

Innovation and Creativity at a Two-Year College

Providing Pathways to Success

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Creative Geniuses

Not everyone is creative/innovative or appreciates creativity at all times.

Thoughts of Creative Geniuses:

Thomas Edison, *American inventor, 1889*

"Fooling around with alternating current is just a waste of time. Nobody will use it, ever."

Albert Einstein, *1932*

"There is not the slightest indication that nuclear energy will ever be obtainable. It would mean that the atom would have to be shattered at will."

Darryl Zanuck, *Movie Producer, 20th Century Fox, 1946*

"[Television] won't be able to hold on to any market it captures after the first six months. People will soon get tired of staring at a plywood box every night."

Dennis Gabor, *British physicist and author of Inventing the Future, 1962*

"Transmission of documents via telephone wires is possible in principle, but the apparatus required is so expensive that it will never become a practical proposition."

Ken Olsen, *Chairman and founder of Digital Equipment Corporation, 1977*

"There is no reason anyone would want a computer in their home."

Bill Gates, *Co-Founder of Microsoft Corporation, 1981*

"640K ought to be enough for anybody."

How do creative people define the process?

I Ching (Book of Changes, one of the Chinese Classic Texts)

"Before a brilliant person begins something great, they must look foolish to the crowd."

Albert Einstein (Theoretical Physicist and Mathematician)

"I think that only daring speculation can lead us further and not accumulation of facts."

Carl Sagan (Astronomer)

"It is the tension between creativity and skepticism that has produced the stunning and unexpected findings of science."

"Before the beginning of great brilliance, there must be chaos."

*Process of Creativity**

- Explore the nature of creativity and understand how it can be alive in everyone
- Discover ways to create a fertile environment for creative thought
- Understand how a willingness for risk allows moving from "creative" (the theoretical) to "innovative (the practical)
- Evaluate risk against potential benefits of pursuing a creative idea to innovation
- Understand the value of innovation and find ways to quantify it

Generativity Theory *

Generativity Theory and Creativity

- Generativity Theory is a formal, predictive, empirically-based theory of ongoing behavior in novel environments. Because it can be used predict and engineer "novel" performances, it is also a theory of creativity.
- Generativity Theory has its origins in pigeon research conducted at Harvard University in the late 1970's and early 1980's by Dr. Robert Epstein, B. F. Skinner and others.

Basics of Generativity

Competing behaviors produce new behaviors

- The "combinatorial process" is orderly and predictable.
- By influencing the type and number of competing behaviors, we can accelerate and even direct creativity.

Implications of Generativity Theory

- Everyone has roughly equal creative *potential*.
- "Creative people" have special skills.
- Anyone can *learn* these skills.
- The creative process can be accelerated and directed.
- Management Techniques from Generativity Theory have been applied in business and industry to enhance and direct employee creativity.

Lessons Learned from Generativity Research

- People need to pay attention to and to preserve their new ideas.
- Failure is an invaluable ingredient for creativity because it causes ideas to compete.
- Broad training and life experience is important for creativity because it makes a collection of diverse ideas available to compete.
- Properly designed physical and social environments can stimulate creativity by causing ideas to compete.

Generativity Theory suggests four (4) Core Competency areas that are critical for the expression of Creativity in individuals

Capturing

- One's ability to preserve new ideas as they occur

Challenging

- One's willingness to subject oneself to challenges beyond one's current level of skills & knowledge

Broadening

- The desire for and pursuit of training, experience and knowledge outside one's current areas of expertise

Surrounding

- The desire for the commitment to the promotion of change in one's physical and social environments on a regular basis

Setting the Stage for Creativity

- Establish a risk-free environment, encourage calculated risk taking
- Reduce or eliminate barriers
- Establish a framework

- Complete to Compete, U. S. national movement to encourage students to complete degrees and certificates, gain credentials to become more employable is looking at creativity in terms of time (i.e., hybrid—combination of online and face-to-face, late or early morning time frames), structure (i.e., accelerated programs, cohort learning, contextualized learning—combining English as a Second Language or Adult Basic Education training with training for a specific occupation), choice (i.e., reducing the over abundance of choices so students can remain focused).

Specific Examples from Howard Community College

- Center for Entrepreneurial and Business Excellence: The program includes an individualized coaching component, one-to-one guidance and support from a business coach. Courses are designed to meet specific needs of individuals and may include experiential learning, mentoring and team project work in addition to face-to-face classes, and individualized courses for entrepreneurs that are customized to meet the student at his/her current level of expertise. In addition, the college offers business space which includes basic office equipment, meeting space, and a collaborative environment and students participate in a rocket marketing competition each semester.
- Internal and External Partnerships: The hospitality program has an agreement with the University of Nevada at Las Vegas for its casino management program; The Center for Entrepreneurial and Business Excellence has an articulation agreement with Babson College for HCC students, one of the few between Babson and a community college; The English Language Institute is a partnership between the credit and noncredit divisions to develop a program for international students who do not place in college-level courses to create a schedule that meets the minimum requirements for international students studying in the United States; The college has partnered with a neighboring community college to create a Global Distinction Award which combines courses and activities with global themes with civic responsibility; The Commission on the Future is held every 5 years and invites community members in specific areas to meet for a with college personnel and develop a set of recommendations for programs and services that will be required in the next five years and the college then reports back on the progress of each of the recommendations .
- Research and Development: HCC has established a cross-fictional team with representatives from the academic, student services, information technology, and marketing areas that meets regularly to discuss new programs and courses, reflect on environmental scanning, and take a holistic approach to integrating these programs and activities into the college environment.
- Step Up: This award-winning program is focused on student success and retention and links first-year students with mentors from across the college community (including the president of the college and members of the board of trustees) who meet individually with the students to guide them through their educational process and point them towards supportive resources at HCC. It provides individuals who normally don't interact with students the opportunity to meet with students and provide assistance and gives students an advocate for them in this critical period.
- Learning Communities: HCC has a variety of innovative learning communities including: Rouse Scholars, a selective admissions and leadership program for incoming high school seniors; The Frederick K. Schoenbrodt Honors Program for full and part-time students of all ages who enjoy learning with outstanding faculty and peers in stimulating honors courses; the STEM Learning Community for students interested in pursuing careers in Science, Technology, Engineering, and

Mathematics which provides them with a supportive environment where they learn and practice some of the “softer skills” that will make them successful in the workplace; and, the Silas Craft Collegians Program, a selective admissions program for recent high school graduates whose past academic performance does not reflect their true potential which provides a customized curriculum.

- Service Learning: Students are encouraged to participate in service learning projects which are either incorporated into existing curriculum or designed as separate activities. For example: Within some courses in the English Language Learning Center, students practice their English skills as they volunteer in middle schools and senior centers. HCC students have used winter and spring breaks to travel to the Dominican Republic to help students in a school there, New Orleans to assist in rebuilding after Katrina, and to New York City to work in a soup kitchen.

*Information used in a customized training class on Implementing Creativity and Innovation in the Workplace designed and delivered by Howard Community College for and to a state government agency.

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