TEACHING PHILOSOPHY – Ryerson Chancellor Award (Gosha Zywno, 2010)

Commented [a1]: This philosophy stresses personal goals as a teacher, teaching strategies, and reflection of her own teaching

Dr. Leo Buscaglia [1], a Professor of Special Education at the University of Southern California, once said that he disliked the word "professor", since in our practice we tend to profess too much. He liked to call himself an educator, the word with a Latin root of "educare", meaning "to guide". What wonderful words to live by as a teacher!

Someone wise said that we are a sum of our experiences, so as I reflect on my teaching philosophy, I realize that its emotional centre has been shaped in part by my experiences as a learner. I like to think that compassion and empathy are at the core of who I am, and even though my undergraduate days are almost 40 years in my past, when I look at my students, I still think about how I would feel sitting among them, and I want to make their experience richer and more supportive than what I went through. Since past is so relevant to who I am as a teacher today, I will ask the reader to indulge me as I take a short walk down the memory lane...

When I studied to become an engineer, I never imagined that teaching would become my professional passion. And yet, in hindsight, I always enjoyed teaching others, and more importantly, I was good at it - I supported myself through high school and university by tutoring, mostly in English, but later also in Sciences. I do not have any teacher role models from my time at the university - institutions of higher learning in Communist Poland were not exactly enlightened: competitive, rigid hierarchy, huge classes and TAs taking out their frustrations on us undergrads – we were the plebes. All I remember is a blur of boredom in classes we had to attend as it counted towards the final grade, being subjected to petty humiliations in our dealings with lecturers and TAs, hard work, stress of tests and exams used to winnow us out. In a way, watching disinterested professors rhyming off their notes in front of a chalkboard, I learned what NOT to do as a teacher, such as: be an unavailable and unapproachable figure who delegates to TAs all daily dealings with students; when in class, lecture non-stop; never use anything other than chalk and talk; either ignore students completely or single out individuals with unexpected questions, drag them on the podium for all to chuckle at their anxiety and then smirk about own superiority, and so the list goes…

About the only class I clearly remember was Physics, where the professor was conducting experiments, illustrating theory taught - that was my early lesson in the value of experiential learning. I actually looked forward to that - it was interesting! Unfortunately, that professor also had a mean streak and took pleasure in humiliating his assistants, and us students, at every opportunity... We all chafed under Communist-imposed rules and policies, but I also kept buckling against conventions of a conservative society where political stagnation and isolation had bred a nasty streak of intolerance against anyone different, whether by religion, sexual orientation, gender or even looks or ambition. On paper, Communist- imposed equality for women looked great, but in reality I quickly found out that engineering was still a man's world - well, in a different time, society and place, this bit sounds depressingly familiar.... but I digress. I was one of only five women in a cohort of 200 engineering students and to survive I had to be smarter and work harder. I also had to put up with stupid jokes, exclusion and sometimes outward harassment. That was another early lesson that stayed with me for life - that exclusion and discrimination, overt or covert, and lack of respect, really impact negatively lives of students, and affect their learning. The impact is not just on the minority affected, but on the majority as well, who lose an opportunity to develop as human beings.

Years later, in Canada, when I started teaching, I swore that I would never allow any student in my class to be made to feel that way. I consider the human aspect of what we do in classroom as a prerequisite condition to learning. Having taught for over 30 years, I am proud to say that I have always strived to recognize my students as individuals, get to know them, listen to their concerns, try my best to offer

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guidance, help, motivation, mentoring, to serve as a role model, to be fair in my dealings with the students and in their assessment, but at the same time to have zero tolerance for cheating, bullying, discrimination, or boorish behaviour. I pride myself on the care I take to create an environment that is safe and conducive to learning for all. It is my life's experience, not just professionally, that people return what you give them, and when the students see the professor who cares about them and their learning, who is fair and enthusiastic, they will put an extra effort, and will behave well. In my estimate I have taught over 3,000 students and I can count on one hand the instances of the so-called "class management problems", and students labelled as poor achievers and troublemakers somehow find interest and actually thrive in my classes!

This is the point in the statement where I am supposed to espouse some particular educational theory that I have been successful at, and it is true that, over the years, I gained a lot of insight into what works and what doesn't in a particular learning environment. I also learned the value of reflection to develop as a teacher. But it has been a slow and gradual journey of personal discovery and I worked hard at it - I can offer no tips or shortcuts. I am by nature reflexive and intuitive, and I found both these traits extremely helpful for me as a teacher. I started out from a master apprentice model, which had worked for me when I tutored individuals. Back in early eighties when I started at Ryerson, the classes were very small and I worked with all my students closely in the labs, where the experiential aspect of teaching was a given. I was quick to establish rapport with my students, and to "infect" them with my enthusiasm for my area of expertise, which is Control Systems.

However, as we moved from a Polytechnic to a full-fledged University, the class sizes grew exponentially, and I realized that the personal guidance model that worked so well in a class of 20 (and still does, when I work with my TAs or with my peers), is impossible to sustain in a class of 200.

It is a cliché to say that we academics have no theoretical foundation in educational psychology or learning theories that would help us deal with that, but, as many clichés are, it is also very true. It has been a long-standing tradition to assume that if one has a PhD in his/her field, somehow one will be able to miraculously impart that expertise onto hundreds of eager undergrads, and thus freshly minted assistant professors will learn to paddle quickly to avoid the figural drowning in those huge auditoria. Some will treat teaching as a necessary evil, most will make do, but this approach has created a default culture of indifferent and mediocre teaching on our campuses, where good teachers are outliers rather than the norm. Parker J. Palmer in his beautiful book "The Courage to Teach" [2] calls this " the world of education filled with broken paradoxes and with the lifeless results: we separate head from heart; we separate facts from feelings; we separate theory from practice; we separate teaching from learning". However, it is very gratifying to see more recently a determined push on part of the academia to change that, and student engagement becoming a hot button issue.

My answer to the challenges before me had been to hit the books and connect with others that would help me find out more about what it is that we are supposed to do as academic teachers to create this phenomenon of learning, critical thinking and problem-solving. And so beyond my own experiences as a learner, I can think of two major sources of inspiration and help for me in my professional journey. The first is a Community of Practice, the second is Educational Research. I do believe that being immersed in the Community of Practice is necessary to develop and grow in any profession, including ours. I believe in learning from others and in giving back. Teaching is still mostly a solitary pursuit behind the closed doors - we do not often see our colleagues teaching, and we do not routinely engage in conversations about what we do in our classrooms. Palmer [2, p. 144] memorably said this: "If surgery and the law were practiced as privately as teaching, we would still treat most patients with leeches and dunk defendants in millponds." Harsh words, these, but let's face it, has teaching changed much over the last, oh, 500 years? But we live in interesting times - the Internet and social networking technologies have already showed

their potential to revolutionize the way we teach and learn, probably the first really significant "revolution" in the classroom since Gutenberg and his printing press!

I first reached out to connect with our Ryerson Teaching and Learning Community back in the mid-nineties. I found help and inspiration from people who would be instrumental in creating the Learning and Teaching Office (LTO), at GREET Conferences, working with instructional designers in the Digital Media Projects Office. Later when I joined the LTO as Faculty Associate, I found professional nourishment, a source of constant discoveries and a chance to share. I have been involved with the LTO and the educational developers community for close to a decade, and working with my peers across the University and outside has been the best thing that could have happened to me professionally! I particularly enjoy working with my younger colleagues in the University Teaching Development Program (UTDP), and facilitating the Instructional Skills Workshops (ISW).

Access to educational literature and connecting with like-minded people opened up a whole new world for me as a teacher and I never looked back. I found theoretical underpinnings for my intuitive teaching approaches, and I learned how to adapt the active/experiential learning model to the realities of large classes. I also discovered the work of Dr. Richard Felder [3] from the University of North Carolina, one of most influential engineering educators in recent memory and an avowed advocate of active & collaborative learning, as well as his Theory of Learning Styles [4]. Dr. Felder later became my mentor and a colleague. His work allowed me to gain insight not only into how I learned, but also to understand how students learn and how important it is to use a wide variety of teaching strategies

Most untrained teachers who do not reflect on their practice, tend to teach the way they were taught and which feels comfortable to them. They successfully navigated the graduate studies and connected with their professors partly because their highly theoretical teaching style and a developed habit of individualistic, competitive pursuit of learning suits them well as future researchers and professors - that is why graduate students are more and more like their professors the closer they get to their PhDs. This self-replicating formula unfortunately does not take into consideration the fact that a vast majority of undergraduates do not head for the graduate school but out into the world of practicing engineering, where working in, often interdisciplinary, teams, personal skills, communication, conflict resolution etc. are the order of the day. According to Dr. Felder's work, most professors and graduate students are Reflective, Intuitive, Verbal and Sequential, and tend to teach to these styles, whereas most engineering students are Active, Sensing, Visual, and many of the most unconventional thinkers that would really enrich the engineering profession are Global learners. While it is true that teaching to a particular style is not proven to result in better learning, teaching in a style that consistently ignores the needs of the majority of learners results in frustration, more academic problems, and higher dropout rates, particularly among those students who do not fit the conventional mould.

Dr. Felder's assertion that our teaching should target cognitive flexibility by providing support for all learning styles, but at the same time by challenging students to stretch, became a cornerstone of my approach to developing effective classroom strategies. It allowed me to understand why (I am Visual learner) I was quick to realize early on the value of immediacy and visualisation offered by multimedia, computer simulations and the Internet in supporting the teaching and learning.

In 1995 I was the first to build a website to support my course, and once Ryerson introduced university-wide course management system (WebCT and later Blackboard), I was one of the first adopters - I started using presentation technology and web support in teaching my classes in 1998. At the same time, I realized that while my personal learning style is intensely Introverted, Intuitive and Reflective (I like theory and like to learn alone) many of my students are Extroverted, Active and Sensing - they like interaction, working in groups, experiential learning and real world applications. I thus became in my teaching a "Pseudo-Extrovert", a term used by Dr. Brian Little [5], a Canadian psychologist and a 1995

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3M Fellow, more recently of Harvard fame. I consciously introduce active learning and student engagement strategies into my classes even though it costs me much more mental energy and recovery time, since my first instinct facing 200 people is "to run for the hills"…

Over the years I have also developed my facilitation skills, and I do not need to constantly "profess", citing good Dr. Buscaglia. I feel comfortable letting students loose in a classroom to work in "buzz" groups, to discuss, move physically. I am proficient in learning technologies, and I know how to leverage them in class to engage students - say, I will show them an interactive Java applet, then discuss a problem and solve it together with them jotting down notes on my Tablet PC, run a computer simulation where we can immediately implement our solution, and then check the students' comprehension of the problem by a quick poll using "clickers". At the same time, I try to balance technology with students being active, doing stuff, solving, talking, even taking part in a skit where they will enact how signals move in a closed loop system, or how two sequences correlate - a practical lesson in statistical methods by doing a "stadium wave"! Core beliefs are what allows as to be good teachers, and it helps to create a mental schema, a framework, of how we see our teaching and our students. I already mentioned the "pre-requisites" that I believe in: enthusiasm, fairness, respect, rapport with the students, building them up rather than cutting them down, creating a safe environment. I cannot overemphasize how important I believe these are - too often we "live in the head" (Cognitive Domain) and forget about the "heart" (Affective Domain) and how important it is to successful learning…

> **Commented [a10]:** Methods to assess student learning are included

What I believe needs to happen next between me and my students, and what I try my best to practice, is best summarized by Arthur Chickering and Zelda Gamson [6] whose "Seven Principles for Good Practice in Undergraduate Education" became a sort of manifesto for educators concerned with the state of our campuses. It goes this way: "Good Practice… encourages contact between students and faculty, develops reciprocity and cooperation among students, encourages active learning, gives prompt feedback, emphasizes time on task, communicates high expectations, and respects diverse talents and ways of learning". This I keep as my teaching compass. Of course, as they say, devil is in the detail, which is why I learned that to be effective in classroom, one has to learn a bit about instructional design. Too often our courses have grown organically over the years, and we do not question the 'how" and the "why" of doing things that we do. I have gone through several major overhauls of my courses, as I learned to navigate the triad of Learning Outcomes, Instructional Strategies and Assessment and Evaluation. On the way, I discovered some things old (Bloom's Taxonomy of the Cognitive Domain of Learning [7], Kolb's Experiential Learning Cycle [8]), some things new (Felder's Learning Styles [4], Fink's Five Principles of Good Course Design [9], [10]), but all useful to the extreme.

As to how I got involved in Educational Research - I have a need to understand why things work the way they do, which I suppose is a very "engineering thing", and also to explain it to others, consequences be damned - must be the "teaching thing"! When I started experimenting with educational technology and multimedia in classroom, I was met by my engineering peers with a lot of indifference and even disdain for my efforts. They simply did not believe that what we do in classroom made any difference, especially with technology. Spurred by that resistance, I embarked on a lengthy and carefully planned study to find the proof that such difference can be quantified. One led to another, and a decade on, I published over 30 papers on educational topics, received several awards and succeeded in securing SSHRC funding, very unusual for an engineer! On the way I entered a whole new realm of research with human subjects, ethic committee reviews, vagaries of conducting action research in classroom environment, and got hooked!

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Here again, Dr. Felder was my inspiration, with his many influential publications in various educational journals. What I found out from my research into learning technologies, learning styles and academic success has definitely influenced my professional practice. It has also immensely expanded my professional horizons as an educator, and again connected me with a larger Community of Practice of educators interested in building the Scholarship of Teaching and Learning (SoTL) - a term introduced by

Ernest Boyer [11], who validated teaching as a scholarly pursuit, where teaching is reflective and informs educational research, and vice versa. I ascribe to the SoTL philosophy as it leads to real changes in classroom and in academia. We can already see more interest in how teaching is evaluated, in continuing professional development, certification programs, using teaching dossiers for hiring and promotion, and a positive change in how teaching is regarded at universities.

In summary, as I look back on my teaching, the one thing I can say that stays constant, is change. I have changed enormously and grown as a teacher, and hopefully through my actions inside and outside of classroom I contributed something positive to the lives of my students, my colleagues and my University. My journey has been the source of my professional pride and joy, and great satisfaction. I said that when I started I could have never imagined where this journey would take me - into a different world, literally and figuratively. Looking back, I would not have had it any other way!

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