

Makermatic Team Internship Evaluation Executive Summary **Prepared by Suzanne Valery, Valery Associates**

The Makermatic Team Internship program was borne out of an effort to re-imagine the way that college-based internships are done, with the objective of increasing the ratio of interns to business partner. Designed as a 7-session program, Makermatic follows a prescribed pathway over twenty hours that engages interns in a project-based learning experience that connects students to real world business problems. Guided by a community business leader and a coach, the student interns practice the skills of business problem understanding, ideation, and solution identification. The compressed format is meant to focus the Interns' skill building in teamwork and communication. Five colleges with makerspaces funded by the CCCMaker Initiative participate in piloting the Makermatic Team Internship Program in spring 2019. The participating colleges were Allan Hancock College, Cabrillo College, Folsom Lake College, Sacramento City College, and Sierra College. The Makermatic internships were conducted at various times between February 19 to May 10, 2019 that included the initial charrette, the 20-hour internship, and a final debriefing session. Each Makermatic Team Internship consisted of a lead coach, assistant coaches to work with each team, approximately 20 interns, and a business partner. The sessions were structured to take the interns from learning about the business challenge, identifying problems associated with the issue, selecting the problem each team would focus on, forming ideas and strategies to address the problem, planning a solution, and preparing a presentation for a panel of business reviewers. The business partners represented a range of industries: hospitality, transportation, beverage, entertainment, and architecture. They were asked to present a business challenge that would encourage teamwork, personal responsibility, and creativity.

Evaluation activities were designed to assess the interns' learning experiences, gather input from the coaches on the effectiveness of the materials and hear from the business partner about the usefulness of this approach to preparing future employees. Also of interest was how the experience impacted the coach's regular work at the college, and if the model might be an improved approach to furthering relationships between the college and the business community. The interns were asked to complete pre- and post-surveys and to respond to specific prompts in a daily journal. The lead coaches were provided with journal prompts linked to each session's focus of activities. The lead coaches and business partners were also interviewed by phone. Feedback from business partners was generally positive and provided valuable insight on the potential for college-business partnerships to impact students' employability. In addition to gaining fresh ideas on new business approaches, they indicated a desire to participate in future team internships. Feedback was obtained from the lead coaches whose regular functions at the college were varied: Computer Information Systems faculty, Graphic Design faculty and business owner, dean of Visual and Performing Arts, Business Outreach Specialist, and Internship Coordinator. Some implemented the program as intended and others modified it based on either the business partner's suggestion or based on scheduling constraints. All were in agreement that the experience was a valuable learning opportunity for themselves as well as for the

interns. Approximately 120 interns from as many as 17 disciplines participated in the Makermatic pilot program. Extracts from a random sample of their journal entries were summarized into four thematic categories: professional modelling, teamwork, process, and impacts. Their self-reflections indicated the value of working on real-world business problems. They also reflected on the growth experience of working on a team with students from a variety of disciplines with their varied perspectives and approaches to problem solving.

Suggestions for modifying and/or improving the program were provided by the coaches, interns, business partners, and the Makermatic leadership team. Suggestions were presented on ways the curriculum could be modified, how the teams are formed, how much time should be allotted to the internship, and how to engaged more business partners. Their feedback was summarized in answers to some of the questions that the CCC Maker team initially grappled with in designing the program.

Would the students and businesses find it appealing to engage in a mentored internship in a makerspace environment? We can say unequivocally that the interns did indeed find the experience not only appealing, but in some cases, the most rewarding learning experience of their time in college to date.

Is the program scalable, meaning on-boarding multiple students in one internship instead of seeking one internship for one student at a time? The idea of pairing one business partner with multiple interns to work on a single challenge has merit in theory, but its practical application might benefit from further examination and testing of approaches to getting the hiring done.

Did the program demonstrate a positive impact on the students, the college makerspace, and the contributing businesses? The business leaders reported that some of the ideas and solutions were valuable and worthy of implementing in their businesses, which they did. That there was benefit to them was also indicated by the fact that most said they would participate in Makermatic again if it is repeated. Whether there was an impact on the college makerspace as a facility was not directly examined, but the experience of holding Makermatic in the makerspace increased its visibility on campus, not only to students, but to career centers as an opportunity to consider this model of internships. The positive impact on the interns was clearly demonstrated in their self-reflections where they spoke to what they learned. The fact that at least three of the business partners actually hired interns indicates that something significant worked in Makermatic.

The success of this pilot program forms a solid foundation on which future grant funding can be pursued and business partners recruited to sponsor future Makermatic Team Internship programs.