

**Discussion of paper “Effective Practice and Experiential Education” given by Janet Eyler
by James R. Stellar**

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(<http://www.clarku.edu/research/mosakowskiinstitute/conferences/mar12/index.cfm>)

Our conference organizer, Dr. Freeland, has asked me to comment on the very nice paper of Janet Eyler and to do so particularly from the experiences I had as Dean for 10 years in moving the College of Arts and Sciences in the direction of practice. He asked me to focus particularly on how we engaged the faculty. I believe this is the critical issue if the goal is to promote the wide-spread adoption of experiential education. But before doing so, I want to comment on the paper itself.

Thoughts on the Eyler paper and particularly on reflection

All of us who work in Experiential Education would acknowledge the leadership of Dr. Eyler and my co-discussant, Dr. Ira Harkavy, in helping to lead this area. Service-Learning is not only important for its contributions to society which helps the higher education industry be less of an ivory tower and give back more to the community in a time when higher education is under increasing scrutiny, but it also has provided a lead (along with the field of Education) in how to best utilize experiences outside of the classic classroom to promote learning that serves the business of Colleges and Universities.

I believe Dr. Eyler got it right in her paper when she focused at the end of her paper on reflection as a key process to tie experience back to academic learning and to develop the contextual learning from the experience itself. I also think she got it right when she said that most of us probably do not do enough of reflection in our programs to have students get the full benefit from the experiences we provide. I want to make two further theoretical points about reflection to reinforce its importance.

Neuroscience:

The first point about reflection comes from my field of Neuroscience. First, I need to make a disclaimer that my disciplinary training and scholarly work, until recently, has been entirely on behavior, neuroanatomy, and biochemistry concerning limbic system circuits of reward and motivation in the mammalian brain with an eye on better understanding human drug addiction. More recently, as a result of my experience as Dean, I have been begun to look more broadly at the involvement of limbic circuits, first believed only to mediate emotions, in making judgments related to value and meaning. This area of study has been driven by modern brain scanners, like the fMRI (functional magnetic resonance imaging) machine, that are common in hospitals and in many universities. Like many new discoveries, there is an old story here too. Using the “heart” as a metaphor for these circuits, the famous mathematician, Blaise Pascal (1623-1662)ⁱ, wrote “The heart has reasons of which reason does not know.” Based on the use of modern fMRI brain scanners, António Damásioⁱⁱ refers to certain regions of the brain as having a logic based on “body wellness sense” that enables us to make judgments about what to value and even what to do. We see the same points made in the emerging field of neuroeconomicsⁱⁱⁱ. Right now, economists talk about fear and lack of confidence as forces in the stock market as much as they talk about data and patterns. In an earlier paper in this conference, Sternberg^{iv} talked about multiple forms of intelligence in the WICS model. Certainly all are familiar with the important story developed by Howard Gardner on multiple intelligences^v or the concept of Emotional Intelligence in the IQ vs. EQ distinction.

Reflection is then important to connecting these various forms of learning. Joe Raelin^{vi} refers to reflection as connecting didactic vs. dialectic learning in that it surfaces tacit knowledge gained from practice so that cognitive learning (processing) can occur. But it goes deeper than that. Through recording individual nerve cells and groups of nerve cells, we are learning more about brain areas are used for purposes beyond what we thought. Mirror neurons^{vii} are cells within the motor system that are involved with

encoding particular behaviors, such as drinking from a cup, and are now known to fire when the subject sees someone else do the behavior. It may well be that the motor system represents the acts of others as well as of its own acts. Some have even argued that such mirror neurons lead to empathy. If the motor system can represent the actions of others, perhaps the limbic system could represent aspects of knowledge generated by practice. With learning occurring in these other systems, it may well require substantial reflection to draw that learning to the verbal level where it can be integrated with cognitive learning and other knowledge, discussed, and taught to others. How this works in the brain, we do not know. We may well need a neuroscience of experiential learning to fully understand how the mind works to take in and process experiences and integrate them, probably through reflection, with conscious, cognitive knowledge. If that sounds preposterous, consider how “Neuroeconomics” sounded not long ago.

Communities of Practice:

A dialectic way of learning from practice is heavily dependent on the social context conferred by a community of practice. As Etienne Wenger and colleagues^{viii} point out, such communities not only hold knowledge but they transmit it by example and practice. Think of the law firm where a student may work while in college and where that makes meaning in their career decision making. (I worked in a law firm. I love the law. I know want to be a lawyer.) People are very good at fitting into the social situation and social psychology^{ix} shows how they do so often without being aware of what they are doing.

On the other hand, the same social forces may make communities very powerful at promoting reflection. Reflective communities may have special access to limbic circuits and thus help take what has been experienced (often in a community) and connect it to classical cognitive learning. But as Dr. Eylar has questioned, do we do enough of it? Time on task is certainly one way to increase reflection. Building reflective communities of practice with our students and faculty might be another and made do more than just add time-on-task. It may add a privileged way to promote the communication between limbic and cognitive functions of the brain. That too could be a subject of study in a future neuroscience of experiential learning.

Building Faculty Engagement from a Dean’s Perspective

To return to the topic of building faculty engagement and lessons learned from my experience as Dean, I want to start with the fact that the College of Arts and Sciences was and is imbedded in a University with a nearly 100 year-old Cooperative Education program. In this program, six months periods of full-time paid employment alternate with similar periods of full-time study. To use the words of the current Northeastern strategic plan^x, this program is “authentic and substantial.” It sets a campus calibration standard against which to measure other forms of experiential education. Also, the nearly 100-year history has developed a network of alumni and friends in industry with deep familiarity with Northeastern students. But perhaps the greatest gift to help establish experiential education in the College was that the University is more comfortable than most with letting go of the common methods of control of students in a classroom or residence hall and allowing students to take control where they really can create knowledge for themselves – succeed or fail, even if we may not know exactly what is going on back on campus.

Getting it in the curriculum:

While early adopters were already enthusiastic about experiential education, to get wide-spread buy-in, we had to get it into the curriculum. There were two ways in which we undertook this effort. First, the College of Arts and Sciences incorporated an experiential education requirement into its Core Curriculum beginning with the class of 2000. It came in two parts to this requirement. One was having an approved

experience which we originally set up to be adjudicated by an experiential advisor to insure that it was substantial and authentic enough. The other part was a required reflection which was most often built into the departmental capstone course, changing the nature of the capstones. Second, then President Freeland led an ongoing operation to incorporate experiential thinking into all levels of the curriculum of which the ending (capstone course) and beginning (freshman seminars) were the easiest. To get at the middle, we set out to create through modest funding and incentives, a variety of courses involving service-learning, community research, undergraduate research, etc. The idea was to encourage faculty in their own time, led by peer examples, to adopt experiential practices into their courses where they made sense. For example, Political Science developed a Community Research course and Psychology developed a laboratory course which used the community to teach research principles in social and personality psychology. We knew enough to take our time and let the faculty teach each other by example of the early adopters and to let the curriculum adjust dynamically while we all learned as a College what we were doing.

Some programs were easy. The Faculty Undergraduate Research Initiative (FURI) met no resistance when it began offering students small stipends to work with faculty on their ongoing research. The sciences jumped on this with predictable enthusiasm, but we managed to encourage all disciplines to participate. FURI requires group attendance at a few meetings where the students and their faculty mentors listen to student reports on the research. The University has expanded its campus-wide Research Expo to better celebrate and communicate undergraduate research. Undergraduate research was also celebrated in publications, in Department gatherings, and such presentations made their way into capstone courses.

Study abroad was another easy first step to encourage faculty engagement and an emphasis here predated the experiential requirement. Indeed we needed that in place for the class of 2000 so as not to be completely dependent on co-op to generate the experiential part of the requirement. Later, we modified the plan to include ongoing reflective journals and keyed the assignments to the stages in Chisholm's book "Charting A Hero's Journey."^{x1} Before the operation moved to the Provost's Office (a good thing to promote universality), the College was contemplating requiring students to submit electronically in a timely fashion as one of the criticisms we heard was that the students made up journals on the plane on the way home. A next step of our abroad programs and one that brought serious faculty engagement came on strongly in the last several years. It was built on the concept of a faculty-led trip in one of our half-summer session (2 months, 2 courses) and emphasized a deep integration with the country leading to public diplomacy. The program is called "Dialogue of Civilization" and tend to occur in less traveled and more challenging parts of the world where our faculty have particular expertise. We modeled the program after a long standing experience in Cairo that was originally designed to serve International Affairs Majors. Because a Dialogue of Civilization program was led by faculty and involved so much effort, there was serious compensation involved (e.g. extra salary or it fulfilled part of the yearly teaching load). Perhaps because we took it seriously, the program blossomed. When I left the Dean's Office in fall of 2008, there were 30 Dialogue programs a year and participation among students was rivaling that in the classical study abroad programs.

The College did not have to do everything on its own. We were able to partner with the Community Service Center to create service-learning TAs that helped our (and all) faculty develop courses of service-learning by adding expertise and a helping hand. In the fall of 2008, we created together an nuSERVES program where freshman come 3 days before the opening of the fall term and participate in physical service as well as reflection exercises and seminars. They also bond together and learn campus. Our hope is that they will strengthen by example the natural commitment our student population is showing to service as these freshman live with the entire freshman class.

Once one starts thinking this way, many things tie together. We had for a few years an originally student-developed access program called Linking Education and Diversity (LEAD) where students go back to the

Boston Public Schools and encourage high school students to apply to college, including Northeastern. This effort relates to the many efforts of the School of Education or the other agencies on campus, but involves now significant admissions scholarships where students are obligated to service. Given the historic role of reflection in teacher training, it is easy to connect reflection and learning to access missions and this mission offers many service opportunities to students outside the education field. A key would be to capitalize on the National emphasis on education and service to build service-learning activities here for students in all fields.

Nothing succeeds in getting faculty engagement like success. In the last 10 years, applications rose from 5,000 to 17,000, SAT scores rose 200 points, majors grew from 3,800 to 6,700. This improvement in quality and size brought many benefits, including to the budget, which are beyond the scope of this paper. I cite them only to say that such numbers strongly contributed to the rise in the University's reputation from a US News ranking of 165 to 96 in less than 10 years, thus fulfilling then President Freeland's goal of taking Northeastern into the top 100 universities. Along with substantial improvements to campus and in clever branding and admission campaigns, these numbers also brought Northeastern to a peak of 36,000 applications for the class entering in fall 2008 or 4th in the Nation by size among private universities. While success has many factors, I clearly believe that one of them was this distinctive educational system that was very attractive to students.

With the coming of the University Strategic Plan almost 2 years ago, many experiential education operations were centralized, beginning even earlier with the abroad programs. New administrative offices appeared, such as a Vice Provost for Experiential Education. New funding sources appeared such as Provost-level grants for undergraduates to promote research. In the meantime, the College had started a summer institute on the Island of Martha's Vineyard (now moved to WACE - <http://www.waceinc.org/institute/index.htm>) to help other interested institutions develop their own experiential plans/programs. Our faculty and staff taught in that program which deepened faculty buy-in and ownership and learning about experiential education. Also, in a previous re-organization, the cooperative education coordinators, a faculty-rank position, were eventually transferred to the colleges. This gave the College of Arts and Sciences a chance to connect Cooperative Education to the broader efforts in Experiential Education, putting some 15 full-time people on line who were based in the Departments and could be advocates for all forms of experiential education. More importantly, our coop participation went up to the point where the last year I was Dean about 2,000 students of 6,700 total went on a 6 month co-op sometime in that year. The success with the students made it clear that experiential education in all of its forms was an important signature program of the College and the University. Greater faculty buy-in followed each step in our improvement. It remains a work-in-progress, but one where I feel substantial progress has been made.

Summary points: So, how do we produce faculty engagement generally? Each campus will have its own way of doing so depending on the goals and the culture of the place, but here are some points to consider:

1. We did not do it directly. It was never in the College leadership's mind to do anything but seduce the faculty into believing. That encouragement remains a work in progress and probably always will. Collins is right in his book "Good to Great"^{xiii} in that organizations need passionate leadership and a hedgehog concept. Our hedgehog concept was the little formula: Academic excellence + deep experience = powerful growth of our students.
2. We did it systemically on both the student and faculty level. As students enter campus as freshman they are enter a milieu where everyone is talking about co-op as part of College. For example, upperclass students are returning from co-op in the evening often in business dress. They have some money, no homework, but have to be up early the next morning. Freshmen students find this behavior very interesting, talk to them, and grow greatly in their understanding about what is possible before almost all of them have any of our experiences. In this sense, the reflection begins immediately. On the faculty side, we are now an attractive university which has

not only boosted faculty hiring but made them more eager to join us. That helps drive acceptance of our dominant teaching philosophy involving experiences outside the classroom.

3. We promote reflection, but could do a better job. For a few years, the Dean's Office bought 50-80 1st time co-op students dinner in groups of 6-8 once a month under the leadership of a guide who promoted a reflective discussion of their co-op experiences. We also studied them vs. others in a pilot study led by Rick Porter and Joe Raelin and a project of an undergraduate group (REEL – Research on Experiential Education and Learning [<http://www.casreel.neu.edu/index.php/our-mission>]) to see if there was an impact of this experience. Given what Dr. Eyler said in her chapter, I wish we had run the dinners at twice a month.
4. The commitment had complete buy-in from the College administration and we backed that up as best we could with resources, e.g. hiring more co-op coordinators as the participation grew. Over time that made a difference.

Now that I am not Dean, I am writing a blog on this subject (www.otherlobe.com). Other colleagues promote undergraduate research on experiential education (<http://www.casreel.neu.edu/index.php/our-mission>) or teach at the Martha's Vineyard Institute as mentioned above. The work goes on in many forms.

ⁱ Pascal quotes (http://thinkexist.com/quotes/blaise_pascal/)

ⁱⁱ USC home page for António Damásio (<http://www.usc.edu/programs/neuroscience/faculty/profile.php?fid=27>). See also *Descartes' Error: Emotion, Reason, and the Human Brain*, Putnam Publishing, 1994

ⁱⁱⁱ Paul W. Glimcher and Aldo Rustichini. Neuroeconomics: The Consilience of Brain and Decision *Science*. 15 October 2004: Vol. 306. no. 5695, pp. 447 - 452

^{iv} Academic Intelligence is Not Enough by Robert J. Sternberg, presented at Clark conference (<http://www.clarku.edu/research/mosakowskiinstitute/conferences/mar12/papers.cfm>)

^v Gardner, H. *Frames of mind: The theory of multiple intelligences*. New York: Basic Books, 1983.

^{vi} Raelin, J., Glick, L., McLaughlin, K., Stellar, J., Porter, R. (2008). Reflection-in-Action on Co-op: The Next Learning Breakthrough. *Journal of Cooperative Education and Internships*, 42(2), 9-15.

^{vii} Rizzolatti G. and Craighero, L. The mirror-neuron system. *Annu. Rev. Neurosci.* 2004. 27:169–92

^{viii} Wenger, E. *Communities of practice Learning, meaning, and identity*. Cambridge University Press, 1998 see also Wenger E., McDermott R., Snyder W. *Cultivating communities of practice: A guide to managing knowledge*. Harvard Business School Press, 2002

^{ix} Solomon Asch. *Opinions and Social Pressure*. In Elliot Aronson's Readings about The Social Animal 9th edition. Macmillan, 2003, pp 17-26

^x <http://www.neu.edu/planning/draftplan/index.html>

^{xi} Chishlom L. *Charting a Hero's Journey*. Barns & Nobel, 2000. See also <http://www.ipsl.org/advocacy/publications/charting.html>

^{xii} Collins, J. *Good to Great*. HarperCollins, 2001. See also his web site <http://www.jimcollins.com/lab/index.html>