On August 17th and 18th, the Belmont University Teaching Center hosted another outstanding workshop series for Belmont’s faculty to launch the fall semester. Dr. Jean M. DiPirro, an Associate Professor of Psychology at Buffalo State College, gave back-to-back workshops on the 17th which were titled, “Creativity & the Brain.” Dr. DiPirro, a behavioral neuroscientist, discussed how an intensive research effort from 1990-2001, funded by the National Institutes of Health and commonly referred to as the “Decade of the Brain,” led to a better understanding of complex neural processes including creativity. She stated that “creativity is a property which emerges from a well functioning central nervous system and that ultimately anything that can help one part of the brain leads to improvement in the function of the total brain.”

She gave us a tour of the topology of the brain, enlightening us to the roles that various regions serve. She described a complex network among several areas of the brain (temporal, parietal, left and right frontal lobes, the sensory cortex, and the cerebellum) which have been identified as essential to human creativity. We learned that the temporal and parietal lobes of the brain store knowledge whereas the cerebellum plays a key role in working memory. Dr. DiPirro stated that the cerebellum, also known as “the little brain,” is an area in the central nervous system where we hold and process ideas.

One might ask, “How can such diverse regions of the brain be in tune with one another, leading to a neurological process as complex as creativity?” Neuroscientists explain that communicative signals are broadcast throughout the brain upon the release of chemicals known as neurotransmitters from individual cells called neurons. It is the release of these molecules into an area called the synapse between adjacent neurons which orchestrate the connections between different brain regions, thus contributing to processes such as creativity. The roles that the neurotransmitters norepinephrine and acetylcholine play were individually discussed by Dr. DiPirro. By decreasing the release of norepinephrine, stress is reduced; and by elevating the levels of acetylcholine in the brain, learning and memory are improved.

Dr. DiPirro quoted Marvin Minsky by stating that “the principal activities of brains are making changes in themselves.” If that is true, one professor asked, “How can we change the brain?” Quick to respond, Dr. DiPirro cited research which has shown that learning throughout life keeps brains fit and in a constant state of change. For years, neuroscientists believed the brain to be relatively static after birth with only diminishing returns as neurons could no longer divide; however, based on research over the last 20 years we now know that the brain is a very dynamic structure. Changes in the brain are often referred to as neuroplasticity. This is a process by which synapses can be altered either through creation of new ones or pruning of those which are ineffective. By creating new synapses, the brain can strengthen the pathways of communication between cells, thereby enhancing overall neural activity. Dr. DiPirro further stated that research has shown that changes in the brain occur as individuals are exposed to “novel experiences” such as those we as faculty strive to deliver in the classroom or simply by sparking one’s imagination.

Toward the end of the workshop, Dr. DiPirro posed the following question: “Can instruction be geared toward facilitating mechanisms of plasticity to foster creativity?” After allowing some time to ponder the question, she described two approaches that she uses in the classroom and they include surprise and familiarity, often utilized through storytelling. She stated that she works to keep the student audience on their toes, often abruptly changing the direction of a story to convey a concept through surprise. She stated that it is important to emphasize the identification the audience feels when they know the outcome of the story.

Upon reflection of the information provided by Dr. DiPirro, we now have a better understanding of what can happen at the molecular and structural levels in the brain as we teach and work to inspire our students. By novel approaches in education, we can strengthen individual connections in the brains of our students to enhance cerebellar, parietal and temporal function, thereby improving memory, increasing knowledge and sparking creativity.
I was pleasantly surprised when I came to the fall teaching workshop and Merrie had a copy of a book of Margaret Atwood poetry on the back table. Margaret Atwood is coming to Belmont this fall! Events such as the Humanities Symposium - remind me - a natural scientist - why it is great to work at a liberal arts institution. As “future faculty” working on our graduate degrees, we had to face the realization that someone with a Ph.D. or any advanced degree is necessarily near and necessary. Looking at my advisor and committee members, I - and expect many of you - realized that pursuing a career at a research institution would require us to become more specialized, and therefore to have even less time to develop interests beyond our narrow specialties. But as a long-term advocate for the idea of the undergraduate liberal arts education, I am happy to walk with the talk I talk to my students. Insights into our own fields comes from a broad application of knowledge and by appreciating the methods and insights of other disciplines. I will be at the Margaret Atwood talk, and as many other talks that I can make.

BOOK REVIEW: THE ELEMENT

By Bonnie Riechert, Ph.D.

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When your natural talent meets your personal passion, you’ve found it, and are, in your Element. This is the thesis of Ken Robinson, Ph.D., with Lou Aronica in The Element: How to Find Your Passion Changes Everything (2009, Penguin Group).

“I use the term the Element to describe the place where the things we care to do and the things we are good at come together,” Robinson begins (p. xii). Finding your Element is presented as essential for our own fulfillment and for the future of our communities and institutions.

While the book is not a how-to manual for finding your Element, it does invite its readers to seek and find that intersection of talents and passions. Additionally, it challenges educators and learning institutions to encourage and celebrate these in their personal quest. When “we are in our Element, we feel we are doing what we are meant to be doing and being who we’re meant to be!” (p. 90).

In Chapter 5, “Finding Your Tribe,” Robinson discusses the importance of connecting to people who share your same passion and interest. His idea of “domain” focuses on activities, and “field” relates to the other people engaged in it. We may go in a multiplicity of domains, but it’s important to find our tribe(s). “Finding your tribe can have transformative effects on your sense of identity and purpose. This is because of three powerful tribal dynamics: validation, inspiration, and what we’ll call here the ‘alchemy of synergy’” (p. 114), that magical process of mutual inspiration.

People need mentors more than they need heroes, Robinson argues in Chapter 8, “Somebody Help Me.” Mentors can serve the roles of recognition (identifying skills no one previously had seen), encouragement, facilitating, and stretching (pushing others past perceived limits). We all idolize heroes who inspire us but whom we’ve never met. But mentors do something more. “They take a unique and personal place in our lives. Mentors open doors for us and get involved directly in our journeys. They show us the next steps and encourage us to take them” (p. 186). He cites an interview on the Harvard Mentoring Project posted on www.

It’s never too late for people to find their Element, according to Robinson. Human lives are organic, cyclical – not linear – with various capacities expressing themselves differently at different times. To find and move within your Element is to reconnect with yourself in a holistic way. “The evidence of research, and of common sense, is not only that our physical health affects our intellectual and emotional vitality, but that our attitudes can affect our physical well-being” (p. 198).

Robinson is an education reformer, and he devotes Chapter 11, “Making the Grade,” to discussing educational reform suggested by the principles emphasized in The Element. He argues, for example, against the existing hierarchy of subjects, “suggests we need to question the entire idea of ‘subjects’” (p. 247), and states curricula should be personalized. The implications for teachers as mentors are far-reaching. “Great teachers have always understood that real changes can be taught. They can find relations to your disciplines here as well. ‘Get all A’s?’ but what do all those letters represent? Does it mean they ‘get it’?”

I had been teaching for about two days on the first day of class, I walked in, took attendance and paused to ask a question. “Before we start, I would like to clear the air. What rumors have you heard about me?” The class sat stunned thinking, “Who is this crazy woman? Finally one person put her hand and said, “We heard this is the hardest class you’re going to do.” I went in search of one last thrilling encounter. As her patients were stable, she went looking for her last lunch. She walked through the Trauma Unit and poked her head in one doorway and saw a woman with both arms casted, part of her jaw wired, sitting with a tray of food in front of her. Erin asked: Can I help you?

The patient replied: “I’m hungry.”

So Erin sat down and fed her.

For I was hungry and you gave me food, I was thirsty and you gave me drink. ‘Amen, I say to you, whatever you did for one of these least brothers of mine, you did for me.’ -Matthew 25:35-40

I knew that Erin got it. How do you know your students get it?

This past spring I participated in an interview here at Belmont where the Chaney Committee asked many questions about me and my teaching in an attempt to determine if I was a teacher or an educator. One of the first was a question about childhood influences on education. However, of all the questions the committee asked, the most impressive did not come from the faculty, but from the student, Lauren Cooper, a graduating senior. Her question was short, but simple. It is the question I not only ask you today, but pose to you: “How do you know your students get it?”

The obvious answer would involve some measure of success, good grades, passing boards, acceptance into graduate, medical or law school. But I didn’t think that was what Lauren was asking.

Most students’ measure revolves around the almost mythical “A+.” Many of our students have come to receive all “As” in high school. They are accustomed to being at the top of their class. They come to college with the same aspirations: “To get all ‘A’s,’ but what do all those letters represent? Does it mean they ‘get it?’”

I later went back to review the statistics of the previous two years, and the student was correct; only one student each semester earned an A. The students knew more about me than I did. That was about five years ago. Last semester with 71 students, four were going into the final with a solid A, not a B+ or 95+ and one only emerged. So does that translate to only one student “getting it”? No. It’s not what you know it’s what you do with what you know.

Let me give you an example.

One class I teach is Nursing Senior Practicum where students spend their last semester 1:1 with a preceptor in their area of interest. Because I teach Acute Care Nursing, students go to the ER, ICU, Burn and Trauma units all over the city. One student, Erin, was in Trauma. She got to see exciting, over-the-top, state-of-the-art nursing, and loved being in the middle of this fast paced world. It’s everything you see on TV and more. Erin and Grey’s Anatomy; all the blood guts and gore but not as much sex. After each shift, Erin would journal of all the life and death events she experienced. On her last day, Erin went in search of one last thrilling encounter. As both her patients were stable, she went looking for her last lunch. She walked through the Trauma Unit and poked her head in one doorway and saw a woman with both arms casted, part of her jaw wired, sitting with a tray of food in front of her. Erin asked: Can I help you?

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I knew that Erin got it. How do you know your students get it?
A QUIETER, GENTLER BELMONT

Thirty to 50 years ago, Belmont College was far removed from the bustling, bustling, under-construction Belmont University we know today. Was it better then, or not? One could argue both ways, and the long-term faculty/staff I interviewed weren’t sure. The simpler Belmont College of a few hundred students certainly had its appeal, but today’s nationally-known Belmont University of nearly 6,000 students exudes a renewed sense of excitement and offers opportunities and areas of study not previously available (or dreamed).

The former Belmont College was a place of great collegiality, because, by and large, the faculty members saw each other at least once a day at the campus post office or cafeteria. All faculty attended all faculty meetings, and the meeting location was the Ward-Belmont faculty house which still stands today between Wheeler Humanities Building and the Curb Center (look for the ferocious bruin just outside). All faculty voted on all business and curriculum items, and most other things relating to faculty responsibilities. The shared phone and all mail boxes were in the first floor of Blanton Hall. There was no secretarial help for the academic program until the establishment of the School of Business in the mid 1970s, so each professor typed or wrote his/her own syllabus, tests, and class handouts.

Potluck dinners and picnics were common, with all faculty from all departments, staff, and administrators, as well as all Belmont students, invited to take part. Camaraderie was the order of the day, and interaction was frequent and easy. That’s not to say that everything was harmonious and blissful, because strong personalities and divisive issues are as old as American academe itself. The Belmont of old, as today, had its share of strong personalities and “turf wars” among the various departments, but the reality of meager funds and therefore modest ambitions helped everyone’s feet “stay on the ground” when it came to expansionism.

Required student chapel was five days a week (later three), and lots of faculty attended. As for dining options, the cafeteria was in the basement beneath Belmont Mansion, and later in what is today Neeley Dining Hall (former dining hall for Ward-Belmont College). Many faculty members and administrators ate in the cafeteria, and story tellers such as John Tullock, Robert Byrd, Kenny Sidwell, Roy Chamblee, Janet Wilson, Gladys “Hap” Bryant, and Glenn Kelley held forth over lunch.

Most events included students, and there was always a student vs. faculty/staff softball game to start each academic year. It was common for the same matchup in basketball, and at least once there was a Belmont faculty vs. Lipscomb faculty basketball game. Similarly, the annual Faculty Talent Show was well-attended, and helped cement the feeling of community the campus enjoyed, as did the rivalry with David Lipscomb College, located just down the road (Belmont Blvd.). Belmont’s students’ stealing of the Lipscomb bison head and Lipscomb’s students’ painting of Belmont statues around campus were not well publicized, since the conservative constituents of both church-related schools doubtlessly saw this as something more than good clean “fun!”

One thing on which everyone seems to agree—the great fire of December 30, 1972, was the most life-changing, sobering, scary and significant event in the history of Belmont College. As the stately and much-utilized Blanton Hall burned completely to the ground, Belmont College lost about 90 percent or more of her classrooms, faculty offices, and resources. There was plenty of speculation that the College might never reopen, but we’re all grateful that it did!

Sources:
Interviews with Donna and Stephen Campbell (9-2-10), Mike Awaite (2-2-10), Don Ramage (8-14-09), Ronald Barrett (9-24-09), and David Hill (9-25-09).