

## Baillie Teaching Award Keynote address (Oct 17, 2023)

I am THRILLED about this award – I was THRILLED when I first got the email from Sandra and Brian in early April, and I am STILL THRILLED today!

It is an honour and a privilege to have this opportunity to offer some reflections here now. Each time I stand up to speak, whether in a big lecture course, or to lead a small seminar course discussion, I'm consciously aware that every member of my audience is a fellow human being deserving the very best I can offer. That awareness is my primary source of inspiration.

### Two points:

1. Gratitude – 'It takes a village'
2. Call to Action – 'Nothing that is worth knowing can be taught'

### Part 1. It takes a village.

Reflection is an important feature of my teaching... I keep a self-reflection teaching journal. As I'm going through each course, I note down things that went well, things that went not so well, ideas for improvement, new materials.... and at the end of each course, I review and then compile a list of 'potential innovations for next time'. And then I add to this list later if other new ideas or materials arise. This list sets me up and energises me each time I am preparing to teach the next iteration. Well applying for the Baillie and reviewing my 20 years of teaching here at Queen's was in essence at least a two orders of magnitude greater reflection!

As a result of it, I have become acutely aware of how innately committed to teaching I am, and that this is due to the many, many people throughout my life who have in one way or another contributed to what I teach, and how I teach. Here are just some of them:

- my immediate family both present and passed. My mother was a teacher, and so were both her parents; my father had a particularly broad and inquiring mind, and likewise my brother and uncle. My partner Anne and my three children have been constant sources of prompting and prodding... and balance – calling up the stairs – "Paul, it's time to come down!"
- my personal friends, some of whom teach with the LDSB and other Kingston schools
- my academic colleagues and teaching support staff in Biology (- we have many great teacher in our Department), and across Queens
- CTL staff including Andy, Yasmine and many others I just don't have time to name, and the events they held.....Brown bag sessions - Ed Lobb (English); Peter Taylor (Alfred North Whitehead's Aims of Education – Romance-Generalisation-Precision); Maggie Berg – the Slow Professor; Vicki Remenda (Inquiry-based learning), Sue Fostaty-Young (Ideas-Connections-Extensions), James Fraser (in-class learning by problem-solving, and introducing me to Erik Mazur),..... and many others not named - forgive me.
- my own school and university educators
- And there's one last extremely important group - the students I have had the **privilege** of encountering. Reviewing 20 years of teaching here has made me realise just how organic it has been – growing, developing, testing/trialing.... largely based on **mutual** learning in both large and especially in small-sized classes.

Mutual? – students learning material, concepts, ideas... and more I'll speak about in part 2; and me also learning new material, as well as how to teach better.

14 students/15 people sitting around a table participating in student-led seminars. A sampling of course theme questions:

- *Interconnectedness and impermanence: Is enhanced deep awareness of these fundamental biological principles the ultimate key to significantly advancing our species toward more sustainable living? (BIOL510 2022)*
- *What specific insights can Indigenous ways of knowing and relating to nature provide that would help our society achieve the United Nations Sustainable Development Goals? (BIOL510 2021) – (reading Indigenous plant scientist Robin Kimmerer’s Braiding Sweetgrass).*
- *What specific terrestrial ecosystem-level ecology concepts would be most beneficial to meeting global food demands in 2050, while also addressing industrial agriculture’s deleterious impacts on soil, air, and human well-being? (BIOL416 2019)*
- *What is our current scientific understanding of the specific biology underlying each of the many major global change issues we face? In what ways do these biology-based insights point the way toward potential solutions, and ultimately influence perspectives on our civilisation’s future? (BIOL411 2023)*

You can have a lot of fun addressing such questions, and the mutual learning derived from the students’ energy, enthusiasm and curiosity have taught me a lot, and been my lifeblood - fuelling me to keep going on this journey, and to advancing the quality and depth of the learning experiences I try to provide in each new iteration of my courses.

It’s been an extraordinary privilege - I have enjoyed teaching many large 2<sup>nd</sup> and 3<sup>rd</sup> year ‘core’ biology courses, but to be able to teach small-sized courses and choose a new content focus each time is surely the epitome of classroom teaching experience. Queen’s has supported me in both – it’s been great. In summary, I am now very aware and grateful for all the direct and/or indirect contributions that so many people have made to nudging me along this path... as well as the large smattering of good luck that has permitted it.

Part 2. Call to Action **‘Nothing that is worth knowing can be taught’**– Oscar Wilde (1891): “Education is an admirable thing, but it is well to remember from time to time that nothing that is worth knowing can be taught.”

A heresy! A challenge?! ... a fundamental reality. Real valuable deep learning is self-learning..... the teacher is the ‘guide on the side’ much more than the ‘sage on the stage’. A facilitator.... ‘Pedagogue’ has negative connotation these days...A ‘peda-gogue’ in the ancient Greek sense – a walking guide - a servant who walked with the pupil to the place of learning...guiding and prompting along a path.... Students who get into university have proved themselves as very good dependent learners. The ultimate goal of undergraduate education is to facilitate a student’s rise from dependent learning to independent learning, so that they are then enabled for a lifetime of further advances in their understanding of themselves and the world around them.

So that they can go off and explore, investigate, conceptualize, synthesize, and be creative/original – so that they can make a strong positive contribution to society.

There are many, many ways of helping this process along across all our programs in large first and second year classes, but the BEST ways are in small 3<sup>rd</sup> and 4<sup>th</sup> year classes... that's when you and your students can look each other in the eye, and you can see and feel their enthusiasm and respond accordingly. That's when you can best facilitate **independent** learning.

We at Queen's and many other universities are entering a very difficult decade I suspect. Curriculum streamlining is the current 'buzz word'. And I have no basis to doubt the warnings of severe financial strains ahead, and hence the certainty that because of hiring freezes, the numbers of active faculty and other teaching staff, lab instructors, and admin support staff, and even TAs are likely to significantly decline over the next few years.

I believe that we in this room have a special **responsibility** and hence here's my call to arms:

We in this room are, or at least represent, the contingent of Queen's who very strongly value teaching – that's probably why you are here right now. Other contingents are very, very important (e.g. those who most care about research, or those who are focussed on administration), but quite a few of those folks tend to place teaching as a lower priority. The secret of success across the institution is of course to balance these priorities. However, as the deliberations and strategizing over how to respond to the financial crisis play out, and teaching **quantity**-based metrics are circulating (- which contain no reference at all to teaching **quality**), I'm very concerned about a severe lack of balance. We in this room, and our like-minded friends who are not here today, must remind our colleagues of the university's ultimate mission for undergraduates – to facilitate our students' development toward becoming truly independent learners. If the university loses sight of this goal, we'll lose everything, because it is the ultimate goal of our whole undergraduate endeavour.

We must speak out for the fundamental pedagogical value of small-class sizes, and giving students and faculty the time and space necessary for deep mutual learning.

It is worth noting that the students themselves don't know how good their learning can be... they are moving through on a conveyor belt... A 4<sup>th</sup> year student of the future has no idea what learning was like in previous 4<sup>th</sup> year courses. They simply cannot argue for the fundamental pedagogical value of small class sizes.... We – you and I – are the institutional memory that can. We owe it to ourselves and to our students to do so. We have a **responsibility**. That's my call to action.

I'll wrap up by thanking **all** of you for your part in this award... and for listening to a teacher who's proclaiming that '**nothing that is worth knowing can be taught**'!!