ASSOCIATION OF ATLANTIC UNIVERSITIES

ASSOCIATION DES UNIVERSITÉS DE L'ATLANTIQUE

Awards for Excellence in Teaching

2005

Presentations to the
Atlantic University Presidents

by the recipients of the
2005 Association of Atlantic Universities

Distinguished Teacher Award

Dr. Steve Coughlan
Faculty of Law
Dalhousie University

Dr. Peter J. Williams
Department of Physics
Acadia University

Instructional Leadership Award

Dr. Wendy Shilton
Department of English
University of Prince Edward Island

The Importance of Good Teaching

by
Dr. Steve Coughlan
Faculty of Law, Dalhousie University

I started university as a student with a clear plan - do a three year degree in English Literature, go to law school, practice law. That plan got sidetracked as I first switched to philosophy, then did an honours degree in it, then a Masters degree, then a doctorate, before eventually arriving at law school - after which I have ended up teaching instead of practicing. There is a very simple reason that my career plan, and indeed my life, changed in that way: because of a chance act of the Registrar, a chance act that placed me in the introductory philosophy course taught by John Thorp. John taught a half-dozen or so courses I took from him during my time at the University of Ottawa, but beyond that he was a mentor, offering academic and career advice, inviting me and fellow students to parties, assisting with various extra-curricular activities, and many other things. I've recognized for a long time the significant role he played in the course of my life, but it was only a few years ago, as I was writing a letter in support of his successful nomination for a teaching award at the University of Western Ontario that I reflected on what I had learned about teaching from him.

There's a lot of room for debate about whether the power of the human voice has been replaced by Power Point, whether one should lecture or lead discussions, what kind of visual aids are effective, and other issues around teaching techniques. In thinking about John's classes, though, I realized that I couldn't really isolate from them anything I thought of as a teaching technique at all, good or bad. There was nothing about which one could say "this method was very effective" or "it worked well when he did that". And yet he motivated all of us to work hard and think through the issues we were discussing, whether it was pre-Socratic Greek philosophy, the epistemology of David Hume, or the implications of recent neurophysiological experiments on the determinism/free will debate. The way he did so, I've realized, is the first of four observations that I want to make tonight about good teaching. Quite simply, we all accepted that the subjects he assigned to us to think about were worth spending time on, that they were interesting, because he himself was obviously interested in them. I don't think there is any simpler or more effective technique than to care, and show you care, about what you're teaching. Having enthusiasm for a subject and passing that along is, by itself, a good way of teaching.

But immediately there is a need to qualify that word "teach". I have occasionally observed to students, in this like other exam periods that we've just passed through, that there is no way for the necessary information to get from the classroom experience to the exam paper without passing through the student's brain along the way. What that really means is that the important thing going on in classrooms and elsewhere is not the teaching, but the learning. Paradoxically, if the students in the classroom are not engaged in the material, are not interested in working out for themselves the important issues and just "want to be told", then there would be no point in professors being there in person: we could just play a tape-recording with the same lecture on it every year. Instead, our role is to create the environment in which students can, either in class or outside it, become equipped to understand for themselves what they are studying. Hence the paradox: the very fact that our role is to disappear into the background as much as possible is the reason that our presence is essential.

Let me therefore offer my second observation about good teaching. Academic disciplines are not just long lists of facts. One therefore cannot describe the task of learning those disciplines as just memorizing a great deal of information. Learning is understanding, but rote memorization is not understanding. There must, of course, be a great deal of learning new facts in learning any discipline, but that is not the entire enterprise. In Law, especially my field of Criminal Law, this problem particularly manifests itself in the fact that the Supreme Court of Canada keeps handing down new decisions on Thursday of every week. Indeed, in the two weeks since my students wrote their Criminal Law exam, the Supreme Court of Canada has changed the law with respect to one

aspect upon which we examined them: which, as I told my students at a potluck last week, was a shame for them, because although their answers would have been right at the time they wrote them, now they were wrong!

Really, of course, the point is that to equip students to learn a discipline, what they need to be given is a framework within which to fit the details: given an adequate structure, they can do most of the work of fitting things together well enough for themselves. There is research into memory which shows that if a chess master and a non-chess player both look briefly at the position in a chess game halfway through, the chess master will be dramatically better than the non-player at remembering where all the pieces were. On the other hand if a bunch of chess pieces are arranged randomly on a chess board, chess masters are no better than anyone else at remembering where they were. Clearly in the former case the chess master's ability is not so much "recollection" as it is "reconstructing the position". That result is generalizable: people will better learn material if they are constructing something: if they see the connections and relationships between the various pieces of information, and they have a framework to fit everything in. I occasionally read, for example, about new experimental drugs - say a serotonin that is designed to work with the category 5-HT1B receptor, which is an autoreceptor, unlike category 5-HT1A receptors. I can read and, with a bit of work, get temporarily into my head that fact: but come tomorrow it will be gone, because for me it's just an isolated detail which has no connection to the rest of my knowledge. On the other hand if the Supreme Court of Canada this week decides that internal rationality is of greater significance than external rationality, well, that's a change to the first step in the second stage of the *Oakes* test for deciding whether a breach of a *Charter* right can be justified under s. 1 of the *Charter*. For me that fact would have a home. Helping students learn Criminal Law, or any area of Law, or almost anything I suspect, is to help them develop for themselves that framework into which they can fit their pieces of knowledge: so they don't just try to memorize where all the pieces are, but can see that White's rook and the knight are trying to control the centre but are in competition with Black's Queen.

My third observation about good teaching is also owing to one of my former professors, this time to Tom Cromwell, who was first one of my teachers and then eventually one of my colleagues at the Law School. That observation is simply this: to be knowledgeable is not to be unapproachable. Tom was widely recognized as extraordinarily competent and extremely well-informed, with a national reputation not just as a teacher but as a lawyer: indeed, he is no longer a colleague only because he has since been appointed to the Court of Appeal of Nova Scotia. But Tom never for a moment, inside class or outside, made one feel "now I'm in the presence of greatness". Rather, he was relaxed, informal, and open, and conducted classes that were as enjoyable as they were informative: or perhaps, to avoid ambiguity, I should say "were both enjoyable and informative". I have tried to conduct my own law classes on that same model. One of my favourite moments occurred a few years ago when I had asked the class the difference between me not objecting to students bringing coffee to class and another student not objecting: a young woman said "because you're an authority figure - sort of". I thought that was wonderful, and caught, pretty much, exactly the tone I was aiming for.

My final observation I make with some trepidation, because I've never said it out loud before, and even in print I fear it looks pretentious, but I'll give it a try. Being a teacher is not a discrete task - it is a role one plays in other people's lives. If someone is your student, they're not your student from 10:00 till 11:30 on Mondays and Wednesdays - they're your student, and that gives them a certain call on you. You're not just the person who hands them their cupful of information as they pass the drive-through window. Part of the bargain in entering a university is that one is not just purchasing so many hours of lecture time, one is entering into relationships with other people, including faculty members, and having the legitimate expectation that there are people who want to help one learn, who are concerned about one's interests and who are willing to help look after them.

Dalhousie Law School, since long before I was a student, has had an "open-door policy". That's not just a particular rule - in fact it's not even a rule - it is an attitude of mind about the relationship between students and the School. It's an expectation that students can drop in any time, that they can expect that their teachers will be welcoming and will try to help. It's part of what

gives Dalhousie Law School part of its unique character nationally, and I'm very pleased to be part of that. It's a big part of what the job of teaching is all about.

To conclude, I would be remiss if I did not thank others beyond those teachers I've mentioned above - particularly Dawn Russell of Dalhousie Law School and Don Stuart of Queen's Law School, but also others who have gone out of their way to help me in my career. I also need to pay tribute to my parents for the example they always provided in all things - though no-one else in my family had ever gone to university, my mother always thought that getting a PhD would be a good idea because "you wouldn't want to quit till you were finished". I am also immensely grateful for everything to my wife, Dale Darling, who is here with me this evening, and who is my partner in all things - even, to come full circle, to the extent that we co-teach a course together!

To be honest, I must confess that mostly I do what I do because I personally have a great time doing it. But in the midst of that, I do my best to remember that chance acts of the Registrar happen every year, some of those chance acts place students in my class, and, just possibly, that could matter.

The Importance of Good Teaching

by
Dr. Peter J. Williams
Department of Physics, Acadia University

I was asked to speak this evening on the importance of good teaching. From a personal perspective, good teaching is something I thrive on. There are few things more fun or satisfying that to be able to share an "ah ha" moment with someone. However, I thought I would try to place the importance of good teaching in a somewhat broader context. I feel that good teaching is important for the health of my discipline and I would like to pose the question as to whether my remarks are simply discipline specific or perhaps could be applied more broadly to the entire university system.

Between 1991 and 1999, full time undergraduate enrollment in Canadian universities increased by about 3%. Against that backdrop, enrollment in the physical sciences decreased; by 5% in chemistry, 21% in Physics and 32% in Mathematics.[1] I personally find these trends very disturbing as they have direct implications for me as a physics faculty member. However, I feel that they are of broader national concern. My own field of "materials research comprises the discovery and study of the properties of novel forms of condensed matter. In the last half-century, spectacular advances in this field have driven the huge economic expansion of high-tech industries."[2]

The physics communities in both the US and Canada have devoted a considerable amount of time to attempt to identify strategies to counteract, as well as the underlying reasons for, these trends. In 2002, Dr. Pedro Goldman, then at the University of Western Ontario, traveled across Canada visiting physics departments in an effort to develop a set of recommendations for increasing enrollments in Physics. Two key findings of his were increasing interaction with local high school science teachers and a more widespread adoption of best teaching practices informed by physics education research. Similar studies in the US of high enrollment physics programs have concluded that "no one action, activity or curricular reform will leads to a dramatic change in enrollment trends; many such elements over time are required for a particular physics department to thrive in the current climate."[3]

A recent study at the University of Guelph[4] surveyed 988 first semester science students in both physical and life sciences to develop some insight into the motivations and influences that came to bear on their choice of a major.

There was a great deal of similarity in the responses of the two groups – the common top four factors for choice of a major were; 1) enjoyment of subject 2) aptitude for subject 3) intellectual challenge and 4) diversity of career options (life science students placed a significantly greater emphasis on this compared to physical science students.) At this point the two groups begin to diverge. For physical science students, the next most important factor was influence of their high school teacher. It is difficult to imagine that a high school teacher would not have a great impact on a students enjoyment of a subject.

How can we use this information to increase enrollment numbers in the physical sciences, and what roles does good teaching at the university level have in achieving that goal? The total number of students in undergraduate programs is determined by how many we can enroll and then how many of those we can retain. Clearly, good teaching will have a direct impact on the retention of students. It may also help to attract students from other programs who enroll in a first year

[1] Statistics Canada (1997) Education in Canada. Ottawa, ON: Centre for Education Statistics, and Statistics Canada (2000) Education in Canada. Ottawa, ON: Centre for Education Statistics.

[2] Joint Submission on Interdisciplinary Materials Research – GSCs 24/26, 28 & 29, 2002 NSERC Reall0cations Exercise.

[3] See for example Hilborn R.C and Howes R.H., *Physics Today* **56(9)**, 38-44 (2003).

[4] J. M. O'Meara, Physics in Canada **62**, 19-24, (2006).

physics course.

To turn to the issue of how many students we can enroll, we need to consider the motivating factors for selecting a major. I believe that the physical sciences are capable of providing good intellectual challenges to students and providing a diversity of career options for graduates. Perhaps more effort can be placed on increasing awareness of those career options.

The factors of how much a student enjoys a subject and the influence of teacher are probably closely linked. If you have a good teacher you are much more likely to enjoy the material. How could good teaching at the university level influence these factors? One problem that physics faces is that not very many high school science teachers have a physics background. In 1998 in Canada, in biology, chemistry, mathematics and physics, biology enrollments accounted for 60% of that group, chemistry 10%, math 24% and physics 6%[5]. Assuming that any of these students is equally likely to pursue a career as a high school teacher leave physics under-represented. It may be true then that the first time a person experiences being taught physics by a physicist is when they come to the university. As such, it is incumbent upon us to communicate not only the subject matter but the values of the discipline. We need to show them that not only is physics fun, challenging and exciting, but that teaching physics is also fun, challenging and exciting.

In addition to classroom modeling, each of us also serves as a powerful role model for the research students we supervise and in the case of senior faculty, the junior faculty members in our departments. Universities are somewhat unusual places in that there is no “Professor School” in the way that there are medical schools, law schools, etc. In those professions, the learning/training environment is largely separate from the practice of the profession. Universities are in some sense self-replicating entities and if we wish to have good teaching in our departments, we must practice good teaching and communicate the value that we place upon good teaching to our students.

Finally, what impression do we leave on those students whose experience of physics ends with the introductory physics course? Many of those people are in other science disciplines and some of them will end up in positions where they can exercise a great deal of control over our fates – Deans, federal granting agencies, selection committees, politicians, etc.

In summary, I feel that good teaching at the undergraduate level in physics can reduce attrition, may lead to better quality high school teaching and subsequently improved enrollment numbers, and help maintain the image of physics in external communities which have influence over the discipline. Again, I would like to ask you to reflect on whether these considerations are simply specific to physics, or whether they are general and apply to universities as a whole.

I would like to thank; my nominators at Acadia, my departmental colleagues, the administration at Acadia and in particular the office of the Vice-President Academic, the support staff at Acadia who make all the in-class activities possible, and the Association of Atlantic Universities for their promotion of university teaching through this awards program. Finally, I can only hope that the students I have had the pleasure to interact with have learned as much from those experiences as I learned from them.

[5] Ibid.

Teaching Toward Participatory Responsibility

by
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It is a great pleasure to be here tonight. The AAU Instructional Leadership Award is far more than a personal honour; it's also one that offers serious recognition for the collaborative work of many at the University of Prince Edward Island who've been promoting awareness, both on campus and in the wider Island community, of the need today for strong writing and communication skills in every discipline in higher education.

Tonight's award celebration also allows me to share some of my thinking about good teaching today. Minds far better than my own have long been brought to bear on this question, but given our privilege to affect the course of education directly, I think it's important for us all to take responsibilty to reflect regularly on what it is we do and how we might do it better. My main theme tonight, in fact, concerns shared responsibility and what I think is an urgent need, specifically, for strengthening participatory approaches for sustainable education.

Participatory approaches alter the cultural work of education. They reshape learning practices from the consumption of knowledge products to reflection on frameworks of knowledge and skills relevant to constructive social action. They extend learner-centred pedagogies. They expand the development of the individual critical consciousness to encourage lifelong and lifewide interdependent critical awareness for community and social change. In 1951, H.G. Wells wrote that "[h]uman history becomes more and more a race between education and catastrophe." If that claim seems over the top, we should think twice. Our world is becoming more and more complicated and turbulent, and we need new structures of knowledge, new communication skills, and new learning processes that allow for greater participation, assessment, and engagement by all.

I saw for myself the power of a dawning participatory student consciousness in a 19th-century American literature course I taught this past semester. In the first class, I took the students through several discovery learning exercises aimed at surfacing their attitudes toward matters American. As the volley of expected stereotypes inevitably emerged, I remarked on the role of colonial and 19th-century American literary texts in contributing to constructions of the "imagined self" underlying notions of American identity. Reading these texts, I explained, would help us to understand not only America then and to some extent now but also our own participation as readers in making meaning of the term "American."

Somewhat later, an excellent example of how much we are a part of what we read arose in the course. As we were beginning to explore Nathaniel Hawthorne's cautionary tale, "The Birth Mark," I informed the students that in January 2002 a new American Council on Bioethics had been created by the Republican Administration, and that in preparation for the first meeting the Council's newly appointed Chair had asked his colleagues to read this very Hawthorne story. What is it about? Among many things, it's about a scientist, who – in the manner of Pygmalion, Faustus, and Dr. Frankenstein before him – decides to perform what in today's t.v. parlance would be called an extreme makeover of the ultimate kind. That is, after perceiving a tiny birth mark on his wife's face shortly after they are married, he defines it as a defect and declares himself capable of "curing" or "correcting" it with an experimental elixir. Despite initial consternation, she acquiesces to his authority and submits to the procedure. He ends up killing her – in the name of science, progress, infinite perfectability, and, yes, love. Throughout the classroom, as the students processed the Bioethics Council's use of the text, light bulbs fired off in all directions. Hawthorne's story, written more than a century and a half ago, suddenly was reframed for these students as a searingly current text. Whatever their individual views on such issues as stem cell research, cloning, DNA manipulation, and other kinds of genetic engineering; whatever their views on gender, power, and domestic violence; whatever their views on the "vanity insanity" of the body makeover industry – it was clear that the image of Hawthorne's male scientist-god, intoxicated with power, could be instrumental in facilitating today's debates and policy decisions about science, technology, and social responsibility. The insight

led spontaneously to a series of innovative responses, including the production of a play based on the rewriting of Hawthorne's text in which a double narrative examines the ideological forces at work in the violence of the original tale and explores the kinds of socio-economic change that would be necessary for constructive transformation.

The anecdote brings me back to the evening's question: What is "good" teaching? According to whom? I ask. To students? Teachers? Education researchers? Administrators? What of taxpayers, and the business community? What of the government, the environment, international relations, global security? Teaching is a complex and highly contingent phenomenon. It depends on many players, factors, and forces, all operating at specific moments in time and cultural space. I have very little control over those forces. The best I can do is talk about what seems to work in classrooms and faculty workshops these days and where we might usefully direct good teaching practices for the future.

For me, the primary principle of good teaching proves over and over again to be that it begins and ends with responsible caring – about the life of the mind, about knowledge, about the ways in which knowledge is used or abused, about teaching as a form of *caring labour*. Such caring understands wise use of authority in the classroom, something to which Stephen Jay Gould alludes in *Rock of Ages*, where he makes an important distinction between the words *magisterium* and *majesty* or *majestic*. Majesty, he explains, derives from the root, *majestas*, which stems from *magnus*, or great, all implying on some level "domination and unquestioning obedience." A magisterium, on the other hand, refers to "a domain where . . . teaching holds the appropriate tools for meaningful discourse and resolution. In other words, we debate and hold dialogue under a magisterium; we fall into silent awe or imposed obedience before a majesty." The good teacher doesn't confuse this distinction. What students need is not to be dominated by expertise, self-serving ego, or quantities of unprocessed information but rather to be recognized, respected, and offered useful knowledge that connects with them at the point of need: with what they already know and now require. Good teaching discerns this points of need and gives students the tools to participate in and make meaningful sense of new knowledge for themselves and their own lives.

I dare say, though, that good teachers care first and foremost about their own learning and fields of study. For them, teaching is nothing less than part of their identity and what it means to be alive. The poet Audre Lorde, while being treated for breast cancer, wrote in *Sister Outsider* that "teaching is a survival technique. It is for me and I think it is in general; the only way real learning happens. Because I myself was learning something, I needed to continue living. And I was examining it and teaching it at the same time I was learning it. I was teaching it to myself aloud." Good teachers know their own learning must come first and they demand the training and professional development conditions necessary to sustain it. Melvin Mencher, renowned journalism educator and Professor Emeritus at Columbia University's Graduate School of Journalism, speaks with characteristic bluntness to this issue: "Students are paying to learn from an authority, so good teaching begins with the well-qualified teacher. Education systems must wake up and invest in good teacher training and faculty professional development."

Good teachers model a passion for learning that ignites and validates student curiosity. A former student describes this domino effect: "Good teaching happens when the teacher is excited about whatever he/she is teaching. Ever been in a room with people when someone starts laughing and someone else laughs because the first person is laughing, and then you start laughing? When understanding comes, you laugh harder? Well, with teaching, as students learn and see their teachers excited, they get excited because the subject/material really is interesting and they are engaged and more likely to participate." Good teachers also, however, have a sense of humility and honesty, especially about the limits of their knowledge. They clarify when they don't know answers to questions and they deliver on their promises to try to find out. Good teachers possess an integrity in their relationship toward knowledge and learning, which inspires the ground of student trust needed for meaningful learning to occur – because, of course, good teachers realize that their subjects matter well beyond their personal interests, and they take responsibility for communicating their knowledge and understanding well. Like good writers, they understand that different audiences, and individuals within audiences, learn differently and require different ways of communicating. Good teachers ask questions while teaching students how to formulate good questions themselves. Good

teachers listen carefully to answers, responding thoughtfully and honestly, holding varying views in balance to allow for dialogue and debate.

Good teachers know that learning can't be forced or seduced. They awaken curiosity and they open minds without abandoning the principles of rigorous inquiry and professional boundaries. Students must be guided to insight and understanding. Good teachers create the synergy for a meeting of responsibilities to arise, and they don't mistake coddling for care or adulation for respect. They don't encourage dependency. Good teachers, it has been said, make themselves progressively unnecessary. They know that ultimately their job is to help students chart their own course, find their own way. The good teacher's goal for students is that they become, as it were, a lamp unto themselves. Good teachers maintain appropriately high performance expectations and standards in both the learning process and outcomes. The American medieval scholar, Kathleen Ashley, is one of the most demanding teachers I've ever known but also one of the most respected by students. One of her students told me long ago, "She makes us work harder than any other professor, but it's okay. We all know she works way harder than any of us!"

Creativity, innovation, and humour also are hallmarks of good teachers, the ability to animate learning and make it memorable. A former student, who participated in a 2001 student trip I led to Boston, explains with characteristic directness: "There are really exciting, creative, and fun ways to teach what might be otherwise boring material. For example, some people can write about a 300-year historical period, but it takes them almost 500 years to get through it! If teachers are creative, innovative, and have imagination, they can really bring course material to life. Our study trip to Boston certainly brought Emily Dickinson to life for me!"

Our world is changing fast. The tried and true principles and methods of good teaching need to be recontextualized in learning environments geared toward multi- and trans-disciplinary knowledge-building, higher-order cognitive and intercultural communication skills, and emotional literacy skills that allow students to participate confidently and effectively in today's interdependent global society. Courtney Ross-Holst writes in the preface to *Globalization: Culture and Education in the New Millennium* that "[s]tudents who are not prepared for a lifetime of learning, who cannot adapt to new technology, or who cannot synthesize knowledge from multiple disciplines, often in multiple languages, will face diminishing economic opportunity and general well-being. Those unable to appreciate other cultures will be left out of important affairs or, worse, will too quickly turn to hostility. We already see these factors at work in the growing inequality between rich and poor and the proliferation of cultural conflict around the world."

Teaching needs to evolve from a traditional focus on developing individual agency and independent critical thinking to sustainable learning practices geared toward interdependent participatory agency. In *The Ecology of Knowledge* George Pór argues that knowledge exists in dynamic, diverse, cross-fertilizing ecosystems, and it can be renewed only through engagement with other environments. Our students must be prepared to become active partners in the personal exchanges and transformations that lead to knowledge creation and application. To help students value the diversity of the backgrounds and perspectives they bring into the classroom is a good starting point, but we also must help them assume responsibility for contributing to the collective knowledge of their communities. Training students' ability to acquire, assess, and apply knowledge independently needs to be integrated with training in the ability to think and act interdependently. Good teaching today needs to take place within a context of values that esteem co-existence and cooperation rather than domination and separation.

Ultimately, good teachers recognize that life itself is the supreme teacher. A Chinese proverb says, "Teachers open the door, but you must enter by yourself." What lies behind that door is changing rapidly, and university faculty members themselves have real and urgent professional needs to help sustain them to prepare students for participatory learning and action in a sustainable global world. More than ever before, faculty need good resources and opportunities for renewal, professional development, and community building to provide an education that will help students walk through life's door--not merely to survive but to engage, fully and effectively, with all the variegated challenges they most certainly will encounter in our world today.