

Six Steps to Innovation

While all leaders recognize the need for innovation in product, process, and services, the word *innovation* has many meanings. It is perhaps the most ubiquitous word in both business and higher education lexicons today, yet there is seldom a common meaning of the term. Everyone wants an “innovative business model,” but what exactly does that mean?

In higher education today, an obvious question is whether the traditional classroom lecture—even with PowerPoint, video, or other technology—is the most effective pedagogy. Teachers know that students readily use their search devices to find needed information and often tune out lectures while surfing their computers or handheld devices. Given this new reality, what is the best way to teach subject knowledge today?

At Bryant University, our rethinking of innovative teaching and the design of our new Academic Innovation Center came after we concluded that teaching innovative skills and traits to each student was vital because innovation in the workplace will be increasingly important in the future. So we asked ourselves a series of questions: Can we teach all students to become innovators? What skills must they develop? And can we assess the learning of these skills and traits?

Creating innovators requires more than simply teaching about entrepreneurship or differently designed products. It should also include an education about the innovation process that will enable graduates to make innovative advances in their future chosen fields, regardless of their major. In this education about the innovation process, students will discover something that Walter Isaacson observed in his bestselling book *The Innovators*: even in technology, innovation is almost never a single-person achievement.

While there is not yet a universal definition of *innovation*, a body of knowledge about the subject has been growing exponentially in recent years. Some of the early thought leadership came from IDEO, a California industrial design firm that realized there was a methodology in the way it approached industrial design as creative problem-solving. IDEO shared its methodology, and now “design thinking” enables businesses and academic institutions to use their pedagogy for institutional purposes. For higher education, this does not

mean changing core academic content. Innovation is not an academic discipline, but it can be a skill process, and it should mean overlaying core competencies with the innovative traits and skills needed in future graduates.

The design thinking approach to creative problem-solving has six steps: observation, ideation, rapid prototyping, user feedback, iteration, and implementation. With this approach in mind, we have gone through the six steps to create a culture focused on encouraging innovative teaching and creating innovators at Bryant University.

Step One: Observation. Five years ago, we began teaching design thinking to every freshman in a 56-hour “boot camp” immersion experience that introduces students to the design thinking process and challenges them to apply it to real-world problems. This is our Innovation and Design Experience for All (IDEA) program.

Step Two: Ideation. We then began to apply design thinking as a first step to envision how our faculty, in a new world of technology, could go beyond PowerPoint presentations to a fully integrated pedagogy of experiential learning in the classroom. We started with one prototype classroom, The Ideation Lab, and some adventurous faculty who had participated in the IDEA program. The classroom itself wasn’t too futuristic, but the core group of faculty using the room were known for teaching innovatively. They experimented, evaluated results, and made

significant improvements.

Step Three: Rapid Prototyping. We created an additional prototype classroom in our Bello Center and Library. This second prototype was more sophisticated in its use of wireless technology and audiovisual capabilities, with movable tables and chairs for easy reconfiguration of the space for team tasks.

Step Four: User Feedback. Throughout the pilot projects, we had received feedback from pioneering faculty who taught innovatively, had been part of IDEA, and were ready to imagine a whole new building that would reflect the lessons they had learned. We wanted an active, fluid learning environment—a flexible, open, and transparent space with light and movable furniture and state-of-the-art technology tools. We envisioned group-integrated experiential learning in flipped classrooms and many other possibilities.

Opened in September 2016, Bryant’s Academic Innovation

How can we create a culture focused on encouraging innovative teaching and giving students the skills they need to become innovators?



By RONALD K. MACHTLEY



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Center is the culmination of years of planning and exploration. Gone are the rows of seats and the lecture dais that characterized higher education for centuries. Instead, flexible spaces, modular furniture, and the latest technology allow for a wide variety of teaching and learning styles. The focus is on innovative teaching, group interactions, and dynamics. The technology is user-centric and provides tools that help to visualize, organize, and crystallize ideas while promoting effective communication and collaboration among individuals and teams. At the center is the light-filled Innovation Forum. The building also has 5 tiered classrooms, 5 flat classrooms, 23 breakout study rooms, lounge seating, a welcome center, and a café.

A faculty committee helped ensure that the design of the new classrooms was exactly what they wanted for teaching innovatively. Those who wanted to teach in the building had to submit their syllabi to a committee. They worked closely with our campus IT experts. The classrooms were designed to encourage the generation of original ideas and new knowledge. Abundant writable glass, whiteboard surfaces, and movable furnishings complement smart technology wireless projection, wireless monitors at group collaboration stations, and docks for multiple devices such as laptops, tablets, and smartphones. The innovative learning spaces enable faculty and students to work side by side and more effectively engage as they access worldwide data, create and share content, and view and critique solutions. The teacher load was divided between the College of Business

and the College of Arts & Sciences, with students in all four years of classes equally participating in the use of the facility.

Step Five: Iteration. We recognized that our entire community should have a rich culture of innovation. We created many programs, such as “Faculty Without Borders” and the Sophomore International Experience. An event held each spring, Research & Engagement Day, provides an opportunity for faculty and students to share experiences, whether a research project, independent study, or classroom activity. It is this kind of sharing that helps build a community around teaching.

Step Six: Implementation. We decided that our goal was not only to teach innovatively but also to develop within all students the traits, skills, and qualities that will make them innovative leaders. Innovation involves not just teaching them how to design a product or engineer a process or develop the next IT venture that can achieve an IPO; innovation is also a way of thinking and collaboration and, yes, failure.

In dynamic collaboration, we established a definition of that elusive word *innovation*: “The process of creating and implementing an idea that generates significant positive change that the user values.” The last part is crucial: innovation must be something that the user values, not merely a good idea. We then identified five traits of innovators: *Curiosity and Creativity; Integrative Thinking; Collaboration; Connectors; and Perseverance and Grit.* Our students are learning those defined traits as well as the core of academic courses. And as we all know, in higher education we must develop the tools to measure and assess. We have begun the process of determining how we will assess accomplishment in this area, including whether and why students learn more of the academic content through innovative teaching than through the conventional lecture method.

We have not found, nor do we expect to discover, an all-purpose teaching method that is optimal for all. That is neither realistic nor desirable. The challenge of educational innovation is for teachers to think anew about their unique disciplines and how they might deliver knowledge in different, more effective ways. That challenge to be innovative is why our faculty are invigorated. They are enjoying the creativity and freedom that inspired them to teach in the first place.

Innovation is a continuing journey, of course. There are countless steps ahead of us as we learn, teach, plan, and build. But at Bryant University, we reflect on recent progress with satisfaction. We honor our faculty for teaching innovatively, and we take pride in our students for working to become true innovators. ■

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Ronald K. Machtley (innovation@bryant.edu) is President of Bryant University.

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