

Innovation and Design



Student outputs of brainstorming session (photo by Georgia Dennis)

by Janis Brickey

We developed this lecture series to provide students with various perspectives on innovation. The selection featured a focus on the exploration of creative and innovative accomplishments from multiple fields and perspectives from the past, present, and future.

MTSU's University Honors College Spring 2013 Lecture Series developed from conversations about the importance of creativity and innovation in life success. In 2010, *Newsweek* reported on the decline of creativity scores since the 1990s and warned that a survey of CEOs by IBM indicated that creativity was the "number one leadership competency of the future."

Philip Phillips, MTSU University Honors College interim associate dean, and I designed the series to provide students with a collection of speakers to represent excellence

in innovation and creativity. The selection featured a focus on the exploration of creative and innovative accomplishments from multiple fields and perspectives from the past, present, and future. We formulated the series applying the interdisciplinary work of the innovative design firm IDEO. Their multi-decade approach to problem identification and solution generation has garnered numerous major awards connected to design and innovation from various industries.

We developed this lecture series to provide students with various perspectives on innovation. Our intent was to introduce students to the

necessity of the multidisciplinary, context-driven immersion philosophy. We felt the speakers exemplified the tenets of observation, empathy, and the ability to share a unique perspective on how design and innovation are connected to our past, present, and future.

Each article included in this edition from selected speakers provides a more comprehensive explanation of their perspectives. Deana Raffo explores the role of self-knowledge in relationships and success throughout life. Lee Mar-

continued on page 5

DESIGN THINKING

Video: <http://goo.gl/xf4wMi>

As businesses adapt to changing technologies and demographics, the IDEO process of problem identification, grounded in the design process and the behavioral sciences, provides users a decisive edge. In 2001, Tom Kelley shared the IDEO philosophy to incorporate empathy, observation, brainstorming, model building or prototyping, action or implementation, and evaluation in *The Art of Innovation*. IDEO has significant contributions in for-profit and nonprofit sectors. Items such as Apple products and OXO kitchen tools were created with this approach.

IDEO CEO Tim Brown illustrated how design thinking can be used to imagine 1) the future, 2) new strategies, products, and services, 3) new business models, 4) new applications for technology, and 5) ways to connect to new customers (2008). By triangulating people (with their desires) and business (with need for viability) and technology (with constantly changing feasibilities), design-thinking interdisciplinary teams generate contrasting perspectives through real-world experience. Brown's *Change by Design* (2009) summarized a number of innovations generated from this approach.

Design thinking simplifies the design development process into three phases: inspiration-ideation-implementation. Inspiration is the investigation period, when prob-

lems are studied from various perspectives in context. Inspiration relies on the critical ability to empathize with people as they deal with problems. Team members should immerse themselves in the environment. Another process is to observe analogous situations (participating in a NASCAR pit crew to understand the need for speed and accuracy) and apply the experiences to understand other stressful work environments (hospital operating rooms).

Considering all perspectives can lead to innovations. In childhood, we learn stories about world-changing ideas such as Newton discovering gravity when an apple fell on his head. The history of science includes many illustrations of how great inventions were visualized after seemingly unrelated observations. Ideation involves recording and evaluating various perspectives to generate common issues and factors that make a difference. In the global marketplace, this type of knowledge requires significant input from different sources. Historically, in smaller local contexts, successful businesses provided targeted products for clients based on acquired insider knowledge. IDEO multidisciplinary teams gather to post ideas, observations, and conflicts visually for group discussion.

Implementation is the process of model building or prototyping, testing, producing, and evaluat-

ing the user in context. Prototypes can be simple models to generate ideas and solutions. Innovation is dependent on the ability to invest in the problem as a group and to learn from success and failure.

The key to promoting IDEO ideas, products, and paradigm changes is the ability to tell the story to educate the audience with a reframed message. The goal is to involve the audience and create a valid sense of empathy to understand the problem in context and the strength of the solution. Empathy is a key component in any design or problem-solving process.

As an interior designer and human scientist, my degrees are based in the tenets of business, systems thinking, behavioral sciences, and the design process. A core component of my professional design work was understanding the client in context. I teach a course applying the design-thinking tenets to identify issues and problems for real-world clients. The interior design program is working with the Tennessee State Parks system to evaluate conference centers. Students spend the night to evaluate user experiences, recording observations in break-out sessions. Since today's students are tomorrow's park patrons, design changes that attract their continued support are important. Students benefit from learning to empathize with different users and contexts.

tin discussed the role of changing technology and how the entrepreneurial spirit can guide innovation and change. Cliff Roberts was guided by empathy for the next generation of car drivers, his innate drive to solve a problem, and the ability to engage a multidisciplinary team to succeed. Pete Barile has worked in the contract furniture industry for decades and built several successful international companies. His awareness of the global marketplace is derived from his ability to interact with multiple cultures and identify trends.

The speakers and their concepts represented the cross-disciplinary approach of IDEO to identify and solve problems. We treated the development of the lecture series like assembling a multidisciplinary team to present ideas and experiences to the students. We heard they enjoyed the series, and many speakers stayed to answer a myriad of questions from a broad range of students. We hope you are inspired to think differently as you read the articles included in this edition. ■

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Selected Resources

- Bronson, P., and Merryman, A. (2010, July 19). The Creativity Crisis. *Newsweek*. 156 (3), 50-56.
- Brown, T. (2009). *Change by Design*. New York, NY: Harper-Collins.
- Brown, T. (2008, June). Design Thinking. *Harvard Business Review*. 86 (9), 39-50.
- www.ideo.com
- Kelley, T., Littman, J., and Peters, T. (2001), *Innovation Observed: Lessons in Creativity from IDEO, America's Leading Design Firm*. Crown Business and Random House: New York, NY.

Innovation Lecture Series Speakers

- **Deana Raffo**, MTSU's Department of Management and Marketing, used the Myers Briggs to discuss the role of self-knowledge in leadership.
- **Harry Lee Poe**, Union University, a descendent of Edgar Allan Poe's cousin, William, explored Poe's pivotal role in developing the art of the short story and his treatise on the universe that predated Einstein's theory of relativity.
- **Eric Klumpe**, MTSU's Department of Physics and Astronomy, described the role of the multiverses in our knowledge of the universe.
- **Lee Martin**, University of Tennessee, talked about the impact of rapidly changing technology and speed of business and product delivery.
- **Cliff Ricketts**, MTSU's School of Agribusiness and Agriscience, explained his work on gasoline-free automobile travel.
- **George Elvin**, architect with Gone Studio, described his work to promote the reduction of plastic dependency

Lecture videos: <http://goo.gl/yxqB0u>

- **Janis Brickey**, MTSU, discussed creativity and individuals, describing the work of IDEO and involving the class in an ideation session to brainstorm on attracting students to the Honors College.
- **Jonathan Metz** of the Vanderbilt Center for Health, Medicine, and Society, spoke about the role of lifestyle in community health.
- **Pete Barile**, Daniel Paul Chairs, Morristown, and Carson Newman College international business faculty, explained our collective roles in current product lines and the impact of global marketplace competitiveness on the U.S.
- **Kaylene Gebert**, MTSU's Department of Speech and Theater, discussed several recent innovations in robotics and asked students to consider the implications on their current and future lives.