Educators and Entrepreneurs

BY ROCIO CHAVELA

How can STEM education innovations avoid the "valley of death" and become widely adopted? I-Corps for Learning, a pilot initiative of the National Science Foundation and ASEE, may have the answer. Championed by NSF program director Don Millard, I-Corps-L seeks to foster an entrepreneurial mind-set among educators, enabling them to promote and gain broad acceptance of their innovative products and approaches. The pilot study is modeled on the NSF I-Corps program, which helps research scientists and engineers develop the enterprise skills needed to turn laboratory discoveries into commercial ventures.

Last September, ASEE partnered with Karl Smith of the University of Minnesota and Purdue University, Ann McKenna of Arizona State University, and Chris Swan of Tufts University to provide a means for NSF-funded researchers to assess the potential for sustainable scalability of their educational innovations. The eight-week program is composed of an introductory three-day workshop, five online sessions, and a closing two-day workshop. In January 2014, nine teams embarked on the project. Each team comprises three to four members, including a principal investigator, an entrepreneurial/administrative lead, and a mentor.

Since the program is highly experiential, teams used their current projects as the platform for exploration. The pilot projects covered a wide spectrum in the STEM education arena, examples of which includes a Web platform to speed the propagation of evidence-based instructional approaches, a holistic transition program to support veterans interested in engineering and technology careers, and a boot camp for preparing for the math placement test.

Throughout the program, participants engaged in customer discovery to understand the ecosystem associated with their projects, including potential adopters, collaborators, and users. In a challenge similar to one used in I-Corps, each team was instructed to conduct at least 100 interviews to test hypotheses related to the nine elements of Osterwalder's business model canvas; for example, customer segments, value propositions, revenue streams, and key partners. During each session, the entrepreneurial/administrative leads presented their teams' findings to the entire group, stressing insights gained from the interviews — which in many cases challenged their assumptions and compelled them to shift direction. The instructional team, complemented by Russell Korte (Colorado State University – Fort Collins), Robert MacNeal, (Working Company), Shawn Jordan, and Micah Lande (Arizona State University), served as a guide to help the project teams navigate through the challenge.

Even partway through, it was clear the program was making an impact, with participants using such terms as "transformative" and "intense and challenging" to describe it. "For me, the I-Corps-L experience was truly empowering," wrote Maria Milleville, an education and outreach coordinator at the University of Pittsburgh's Department of Rehabilitation Science and Technology. "All who learn to apply these concepts will benefit!" added Mark Stratton, education relations manager at the Society of Manufacturing Engineers.

To learn more about the I-Corps-L program, please visit *www.asee.org/i-corps-l.* During the 2014 ASEE Annual Conference in Indianapolis from June 15-18, ASEE will be hosting a Sunday workshop to disseminate lessons learned and to reflect on next steps.

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