHASE 1 : PROJECT PREP

- LeadLocal recruited “emerging leader” (a past Space Grant Grad Fellow) to mentor Interns
- Struggled with diversity! Ultimately 7 Interns: (6 female, 1 male; 4 underrepresented)
- Interns trained to conduct study to engage and learn from past, current, and potential future interns to evaluate current approaches and develop new ones.

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2013 SPACE GRANT/LEADLOCAL TEAM

PHASE 2: USER GROUPS DATA COLLECTION

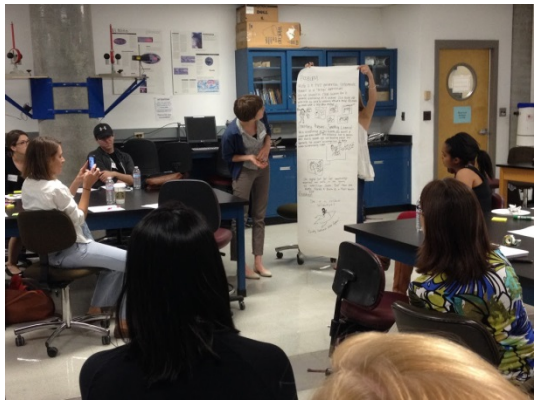
- Electronic Surveys: STEM research interests, work with mentors, barriers, engagement experiences and how learn of opportunities.
  - Interns past (67), Interns present (15),
  - Potential recruits (397)
- Semi-structured Interviews: with (5) mentors and (5) Space Grant staff
- (2) Focus groups: Underrepresented students

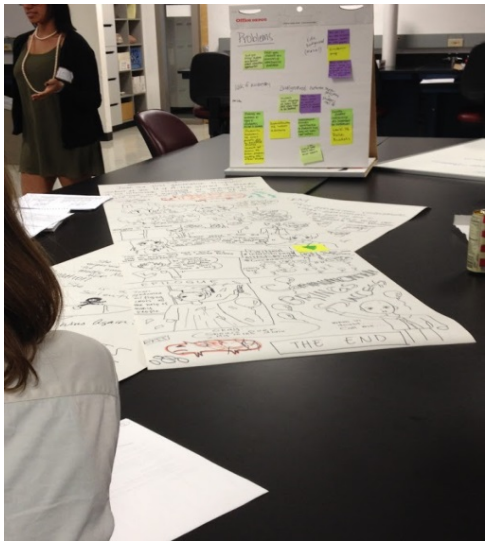
PHASE 3: LEANSTART DESIGN LABS

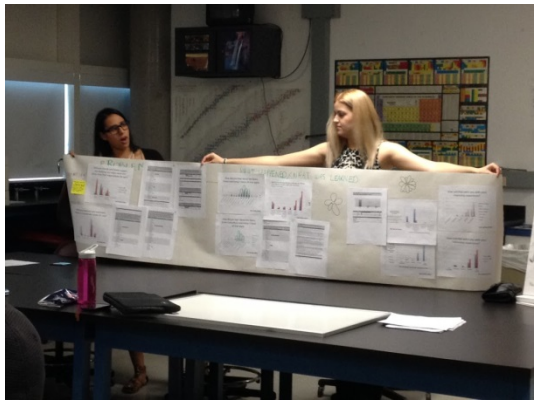
- (2) Lean Startup Rapid Experimentation Labs:
  - Worked in mixed teams
  - Used survey data to test best practices via rapid experimentation & collective problem-solving

PHASE 3: LEANSTART DESIGN LABS

- Labs focused on topics of: identifying, recruiting and successfully engaging underrepresented students in Space Grant research







PHASE 4: FINDINGS

- Current & past Interns surveys showed:
  - Majority learned of Space Grant opportunities via word of mouth: previous interns, other students, faculty and academic advisors.
  - 96% of past program participants were likely to recommend!

FINDINGS: IDENTIFICATION

- From "potential interns" surveyed we learned:
  - 88% unaware of Space Grant
  - No understanding of NASA research diversity
  - Many believed would not qualify to participate
    - Wrong major (not astronomy or aerospace student)
    - not enough science, math, etc.
  - Underrepresented student ("cultural" barriers)
    - Family expectations (go into medicine!) and obligations
    - Need well-paying employment (more income than intern)
    - Lack of connections to campus clubs/organizations

FINDINGS: GROWING DIVERSITY

- Select recommendations:
  - Must better communicate diversity of NASA research (i.e., Earth, climate change) and variety of projects available through our program
  - Educate academic advisors about program breadth
  - Enlist alumni (peers) to promote opportunities
  - Develop smarter (not one-size-fits-all) group-focused advertising, i.e., feature past Native Interns to advertise program at Native Student Center, etc.

EARLY IMPLEMENTATION RESULTS

- Advertised through UA Advising Resource Center's website & listserv (Director introduced to Space Grant through this project—potential steering committee member!)
- Did not purchase pricey, full-page ads in campus newspaper (saved about $3K)
- Did not design, print and mail posters across campus--saved time and money ($500-$1K!)

EARLY IMPLEMENTATION RESULTS

- Largest applicant pool ever! 210 applications! (Up 40% from 2013), 33% underrepresented
  - Unexpected outcomes:
    - clusters of hard-to-place majors (i.e. biological sciences focused—assume through Advising Center)
    - Clusters of weak applications from good students from groups we worked very hard to reach!
  - Action item: In FY 2014, SG Managers and Steering Committee specialists will host application preparation workshops.

RESULTS: EARLY IMPLEMENTATION

- 2014 Intern class—Most diverse to date!
  - 40 Interns, 5 Intern Advisors
  - 42% Underrepresented
  - 51% Women
- Advisors charged with providing peer support for Interns and spearheading promotion

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SPECIAL THANKS!

- Appreciate opportunity to critically look at ourselves so we can continue to improve!