Introduction

Teaching and research are not independent – they are flip sides of the same coin. - Ilene Busch-Vishniac

Welcome to the Teaching and Learning Committee's discussion page on the challenge of integrating teaching and research.

Readings:

President Busch-Vishniac's reference paper on teaching and learning - December, 2012
Bridges editorial by Jim Greer - January, 2013
Bridges article by Brad Wuetherick - January 2013
Comments on the President's Paper by Richard Cassidy -- April 2013
A Way Forward by Richard Cassidy - April 2013
Exploring the Dynamics of Directed Studies Courses: Student, Instructor, and Administrator Perspectives (Hvengaard et al 2013)
U15 blog by President Busch-Vishniac: http://u15.ca/what-we-are-thinking/research-teaching-nexus

June 2014

Given the University's intention to become more research intensive (3rd Integrated Plan, U15, etc.) how do we best address the challenges this may pose in continuing to support and strengthen the teaching and learning mission of the U of S.

Invite Desiree Steele to join the working group. Thanks for your support, Desiree!

Draft Response: May 12, 2014

Thank you for this opportunity to engage in an open, transparent, and sincere discussion about the relationship between teaching and research that is so important to the success of the University of Saskatchewan.

- Central issue is the effect on teaching as we become a more research intensive university
- Look at this in several ways:
  1. a. Inquiry or problem or research project based curriculum delivery
     b. Research into teaching (SoTL)
     c. Opportunity cost of pursuing one direction or another
        i. At an institutional and individual/unit levels
     d. Research informs and improves teaching
        i. For graduate students
        ii. For undergraduate students
  a. Inquiry or problem or research project based curriculum delivery
    - Time and resource intensive
    - Usually small numbers of select students
    - Research intensiveness is not necessary and won't promote these courses (see below)
  b. Research into teaching (SoTL)
    - Both research and teaching improve, near perfect synergy
    - This is NOT what we mean when we talk about research intensiveness
  c. Opportunity cost of pursuing one direction or another
    - More resources directed towards research, less towards teaching
      i. Larger class sizes, less contact with the prof
      ii. Fewer classroom materials, IT, EMAP
      iii. Fewer courses offered, less time to develop and polish
      iv. More use of TAs, less office time, etc.
    - Research shows that there is no relationship between measures of success in teaching and measures of success in research FOR INDIVIDUAL professors and departments
      i. Authors caution the use of their study for making institutional level decisions
    - Macleans rankings show a clear advantage to less research intensive institutions in the area of student experience and engagement
  d. Research informs and improves teaching
    - Graduate students need research labs and active programs
i. Research intensiveness still pulls profs away from grad students

- Undergrad students need support for learning at a more basic level

i. Undergrad students need more of the basics and less of the detail informed by cutting edge research

Discussions:

May 1, 2013:

This is an important discussion. The policies and plans of the U of S, its colleges and departments, can and do have profound and lasting consequences for us all. In particular, the policy and direction to be more research intensive may adversely affect our teaching mission and disadvantage students. 1) We may still decide that we will be research intensive but we need to know at what cost. 2) We may decide that the cost is too great and take a different path.

Below I offer some thoughts and evidence that I believe indicate we need to be carefully thinking about our current initiatives to become a more research intensive university.

Marcel

- on surveys of student experience research intensive universities seem to place lower than colleges and other universities dedicated to teaching; is this the institutional data we need to show that unit policies that promote more and better research do in fact affect teaching negatively? I think this is one source of data that might lead us to make such a conclusion.
- the U of S is now comparing itself with its peers in the U15, a group of research intensive universities: we will not be comparing ourselves with colleges and universities that prioritize teaching and learning and generally score higher on measures of student experience. How will this further affect our self-image and negatively affect our teaching and learning mission?
- I offer below three pieces of selective evidence in support of small liberal arts colleges/education. Is the U of S missing something in our push to be research intensive?

  - http://collegenews.org/about-liberal-arts-colleges* 2013 On a per capita basis, liberal arts colleges produce nearly twice as many students who earn a Ph.D. in science as other institutions. Liberal arts graduates also are disproportionately represented in the leadership of the nation’s scientific community. In a recent two-year period, nearly 20 percent of the scientists elected to the prestigious National Academy of Sciences received their undergraduate education at a liberal arts college. What accounts for the distinctive contributions of top liberal arts colleges? In the end, it comes down to a matter of style and scale. Intentionally small in size, a residential liberal arts college permits the active engagement of faculty in promoting the learning of every individual student. Embracing a distinctive style of undergraduate education, these colleges foster a broad based knowledge and understanding of the humanities, sciences, and the arts and the cultivation of critical thinking and examination, skills that lie at the heart of liberal learning. In doing so, the nation’s top liberal arts colleges uniquely prepare students for lives of service, achievement, leadership and personal fulfillment.
  - www.ilr.cornell.edu/cheri/conferences/upload/2006/Lemke.pdf 2006 Liberal arts colleges are an important source of PhD students. Although they award only eleven percent of all undergraduate degrees in the United States, liberal arts colleges account for seventeen percent of all PhDs awarded to American students.
  - http://www.usatodayeducate.com/staging/index.php/toolbox/liberal-arts-colleges-are-they-the-right-choice-for-you 2012 Though liberal arts colleges educate only 3 percent of all U.S. graduates, their alumni account for almost 20 percent of all U.S. presidents and 20 percent of Pulitzer prize winners from 1960 to 1998. Liberal arts colleges produce twice as many science doctorates as other institutions, per capita. And about one in twelve of the nation’s wealthiest CEOs is a liberal arts college graduate.

Feb 2013?

I was thinking that one good way to proceed would be to identify various aspects of the T-R nexus where we do agree so that we can share a pint and move on to the areas where we don't and need to argue as friends. The following from Jenkins and Healy 2005 (p. 21) seems to be a good place to start. These were described by the President in her short paper posted above. Added to the list is a fifth from Colbeck (1998).

1. Teaching about the latest research break-through
2. Teaching about the research process
3. Teaching through research and inquiry methods
4. Teaching that is research-informed (SoTL)
5. Concurrent and synergistic teaching and research activity.

For #2, at the graduate level, teaching about research is best done with good researchers who are also good mentors. There is certainly a strong connection at this level between teaching and research. There is some controversy about best practices etc. but on the main points most could not disagree.

For #3, inquiry methods are one of the best to use but not exclusively. Using a research or inquiry approach can and does often support teaching and learning. There is a strong connection here but perhaps not quite to the extent described by the President. This approach is also very resource intensive.

For #5, there may be times when one can do both and here SoTL would be the prime example though there may be ways to do this within disciplinary research, especially at the graduate level. I have yet to see the empirical evidence that taking the time and effort to link teaching and research pays in both student outcomes and research productivity compared to other approaches.

For #4, there will be no argument from many of us on this point. It is a happy marriage.

With respect to # 1, this is in fact one of the problems in undergraduate teaching: failing to teach the basics and meet students where they are. This is an issue about which we may need to talk more.

Back to #5: the President in her paper ends by saying that increase in research intensiveness may actually result in better teaching both at the individual and the institutional levels. This is where we need to carefully consider the evidence and both Jim and Brad have been very helpful in that regard.

Mar 12/13

a useful quote, but not the end of the story!
"...it is the focus on wholes – the overall conceptualisation of subject matter – that is associated with quality of teaching. It is not how active one is as a researcher, but what form of activity the research focus is on. On the other hand, it may be that the non-research-active academics who, through scholarship within their discipline, are able to keep a focus on the developing overall conceptualisation of their subject matter, may also experience their teaching from a more student-focused conceptual change perspective. This suggests that it is not the quantity of research that is associated with quality of teaching, but how scholarship in the discipline or profession is maintained and developed that is important. This may apply equally to non-research-active as well as to research-active academic staff. (Prosser et al. 2008, p. 12–13)

My guess is that many factors play a role in excellent teaching and in how research and researchers can contribute. One of the main ones that I know from considerable research (not my own) is knowledge and skill on how to teach and convey disciplinary knowledge. Might this training factor be one reason why more time spent on teaching and teaching prep does not make one better (but more time spent doing research does improve productivity? (Hattie and March, 2004, p.2)

Marcel