

EM @ ASU Case Studies



"Our unique, off-campus experience now introduces students to the Entrepreneurial Mindset through an activity called SPARKYS Vista, a 30-minute design challenge focused on meeting customer needs."

- Danielle Sosias, Senior Coordinator, First-year Programs

Case at a glance

Integration goals: Establish an E2 Camp activity that would introduce the concepts of Entrepreneurial Mindset and customer validation.

Materials affected: E2 Camp agenda, event preparation plan, and volunteer onboarding documents. Additionally, all activity materials were created (and subsequently revised).

Lessons learned: Ensuring consistency across camp sessions and rotations throughout each session is challenging and required a solution beyond changing how volunteers are trained.

Context

[E2 Camp](#) engages first-year engineering students, before fall classes start, in activities that introduce them to ASU and Fulton Schools culture. After two summers (2016 and 2017), nearly 4,000 incoming students have completed the EM-focused SPARKYS Vista Innovation Challenge. In addition to introducing EM, the underlying goals of E2 are

- To identify as a part of the Ira A. Fulton Schools of Engineering community.
- To build a sense of camaraderie among students.
- To provide opportunities for students to practice teamwork skills and introduce them to a culture of teamwork.
- To cultivate leadership within current students.

Upper-level students, faculty, staff and alumni (nearly 200 each year!) serve as resources for students during E2 Camp (which is actual summer camp with campfires and all) that takes place over two and a half days at a camp in Prescott, Arizona, about 100 miles north of ASU's Tempe campus. With the addition of the SPARKYS Vista Innovation Challenge in 2016, E2 Camp not only helps students to start thinking differently about the way in which they will engineer but also lays the foundation for encountering EM in their courses. In fact, The E2 experience serves as background for students' ASU 101 course, which engineering students take as either FSE 100 or EGR 101. E2 Camp also serves as a starting point for assessing incoming students' inclination toward an entrepreneurial mindset.

E2 Camp's connections across ASU's EM ecosystem extend beyond preparation for foundation courses and our program for assessing student mindset. As a result, E2's inclusion of SPARKYS Vista depends upon integration efforts represented not only the foundations and assessment case studies, but also in those for all of the workshops (everything starts with shared purpose); Entrepreneurial Catalysts (volunteering at E2 Camp is on the long list of what they do); and Devils Invent, KEEN Student Mini-Grants and Venture Devils (all of which students learn about during E2 Camp).

Integration details

During the first phase of ASU's EM integration effort, a working group formed to establish an E2 Camp activity that would introduce the concepts of Entrepreneurial Mindset and customer validation. It was around this time that Joshua Loughman and Amy Trowbridge were the first ASU teaching staff to attend a KEEN Integrating Curriculum with Entrepreneurial Mindset (ICE) Workshop led by faculty at Lawrence Technological University, and it was there that they encountered an activity focused on meeting customer needs. The activity was developed by Andrew Gerhart and Don Carpenter, both faculty at Lawrence Technological University, who were also leaders of the ICE workshop. Upon their return home, Amy and Joshua used the activity as part of an EM Faculty workshop for a faculty lecturer team to help them to start imagining how they could further integrate EML into their FSE 100 classes.

As the first phase of ASU's EM integration effort focused on curricular changes, the pilot served dual purposes, offering an opportunity to introduce an EM-oriented activity to faculty who could then develop similar ideas to incorporate EM into their courses, as well as to try the activity itself. The group deemed the activity a success and refined it for use at E2 Camps beginning in June 2016. The refinement process included developing the infrastructure necessary to deliver a very brief hands-on design challenge with incoming freshmen and minimal materials at a remote location--most notably communication strategies, training materials and event materials. This process also required naming the activity with ASU branding in mind, hence SPARKYS, which is the acronym for the activity's customer: The **Seeking Peace and Rejuvenation KaYaking Society**, and SPARKYS' Vista Innovation Challenge.

For this activity, each group of students becomes an "innovation team." These innovation teams will be organized into sub-teams of 3-6 students each, and all sub-teams will complete the same challenge: in 30 minutes and using only simple prototyping materials (one deck of cards, scissors, and tape) design and build a solution to the problem presented: a structure that can serve as both a viewing platform during SPARKYS events and a storage facility.

A primary goal of this activity is introducing students to the Entrepreneurial Mindset by providing a situation in which they must consider not only technical specifications but also a potential client's/customer's needs. This goal is not explicitly explained to the student and is encouraged organically through the nature of the activity and prompts from the facilitator. The end designs are judged on height, access, appearance, capacity, safety, features, structure, and storage.

The first year this activity was implemented the 10 facilitators leading its 10 sessions were asked to present a brief introduction to the entrepreneurial mindset after students' designs were judged and awards given. While all of the facilitators were given access to the same preparation materials, the presentations they delivered varied in length and details and what individual students learned about EM was inconsistent. A working group was formed to further refine the

activity based on collected student feedback and assessment data from these sessions, with the group's members concluding that improvements were most needed in the areas of the facilitator role, particularly the delivery of the session's introduction to EM.

As a result, the group envisioned a video component for the activity to ensure greater consistency across camp sessions and rotations of the activity throughout each session, as each rotation of the activity is led and managed by a different facilitator and staff, all volunteers. Central to the continuity the facilitation video provides is its concluding message from Brent Sebold, who puts the activity into the context, formally introducing students to the entrepreneurial mindset and emphasizing the importance the 3Cs framework has within the Fulton Schools of Engineering. Brent's segment frees on-site facilitators from having to deliver their own versions of an introduction to EM.

In addition to developing the video, organizers and stakeholders also fully revised the activity's support materials, revisions that included streamlining instructions, while also adding a description of the purpose of the activity, identifying learning outcomes, clarifying expectations and adding debrief questions about the activity to the camp counselor guide so that EM would be a specific topic they discussed with students during the nightly debriefs they lead.

NOTE: Supporting resources, including the activity's facilitator training guide, discussed in this case study can be found in resource folders that are part of its companion KEEN card (see below), which is also where the community can discuss the case and its broader topic of student orientation programs.

Integration outcomes

ASU is in the early stages of implementing a comprehensive program for evaluating the entire EM @ ASU initiative, and the work team that produced the framework and instrument for assessing student mindset, presented in the [Impact Meter](#) case study, is preparing reports based on the results of employing the instrument several times, starting with E2 Camp participants. Therefore, while quantitative results are not yet available, the general consensus based on qualitative feedback from students, faculty, staff, camp volunteers and other stakeholders is that the SPARKYS' Vista Innovation Challenge has been a success. And, as hoped, it was even more successful in the second year, when the extensive changes described above were put to the test.

E2 Camp itself and SPARKYS' Vista do present ongoing challenges. Most obviously, the camp itself and this particular activity require the contributions of a lot of people. The logistics and organizational demands can be daunting, particularly because of ASU's large enrollments. Each camp session (again, there were 10 sessions both summers) has about 210 students, and we want a ratio of 10-12 students to one to two counselors. The training component is especially challenging, as it can be difficult to get faculty and counselors (including SPARKYS' Vista facilitators) to come to training, even with some pieces of the training being available online (delivered through ASU's learning management system, Blackboard).

The problem that remains the hardest to solve is the most basic: Some students simply cannot attend E2 Camp. Whether because of family or work obligations, being away from home for two and half days is not an option for everyone. And of course online students miss out. We continue to explore potential solutions to these access issues.

Future plans

Overall, we're think of ourselves as being more than halfway to where we'd like to be and keep seeing even more potential for integrating EM into E2 Camp. For the near term, we plan to address the challenges associated with training camp counselors, mainly by updating their training to better cover the design activity and their role facilitating it. In addition to making these changes for in-person training, we plan to develop a fully online training module for the counselors. Our goal is to complete these changes by early spring 2018, so that we can use the new training materials for our 2018 E2 Camp sessions.

As noted above, we also continue to explore potential solutions to access issues.

Considerations

As students can only benefit from E2 Camp if they attend it, we give the program a huge presence at student orientation, and we promote it via post cards and phone calls. The direct cost to students is not a factor, as they pay a \$50 camp fee as part of their regular tuition, and the fee is paid even if they don't attend.

Regardless, E2 Camp is a resource-intensive endeavor, and it is to ASU's advantage that it is a signature program of Fulton Schools, having the full support of the institution and its benefactors, most notably Ira A. Fulton, who continues to contribute financially and still attends (and speaks at) as many camp sessions as possible.

Given its complexity, the SPARKYS' Vista activity would not be possible without the KEEN Program Coordinator, who has managed it from start to finish, from logistics and supplies to materials development and training as well as on-site coordination. Ultimately, success depends on ensuring that all contributors (including facilitators, counselors and volunteers) understand the purpose of the activity, which in turn requires ensuring that they understand the KEEN framework and ASU's commitment to it.

KEEN Card

This case study has a companion card on the KEEN [website](#).

Related Cases

Curriculum

Foundations 1: EGR 101 and FSE 100

Foundations 2: EGR 102

Engagement

Extraordinary Customer Service: Entrepreneurial Catalysts

Updated May 2018

Starting Strong: E2 Camp (<https://dev-emind.ws.asu.edu/cases/starting-strong-e2-camp>)

Category: Engagement

The Weekender: Devils Invent Design Challenges
Golden Opportunities: KEEN Student Mini-Grants
All In: Venture Devils

Workshops

Onboarding 1: EM Workshop for Faculty
Onboarding 2: EM Workshop for Staff
Onboarding 3: EM Workshop for Undergraduate Teaching Assistants

Life Cycle

The Impact Meter: Assessing Student Mindset