Teaching Professional Skills and Entrepreneurial-Thinking through Podcasting

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Immediate: Junior/Senior Engineering Clinic
Short-term: Freshman/Sophomore/Junior/Senior Engineering Clinics and other Engineering courses
Long-term: Cross-disciplinary courses/curricula/collaborations

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Innovation:

The innovation proposed here is both the process of producing a podcast and the podcast content itself. Engineering faculty are consistently searching for and experimenting with tools and techniques that teach students important professional knowledge, skills and attitudes (KSAs) (i.e., communication, collaboration, creativity, entrepreneurial-thinking, leadership, ethics). However, engineering instructors often find it difficult to incorporate such KSAs into their technical courses. The process of developing a podcast teaches students these KSAs because it requires students to think professionally when working on teams, leading episode development, interviewing guests, editing episodes, and communicating through storytelling.

Beyond process benefits, the proposed innovation also provides podcast content that faculty members can utilize in their existing courses to support students' understanding of professional engineering, innovation, and the professional skills needed to succeed as an engineer. This content is especially useful in a flipped classroom (described further in the Scalability section that follows).

Creating this podcast also offers students the opportunity to run a small non-profit and learn entrepreneurial KSAs. I am currently working with Robert Zazzali to legally allow students to garner sponsorships, sell ads, and collect/manage

revenue. These activities provide real-world entrepreneurial and managerial learning opportunities for students.

Scalability:

Initially, Juniors and Seniors in the Rowan College of Engineering Clinic curriculum will benefit from this grant. At the beginning of this semester (Fall 2016), a team of 3 Junior/Senior Engineering Clinic students and I began mapping out what it would take to develop a podcast that explored innovation at the intersection of business, science, engineering, technology, art, and design.

Freshman Engineering Clinic (FEC), especially the first semester of FEC, will benefit from the podcast content that is developed. One of the goals with this innovation is to develop episodes that can be used by FEC instructors to “flip” the classroom. For example, episodes or episode segments (e.g., those describing what various engineers do as professionals or how business, science, engineering, technology, arts, and design interact) can help expose students to the engineering disciplines. Additionally, the podcast content will be index so more advance engineering courses can easily find and utilize content that would be specific to their course. For example, an episode that interviews a petroleum engineer about his daily activities would be interesting to chemical engineers who are applying for jobs in the oil industry. Using these podcasts in Rowan classes will hopefully attract more students into the podcast creation process, thus scaling the learning of professional and entrepreneurial skills.

While I’ve currently started this project through the engineering clinic series, it is my goal that this podcast expands beyond engineering students and the engineering clinic course. I hope to evolve the podcast creation process into a interdisciplinary course/initiative. I envision students and faculty from science, business, journalism, the arts, etc. benefiting professionally from their engagement with this innovation.

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With today’s advancements in technology, anyone with something interesting to say and a few pieces of essential technology can create and distribute a podcast. I hope that through receiving this award and sharing my work with both the university and broader academic communities, I can encourage more faculty

Sustaining the Innovation:

At a minimum, I plan to continue to run this project through the Junior/Senior Engineering Clinic. As mentioned previously, I also plan to expand this innovation into a interdisciplinary initiative, possibly through Rowan's Hatch House. Sustained funding will be achieved via additional grants, donors, sponsors, and ad sales to support current and future equipment, hosting, and marketing needs.

You will notice the current budget total is double this grant's maximum funding;

Blue Microphones Yeti Pro USB Condenser Microphone	$249.00	1	$249.00	https://www.amazon.com/dp/B004L9KLT6
Blue Microphones RADIUS II Microphone Shock Mount	$46.00	1	$46.00	https://www.amazon.com/Blue-Microphones-RADIUS-II-Microphone/dp/B00TTQLA50/
RODE PSA1 Swivel Mount Studio				