

Advanced Science with a Twist: Teaching Entrepreneurial Skills Through Application of Course Content

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Theory

Entrepreneurial cognition is a “way of thinking.”
(Meyer, Gartner, & Venkataraman, 2000)

Examining cognitive constructs can be a useful tool in determining whether individuals have an entrepreneurial orientation.
(Baron, 1998; Mitchell, 1994; Mitchell et al., 2000; Simon, Houghton, & Aquino, 2000)

The entrepreneurial orientation is characterized by three constructs: **innovation, proactive problem solving, and risk taking.**
(Covin & Slevin, 2002)

Course

The Global Lactation Class Project

Animal Sciences majors enrolled in ANSC 438 - Lactation Biology were asked to consider real-world challenges such as climate change, environmental issues, emerging diseases, poverty and others. Small groups of students worked together to identify a world issue and propose solutions based on their *emerging knowledge of lactation biology.*

Study

Examining the words students use to describe desired and acquired skills could be a means to assess entrepreneurial cognition.

When asked to describe important workplace skills, would students use entrepreneurial constructs more frequently after engaging in a project that required entrepreneurial skills?

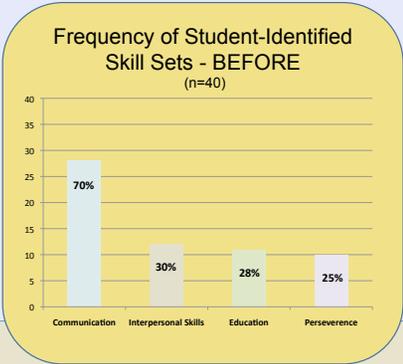
The project integrated entrepreneurial skill development into an advanced undergraduate science course using a unique pedagogy that provides students with the tools to face challenges in a rapidly changing world.

Results

BEFORE engaging in an entrepreneurial project

126 skills identified by the 40 participants. Skills were grouped into related sets to determine the frequency of identification.

- Number of Times a Skill Set was Identified
- 1) Communication - 28
 - 2) Interpersonal skills/ Teamwork/ Social skills/ Collaboration / Networking - 12
 - 3) Education - 11
 - 4) Perseverance/Persistence/ Dedication/Determination/ Drive - 10



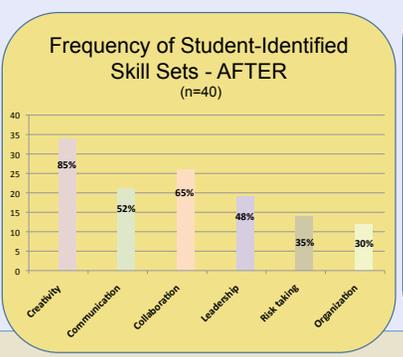
Conclusions
Skills related to creativity, innovation, ingenuity, and imagination were not identified by students prior to participating in the project. After the project, many students identified **innovation**, as well as skills related to **risk taking**, as useful skill sets. Identification of **problem solving** skills was not as evident from these data.

Engaging in an entrepreneurial project appears to foster entrepreneurial cognition.

Results

AFTER engaging in an entrepreneurial project

198 skills identified by the 40 participants. Skills were grouped into related sets to determine the frequency of identification.



- Number of Times a Skill Set was Identified
- 1) Creativity/Innovation/ Analysis/ Ingenuity/ Imagination - 34
 - 2) Communication/Listening/ Writing/Speaking - 27
 - 3) Teamwork/Collaboration/ Interpersonal Skills - 24
 - 4) Leadership/Delegation/ Negotiation/Persuasion - 15
 - 5) Risk taking/Initiative - 14
 - 6) Organization - 12