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How to Build an Entrepreneurship Curriculum That Develops Lifelong Skills

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Washington University shows how courses, experiences and co-curricular programs can build entrepreneurial skills across disciplines and degree levels.

How can schools create an environment that offers a continuum of learning and experiences in entrepreneurship, and develop students into entrepreneurs with lifelong skills that can be tapped when needed?

Since 2003, Washington University in St. Louis has developed an approach that aims to do just that, and that involves all schools, disciplines and degree levels. This article describes that approach to teaching entrepreneurial thinking to students in both on-campus and off-campus settings, as it was in 2015. It describes the learning objectives, course types and co-curricular activities that existed then and are now still evolving.

In 2015, our Learning Objectives and Course Descriptions were used in two ways. The first was for discussion with schools and faculty who monitored pedagogy and course content for their schools and disciplines. This allowed us to describe a cross-campus approach to entrepreneurial learning and get input on how it fit with their discipline and accreditation. We also used the objectives and descriptions to provide specific guidance for faculty who chose to apply for entrepreneurial curriculum development grants. The funding from these grants could be used for creating entrepreneurial courses or for modifying existing courses by adding new entrepreneurial content. The Skandalaris Center Entrepreneur Curriculum Development Committee offered and awarded these grants over several years.

Academic experiences were combined with co-curricular (no academic credit) programs and activities, or used to develop new ones. Co-curricular activities were designed, funded, directed and managed directly by the Skandalaris Center and also included forming relationships with the community and alumni.

Learning Objectives

Our approach sought to do three things:

- To increase student self-efficacy and empathy by offering a mix of academic and co-curricular entrepreneurship experiences
- To offer a diverse set of learning tracks that matched student's discipline, personal interests and motivations
- To develop entrepreneurial students who could create successful, high impact enterprises at any point in their lives

Types of Courses

Entrepreneurship courses were grouped into four categories: perspectives, skills, simulated experience and capstone. This made it easy for students and faculty to understand how a particular course fit with their planned learning.

Perspective Courses aim to expand students' understanding of how entrepreneurial action affects the world. Our approach is to introduce entrepreneurial content in courses offered in the early years of the academic experience, especially information about individuals or situations that have spurred change and innovation. Faculty members use their preferred teaching methods for this. Ideal courses are at the 100-level or 200-level for undergraduates and core courses for graduate programs. *An example: "Leonardo Di Vinci as an Entrepreneur"*

Skills Courses teach students methods, analytical

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techniques and tools that build competency in core discipline(s). Their purpose is to build competency by offering entrepreneurship-related discipline courses; to encourage faculty to enhance courses to include specific entrepreneurship elements that broaden the students' skills; and to prepare students to be competent collaborators when forming teams in Simulated-Experience or Capstone courses. These courses are frequently required courses for students. Teaching methods follow the style the faculty prefers. *An example: "Accounting for Entrepreneurs; Providing an Overview of Entrepreneurship in Engineering Courses."*

Simulated-Experience Courses apply perspectives and skills while testing students' entrepreneurial abilities, comfort, and self-confidence. They aim to test skills in simulated experiences where students encounter uncertainty in a classroom setting; to prepare students for more demanding Capstone courses by using skills and collaborative abilities in uncertain but "safe" (on-campus) environments; and to test the feasibility of ideas or concepts being considered for implementation. For these courses, students from different disciplines enroll in simulated courses that match their discipline and personal interest. Teaching methods may include business model canvas, cases, actual projects, judges, speakers, pitch competitions and presentations. *Examples: Bio-Entrepreneurship; Social Entrepreneurship*

Capstone (Full-Experience) Courses further increase self-efficacy and maturity by allowing cross-disciplinary student teams to form and then achieve results (most frequently launching a new venture). Their goal is to place teams in off-campus settings where they start their own commercial, social or creative ventures; support other entrepreneurs; or pursue solutions to global issues that require entrepreneurial action. The Capstone Courses also cement learning and further extend perspectives, skills, collaborative abilities and self-confidence; and to prepare students to be valuable agents of change after graduating. In this phase, students from different disciplines pursue projects with support from faculty, coaches, and mentors. They also become peer teachers sharing their competencies with students from other disciplines. Capstone courses are often taken in conjunction with co-curricular activities. *An example: The Hatchery -- Launching or starting a new enterprise*

Co-Curricular activities

Co-curricular activities include no-credit programs and activities that extend student learning, motivations and career decisions. They also continue to teach and help students test and hone their implementation skills by doing. Students encounter higher levels of uncertainty as they test the feasibility of their ventures. These activities promote learning by doing, which is critical to entrepreneurial thinking and learning. Students can participate in these co-curricular programs either while in school or after graduation.

Seven of the 12 co-curricular programs listed below (Figure 1) involve people in the community, giving students a taste of market and social realities. Students compete and collaborate with community entrepreneurs, investors, mentors and others.

The ultimate goals of these co-curricular activities: to support students, alumni, and the community as they act on their entrepreneurial ideas; offer opportunities to test individual passions without curricular or grading requirements; and allow students to refine entrepreneurial techniques and collaborative skills outside the classroom.

Figure 1: Co-Curricular Activities in 2015

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Program	Timing
IDEA undergraduate pre-orientation	Freshman year-Undergraduates only
Student entrepreneurship clubs and organizations	Any time, All degrees
StEP business ownership and operation	Anytime-Undergraduates only
Skandalaris Center summer internships*	Rising Undergraduate Junior or Senior
IdeaBounce® Events*	At any time, All Degrees
Coffee with the Experts*	Any time, All Degrees
Skandalaris Workshops (commercial)*	Any time, All Degrees
Skandalaris Competition (commercial)*	Any time, All Degrees; Funds up to $90,000 in commercial ventures
YouthBridge Workshops (social)*	Any time, All Degrees
Social Entrepreneurship and Innovation Competition (social)*	Any time, All Degrees; Provides $130,000 in grants to social ventures
Skandalaris Student Venture Fund	MBA Olin School; Provides up to $250,000 for students to invest in ventures and private equity deals.
National Science Foundation-Innovation Innovation Acceleration Fellows	Post Graduate (PhD and Post Doc researchers)
	*Note: Open to community members

The Outcomes

Washington University in St. Louis' most mature capstone class is the Hatchery. As described above, capstone courses are experiential learning with high levels of uncertainty and doing. In the Hatchery, students receive team grades based upon pursuing new enterprises. Hatchery teams launch companies while concurrently or subsequently participating in co-curricular activities. They are supported by interaction and competition with community entrepreneurs, mentors and investors.

Hatchery startup results from 2008-2015 demonstrate that students can successfully start new enterprises while pursuing their degrees. The Skandalaris Center reported the following outcomes for the Hatchery course over six years:

- A total of 170 projects were implemented.
- 77 (49%) of the projects became companies. 49 (64%) of those companies are still operating. These companies have raised $33.8 million in funding, created 412 full-time jobs and filed 15 provisional patents.

Final Thoughts

The Washington University in St. Louis entrepreneurship efforts continue to evolve, offering new and innovative curricular and co-curricular experiential learning options. Entrepreneurship is now a major part of the university's culture and strategic future. This commitment is causing continued innovation as Washington University contributes to thinking and progress for this important activity within our nation's universities.

Suggestions for Designing An Entrepreneurship Curriculum

- Plan a continuum of experiences that include perspectives, skills, experiences and co-curricular (doing) activities that create a multi-year learning environment.
- Include all disciplines and degree levels to blend commercial, social, artistic and other motivations and interests.
- Encourage teams that promote interdisciplinary connections, collaboration and relationships.
- Ascribe equal value for the different entrepreneurial team roles, including founders, joiners, learners and mentor/advisors.
- Intentionally incorporate uncertainty and self-discovery into experiential courses and co-curricular experiences.

More ideas

College business professors looking for more ideas to enrich the classroom experience can find them here (https://eiexchange.com/eix-in-class) .

Additional Search Terms: entrepreneurship courses, teaching ideas, teaching resources, classroom ideas, entrepreneurship classes, business schools, business school classes, entrepreneurship students, professors

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