

THE NISOD PAPERS



An occasional publication dedicated to topics of interest to community and technical college educators.

An Interdisciplinary Approach to Creating Entrepreneurial Learning Environments

With technological advancements, changing job types, and a new world of work, education must think beyond preparing graduates for a traditional pathway to one career. Rather, it is critical that we empower all graduates to be entrepreneurial whether they work in existing organizations, create their own jobs, or become independent contractors in the “gig” economy. No matter their chosen path, graduates will need to create value by solving problems.

Senior Research Fellow at the Learning Policy Institute, Dr. Tony Wagner (Wagner, 2008) stresses that, “The world doesn’t care what you know, but what you can do with what you know.” Dr. Wagner also notes that curiosity, initiative, adaptability, critical thinking, problem solving, and entrepreneurial skills are more important than ever in the 21st Century.

The challenge is that entrepreneurship is not widely embraced in academia. While there is growth in entrepreneurship courses or programs being offered, they tend to find a home in the business school where students are required to identify as an entrepreneur. Often times, the curriculum falls into Small Business Management programs that teach business planning, marketing, sales, accounting, and legal skills. Or, it is presented as a “plan and pitch” approach with the ultimate goal of seeking venture funding. However, while not all students want to start a business, all students can benefit from being entrepreneurial in their daily lives.

There is a significant disconnect between how entrepreneurship is traditionally defined and how it’s actually practiced. This disconnect prevents many students in all disciplines from being exposed to entrepreneurial thoughts and processes.

This *NISOD Papers* redefines entrepreneurship in a way that is inclusive of all disciplines, and it provides best practices for implementing entrepreneurship with an interdisciplinary approach.

Redefining Entrepreneurship

The World Economic Forum (Forum, 2009) states, “Entrepreneurship education is essential for developing the human capital necessary for the society of the future. It is not enough to add entrepreneurship on the perimeter – it needs to be core to the way education operates.”

In order to move entrepreneurship from the perimeter to the core of education and produce the entrepreneurial workforce needed for the future of work and society, we must first redefine entrepreneurship.

There are many images that come to mind when one thinks of entrepreneurship. Some picture a greedy business person looking to profit off the vulnerable, while others see a small business owner on Main Street in front of a small shop. Many view entrepreneurs as people born with a special DNA or rare traits that give them an advantage over others.

Yet, when you retrace the steps taken by entrepreneurs’, you find they are driven by a problem they are compelled to solve. They engage in a search process of discovery to find a solution that creates value for their organizations and communities.

Entrepreneurship Is Search

Dr. George Land’s Transformation Theory can aid in our understanding of entrepreneurship as a search process. Dr. Land explains that there are three distinct phases of transformation with various breakpoints where the rules for success change. See Figure 1 below.

Figure 1: Transformation Theory
(ELI, 2018 adapted from research by Land, 1992)



During the Search Phase, an entrepreneurial person is

compelled by a problem they are trying to solve, seeking a problem-solution fit that makes a connection (the first breakpoint) with the environment. This process requires using inquiry and observation as they identify the problem, and experimentation and adaptation as they solve the problem. It requires communication and collaboration with stakeholders to obtain more knowledge, and it requires creative and critical thinking to continue to adapt the problem-solution fit. The environment is highly ambiguous in the Search Phase, and resources are very limited, requiring one to be resourceful in the process. The Search Phase is an unpredictable, experimental period filled with trial and error, failure and success, and frustration and triumph. The compelling goal, however, provides the resiliency needed to overcome self-doubt and challenges that arise during this phase.

Once a problem-solution fit is made and value is created in the Search Phase, the first connection (breakpoint) is reached. A connection is made when other people find the idea to be useful. In other words, people know they have created value when the idea is adopted and implemented or when people are willing to pay money for the solution. Once the idea proves useful to others, it can then progress to the Growth Phase.

As the idea moves forward and enters the Growth Phase, the environment becomes less ambiguous and available resources increase. At this point, different rules for survival apply because a formula for creating value has been identified. Experimentation comes to an end and replication becomes the priority. Management skills become more critical with a focus on driving consistency, processes, and efficiency, as well as pushing marketing and sales to scale the original idea.

However, every system has limits to growth, and the success of the idea may create new problems to solve. Unless the original idea adapts to the changing environment and is reinvented, complacency and arrogance can lead to obsolescence in the last phase. Alternatively, innovation may occur bringing the system back to the Search Phase.

The key to Transformation Theory is understanding which phase you are in so you know which rules of survival apply. While entrepreneurship has traditionally been perceived more as the Growth Phase with a focus on management and delivery skills, *entrepreneurship is not management*. Entrepreneurship is a search process that requires discovery skills. And, while the search process requires inquiry and observation, adaptation and experimentation, creative and critical thinking, communication and teamwork, and perseverance and determination, what it does not require is an Ivy League degree, venture capital, a successful business plan, a unique personality or DNA, or even an interest in business (Taulbert and Schoeniger, 2010).

What Problem Do You Want to Solve?

When we redefine entrepreneurship, it becomes clear that it is more than an academic discipline in the business school and that it reaches far beyond the concept of traditional business

creation and small business management. Entrepreneurship is a mindset—a framework for thinking and acting that empowers students to succeed in the 21st Century. As a result of preparing students to become workforce-ready graduates or next-generation innovators, they glean an entrepreneurial mindset that cultivates curiosity; creativity; and critical-thinking, problem-solving, and collaboration skills.

At the core of the entrepreneurial mindset is the belief that it is our responsibility to be useful to our fellow human beings by aligning our interests, skills, and abilities with the needs of others to solve problems that we care about. As Google's Chief Education Evangelist Jaime Casap states, "Let's stop asking kids what they want to be when they grow up. Ask them what problems they want to solve and what they need to learn in order to solve those problems." It is the compelling problem to be solved that drives the entrepreneurial mindset.

When we ask students what problem they want to solve, we engage them in the learning process and drive self-directed learning. We create entrepreneurial learning environments that provide students with the opportunity to find and solve problems, apply creative- and critical-thinking skills, and learn how to adapt and become resilient as problems and solutions evolve. In other words, we help them develop the entrepreneurial skills needed to succeed in the 21st Century.

Best Practices Spotlight

Student Israel Lucero, a Computer Science major, is one example of how engaging students in the entrepreneurial process empowers students to take ownership of their learning. Israel was required to take the Ice House Entrepreneurship Program as a new student at Pikes Peak Community College in Colorado Springs, Colorado. Ice House is an experiential, problem-based learning program designed to equip students with an entrepreneurial mindset at the onset of their academic journey, which empowers them to take ownership of their future by developing the perseverance, attitudes, behaviors, and skills needed to succeed in life.

In the Ice House Opportunity Discovery Process, Israel identified that there was a disconnect between how students learn and how faculty teach. He became compelled to solve this problem and found himself fully engaged in searching for the solution. Israel spoke to many stakeholders including students, faculty, and administrators in the problem finding phase. He built a team to develop an application called Bahuka that included a learning styles inventory and faculty teaching styles to help students select faculty members during the registration process who taught the way the students learned. He began an experiment to test his problem-solution fit. Fortunately, Pikes Peak Community College allowed him to beta the app at the college.

In reflection of the Opportunity Discovery Process, Israel shared that he became much more engaged not only in his Ice House course, but also in his other courses because he

knew he could find what he needed to help move his idea forward. Notably, Israel was in a classroom of students from all different disciplines, all of whom engaged in the entrepreneurial learning process at the start of their academic journey at the college. Pikes Peak's results in implementing the student success course affirmed the successful impact on students, as the institution saw a 28 percent impact on student persistence (re-enrollment) and a decrease in student attrition (i.e., fewer students dropped).

An entrepreneurial mindset can lead to an increase in student persistence and higher academic achievement, a significant goal of nearly all community colleges. One institution, Edmonds Community College (EDCC), saw significant results after implementing the Ice House Entrepreneurship Program in their highest enrollment, lowest completion course to engage their most at-risk student population from a variety of disciplines in the entrepreneurial mindset.

The impact of the Ice House program resulted in a 100 percent course completion rate and a 90 percent retention (re-enrollment) rate with Ice House students. Taking a long-term perspective, EDCC followed Ice House students over several years and learned that Ice House students saw higher academic achievement, with 74 percent of Ice House students receiving GPAs in the 3.0 – 4.0 range, 32 percent more than non-Ice House students who took the same course, but with a different curriculum. Notably, EDCC was able to move the course off of their highest enrollment, lowest completion list because they empowered more students to succeed. EDCC is now expanding their impact across campus, having trained faculty from a wide variety of disciplines to implement the entrepreneurial mindset across the curriculum.

Conclusion

The World Economic Forum's *Educating the Next Wave of Entrepreneurs* report states, "Not everyone needs to become an entrepreneur to benefit from entrepreneurship education, but all members of society need to be more entrepreneurial. We need to create the types of environments that are conducive to encouraging entrepreneurial ways of thinking and behaving." The report emphasizes the need to mainstream entrepreneurship across all disciplines and expose all students and all faculty to entrepreneurial thought and processes. When we engage all faculty from all disciplines in entrepreneurial thinking, we begin to move entrepreneurship from the perimeter to the core of education. A simple starting point to this endeavor is to implement the search process in classrooms and begin asking students what problems they want to solve.

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This NISOD Papers will have an associated webinar, "[Entrepreneurial Mindset: An Interdisciplinary Approach to Advance Student Success](#)" on January 25 at 1:00 p.m. CST.

References

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