

**Epicenter University Innovation Fellows
Longitudinal Survey
Key Findings
March 25, 2015**

OVERVIEW

The first 5 cohorts of the University Innovation Fellows (UIF) were invited to participate in an on-line survey in the winter of 2014-15. The purpose of this survey was to understand the quality of the UIF training and to understand the lasting effects of participation in the UIF program. In particular, we seek to understand the balance between the UIF program providing professional and leadership development to individuals versus developing agents of campus change. Fellows were sent reminders over the month-long period in which the survey was live. Survey questions were constructed based on the most recent program logic model, developed in September 2014.

The purpose of this report is to provide an initial analysis of the response data. The dataset is a rich source of information from which additional questions will arise. It is the intention of the evaluation team to do another deeper dive into the data in consultation with the UIF program leadership.

ABOUT THE RESPONDENTS:

The survey was sent to 125 UIFs with 102 taking the survey (note some survey responses were incomplete). The response rate was approximately 82%. The high response rate was likely due to personal outreach by the program leadership and the higher response rate from the Fall 2013 and Spring 2014 cohorts (76% of the responses). As part of the survey, respondents provided permanent email addresses which has provided the leadership team with a database for future outreach.

Cohort	Number in cohort	Number responding	Percent response
1 (August 2012)	19	13	68%
2 (Fall 2012)	9	7	78%
3 (Spring 2013)	9	5	56%
4 (Fall 2013)	21	17	81%
5 (Spring 2014)	67	60	90%

Roughly 1/3 of respondents identify as female and 2/3 of respondents identify as male.

Prepared by

rzarch@sagefoxgroup.com
mtalley@sagefoxgroup.com



March, 2015

apeterfreund@sagefoxgroup.com
ecostache@sagefoxgroup.com

Fellows report their racial/ethnic identity as:

White	56%
Asian	21%
African American / African / Black / Caribbean	15%
Hispanic / Latino	6%
Native Hawaiian or Pacific Islander	2%
Native American / Alaska Native	0%

The UIFs come from middle- to upper middle class backgrounds with 82% of fellows reporting that they grew up in relatively affluent homes. Twelve percent grew up in a lower-middle class home and 6% grew up with low income.

Most Fellows are currently in school, with 56% still undergraduates and 16% graduate students. Twenty-eight percent hold postgraduate positions or otherwise are working. Among those still undergraduates, 75% are seniors or fifth-year seniors.

- Among those working, half are in an engineering-field.
- Among those in school, 55% are still working on their undergraduate degree; 20% are working towards an MA or MS; 11% are working towards a PhD and; 14% are working on a professional, medical or other degree.

Fellows report that their undergraduate majors were/are:

Engineering & Computer Science	64%
Other STEM	14%
Business and Economics	23%
Other	4%

Rounding error results from double majors

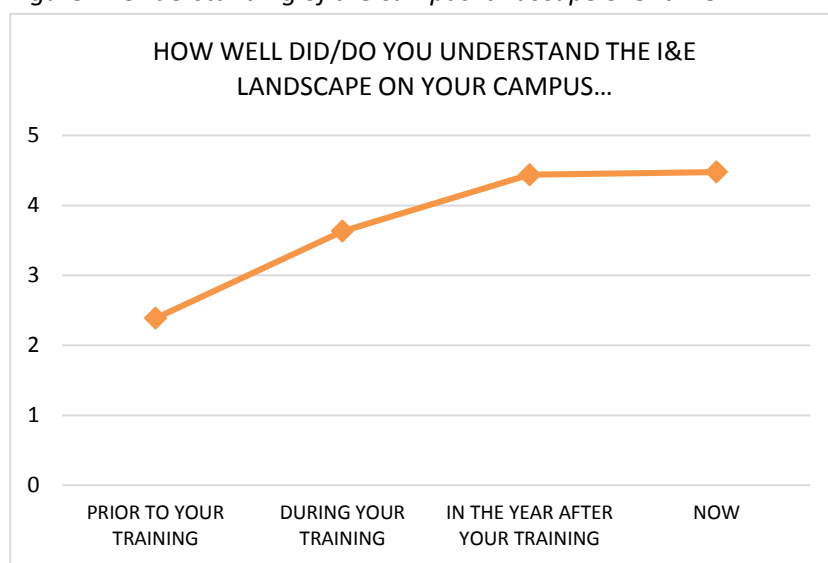
KEY FINDINGS

The primary reasons students joined the UIF program were the encouragement of a friend and to build their resumes. Once in the program; however, the Fellows became knowledgeable about their campuses and became committed to making changes that enhanced I&E opportunities. These results, shown in Figures 1 and 2 also show the reported impact of the training and degree to which knowledge and commitment are being sustained.

Objective 1: Equip students with the knowledge and skills to advocate for I&E (Individual)

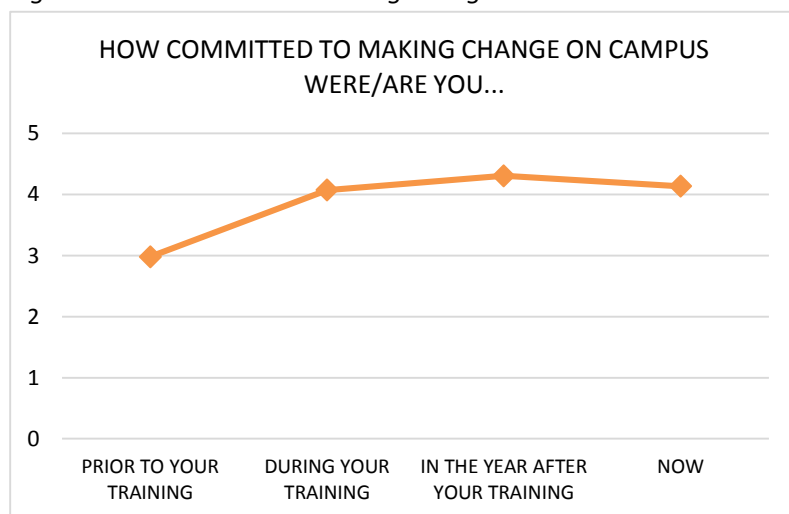
F1a. Do UIFs understand the current I&E landscape on their campus?

Figure 1: Understanding of the campus landscape over time



F1b. Do UIFS understand and embrace their mission as change agents and influences for fellow students?

Figure 2: Commitment to making change over time



Fellow comments include:

My experience as a Fellow has taught me how important networking, creative/design thinking, entrepreneurship, innovation, and communication are. These incredibly valuable skills have prepared me for a job in my universities Office of Entrepreneurship and Innovation. More than a superficial job, it has taught me to think big, set 'moonshot' goals, and to follow through. I know how to break down big goals into actionable steps, and pursue them with passion. Never before have I been involved with such an incredible program.

My experience as a fellow has prepared me to be a leader within the University and community, to be able to sit at the table with decision makers and provide a student voice

F1c. UIFs as champions of I&E become future engineering leaders

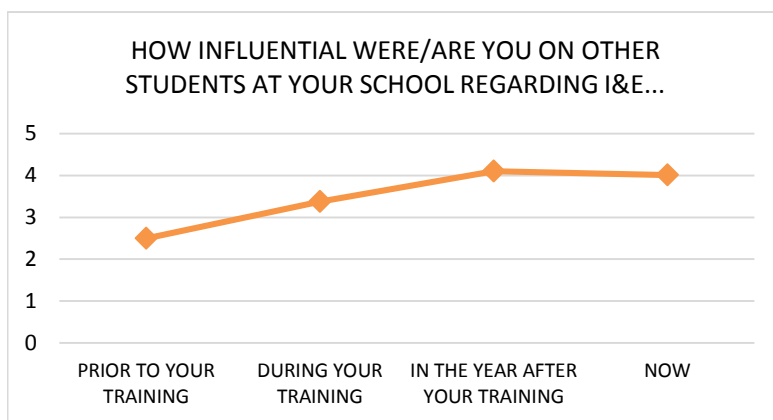
Sixty percent of respondents consider themselves to be champions of I & E on campus, with another 32% somewhat identifying as such.

Objective 1.1 Provide opportunities for engineering students to experience I&E (Peers)

F1.1a. Do UIFs generate interest in students being engaged in I&E through marketing and communication?

As part of their mission, Fellows are conduits for exposing peers to I & E on campus. Most Fellows report being successful in influencing other students on their campuses over time (see Figure 3).

Figure 3: Fellow's perceived influence over time.



F1.1b. Do UIFs host events designed to build I&E skills and mindsets?

Fellows were asked on the survey to provide us with their proudest achievement. Figure 4 provides a wordle to illustrate the most popular themes mentioned. The achievements cited include:

- Hosting meetings and/or events
 - Several students mentioned TEDx events
 - Hosting regional meet ups
 - Hosting creativity workshops.
- Creating clubs, groups and organizations
- Securing physical infrastructure
- Creating start-ups
- Professional development
 - Fellows recognized their own capacity to lead change efforts to promote I & E on campus.
- Influencing campus shifts in general.

Sample comments include:

Leading TEDxUCSD in its first year on campus to \$35k in funding and 550 attendees.

Presenting my entrepreneurial landscape research/project to the entrepreneurship department and board of advisors at my school.

Learning how to effectively facilitate strategic conversations to build a coalition of faculty, staff, students, alumni, community partners and administrators that are creating a shared agenda for innovation and entrepreneurship on campus. In a culture of silos and fractured interests, this is an achievement worth celebrating.

My communication skills and self-confidence have sky rocketed as a direct result of Humera's encouragement and training.

Figure 4: Wordle for proudest achievements



Objective 2: Support student/Fellows to create sustained change in their schools regarding I&E (exposing faculty, staff and institutional leaders)

F2.1 Do UIFs demonstrate to faculty and leaders interest for I&E learning opportunities in the curriculum?

F2.2 Do UIFs influence faculty adoption of I&E into curricular and co-curricular offerings?

F2.3 Do UIFs catalyze institutional investment in I&E offerings?

F2.4 Do UIFs attract outside investment, sponsorship and resources that expand I&E offerings?

F2.6 Do UIFs teach other UIFs how to plan and execute effective change strategies?

Fellows were successful in working with faculty members on campuses (See Table 1), starting with demonstrating the student-driven interest. They worked to influence faculty to adopt I&E into

curricular and/or co-curricular offerings. They also worked to catalyze institutional investment in I & E. The fellows were slightly less successful in attracting outside investments (including sponsorships and resources).

Table 1: Fellow's success with faculty and on campus

As a fellow, how successful were you in...1-4; Very Unsuccessful-Very Successful		
<i>item</i>	<i>n</i>	<i>mean</i>
demonstrating to faculty and leaders the interest/need among students for I&E learning opportunities in the curriculum	96	3.21
teaching other UIFs how to plan and execute effective change strategies	96	3.08
influencing faculty to adopt I&E into curricular and/or co-curricular offerings	96	3.03
catalyzing institutional investment in I&E offerings	96	3.03
attracting outside investment, sponsorship and resources that expanded I&E offerings	96	2.73

F2.7 Do UIFs become future engineering leaders?

Fellows are gaining the skills and drive to participate as leaders in I & E. With 50% of working Fellows in engineering fields, there is the potential for serving as leaders in engineering. Fellows are already actively applying entrepreneurial skills (see table 2), particularly seeking new technologies, processes, techniques and/or product ideas. The fellows are then promoting these ideas to others.

Table 2: Fellow's innovation and entrepreneurial skills

To what extent do you... 1-4; not at all- A great deal		
<i>item</i>	<i>n</i>	<i>mean</i>
Generate creative ideas	96	4.20
Promote and/or championing ideas to others	95	4.15
Search out new technologies, processes, techniques, and/or product ideas	96	4.14
Improve on established practices or products	96	3.80
Develop adequate plans and schedules for the implementation of new ideas	96	3.76
Secure resources needed to implement new ideas	96	3.47

As a result of their training and participation, fellows are confident in their personal entrepreneurial skills (see Table 3) and their confidence in their ability to assess situations and develop strategies (see Table 4). The questions concerning the entrepreneurial mindset come from the Epicenter FIGS' "Engineering Undergraduate Survey." In particular, Fellows have confidence in their ability to lead a team of people, to communicate, and to promote their own accomplishments.

Table 3: Confidence in catalyzing I & E

How confident are you that you could perform each of the following skills or abilities at this time? 1-5; Not confident- Extremely confident		
<i>item</i>	<i>n</i>	<i>mean</i>

Lead a team of people	96	4.42
Speak at public events	96	4.38
Communicate your ideas effectively to people in different positions or fields	96	4.30
Promote your accomplishments to people who may hire or work with you	96	4.24
Convince someone to try something new for the first time	96	4.04
Resolve conflicts with team members	96	4.01
Recognize when an idea is good enough to act on it	96	3.95
Recruit the right people for a new project	96	3.92
Estimate accurately the costs of doing something new	96	3.50

Fellows report that they are confident in their abilities to connect thoughts and ideas in new ways (creativity), to network with others to generate ideas for new products and services, and to ask questions.

Table 4: Confidence in understanding a problem and developing solutions

How confident are you in your ability to do each of the following at this time? 1-5; Not confident-Extremely confident		
<i>item</i>	<i>n</i>	<i>mean</i>
Connect thoughts or ideas in new ways	96	4.40
Network with others to get ideas for new products or services	96	4.38
Ask questions that challenge the status quo	96	4.32
Observe users using a product or service to get new ideas	96	4.32
Experiment to create new ways of doing things	96	4.32
Ask questions that get to the root of the problem	96	4.28

Objective 3. Create a national movement that is student-driven and supporting of I&E in higher education (national)

The UIF program is building a movement. Bringing Fellows together to an annual (or regional) meet-up is a strategy used to generate a sense of community, participation and ownership. Nearly all Fellows (91%) attended an annual meetup, and 20% attended an annual meetup AND a regional meetup. Meetups were seen as most valuable for promoting a sense of community of UIFs (See Table 5. They also helped to keep fellows engaged and learn new skills.

Table 5: Value of UIF meetups

How valuable were your experiences at the Meetup(s) for each of the following items? 1-5; Not at all valuable-Very valuable		
<i>item</i>	<i>n</i>	<i>mean</i>
Making you feel part of a community of UIFs	80	4.55
Keeping you engaged in your UIF-related work	80	4.34
Learning new skills applicable to your UIF-related work	80	4.26

Fellows expect to maintain their focus on creativity and the entrepreneurial mindset moving forward (See table 6). Fellows expect to work at a start-up, either their own company or another's. Fellows also expect to be in graduate school, though not necessarily an engineering-based field. These items are not necessarily mutually exclusive, so fellows may have plans to be doing multiple productive activities. When looking at how many students are already doing this work we see that many have started their own company, or are working for a start-up.

Table 6: Future plans

Looking ahead, how likely is it that you will do each of the following in the next five years? 1-5; Definitely not-Definitely yes			
item	n	Mean*	Already doing this
Start your own company/organization	95	3.97	32
Work as an employee for a start-up company	96	3.66	23
Enter graduate school in a non-engineering field	96	3.19	11
Work as an employee for a medium- or large-size business	96	3.10	18
Enter graduate school in an engineering field	96	2.76	14
Work as an employee for a non-profit organization (not a school or college/university)	96	2.66	16
Work as a faculty member or educational professional in a college or university	96	2.38	9
Work as an employee for the government, military, or public agency (not a school or college/university)	96	2.37	6
Work as a teacher or educational professional in a K-12 school	96	1.98	1

* excludes those already doing this work

NEXT STEPS

The evaluation team recommends meeting with the UIF team to discuss the next level of analysis. The UIF program has gone through several iterations that will have an effect on the participant experience. Examples of questions or themes that have emerged for potential analysis include:

- What motivates people to join the UIF program? Alumni report it was friends and a resume booster, but as the reputation of the program grows, this might change.
- What are the differences between UIF's experience?
 - Does the cohort make a difference?
 - Is there a difference between engineering majors versus those in other disciplines?
 - Creativity is a theme that runs throughout the responses. Are different cohorts more or less prepared?
 - Is there a difference in focus on engineering? On I & E?
 - Do different backgrounds (race, gender, SES, major?) make a difference in a similar way?

- Who are the Fellows that *don't* consider themselves to be champions of I & E?
 - Are they less comfortable with I & E?
 - Was there a difference in how they perceived the value of the program?
- Are fellows creating sustainable change on their campus or are they hosting one-off events?
- As the program plans for sustainability and scalability, what are the goals for students' development? What factors will be most important?