

Initial Thoughts on Academic Reform:

Policy Options for Improving the Quality and
Cost-effectiveness of Undergraduate Education in Ontario

Ian D. Clark
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I last spoke at the senior fellows' luncheon in January 2002. Some of you might vaguely remember that my talk, *Ontario University Presidents and the Harris Government, with Scene Summaries from the first four acts of The Double Cohort Drama*, dealt with the interplay between the government and university presidents a decade ago.

My talk ended with:

“The fifth and final act has begun. No one knows how it will end, but there must be some kind of resolution by September 2003. The dénouement promises to be interesting because the environment has become more complicated since the May 2001 Budget. Enrolments for 2001 and 2002 are higher than projected; there has been no commitment to address the costs of inflation or the unfunded BIUs; and the government is facing tightened fiscal straits.”

Plus ça change!

We know, of course, that the fifth act of that drama ended untragically once the government added sufficient capital and operating funds to enable universities to accommodate the double cohort.

The next play began. The Harris and Eaves governments were followed by a McGuinty government intent on doing things differently in higher education, a Bob Rae Review, a Reaching Higher Plan, and continued enrolment expansion.

When I spoke in 2002, Ontario undergraduate enrolment was 257,000 FTEs. By last year it was 43 percent higher at 368,000.¹ In its March budget, the government committed to increase Ontario's postsecondary attainment from its current 64 percent to 70 percent – that is, 70 percent of Ontario adults

¹ COU data show 257,488 Undergraduate FTEs in 2001-02 and 367,615 in 2009-10, <http://www.cou.on.ca/Statistics/Applications---Enrolment.aspx> accessed on April 7, 2011.

having a postsecondary credential – and has committed to funding an additional 41,000 university places by 2015-16.²

We are moving beyond massification of postsecondary education to something closer to universalization – that is, access for anyone with more than a minimal interest in education after high school.

One of the really worthwhile initiatives from the Rae Review was the creation of the Higher Education Quality Council of Ontario (HEQCO), chaired by Frank Iacobucci, with a mandate to commission research on post-secondary accessibility, quality, accountability and system structure.

In 2008, HEQCO commissioned Greg Moran (former provost at Western), Michael Skolnik (professor emeritus at OISE-U of T), David Trick (former assistant deputy minister of postsecondary education) and myself to analyse the forces reshaping higher education in Ontario. Our findings were published in the book *Academic Transformation* in November 2009.

For me, there were four revelations from this study that have profound consequences for university policy and structure. The first was that, contrary to established wisdom, the inflation-adjusted, per-student resources provided to Ontario universities from operating grants and student fees have not been declining. They did not change substantially from 1987 to 2007 and have held steady since at about \$13,000 per FTE student in 2007 dollars over more than two decades, a period when the student to full-time faculty ratio increased by almost 50 percent from 17 to 25 and class sizes increased dramatically at all universities. The second revelation was that Ontario turns out to be the only jurisdiction of its size in the world that delivers essentially all of its undergraduate education through institutions that employ the most expensive in-

² Budget 2011 refers to “more than 60,000” in colleges and universities. The Ministry’s April 1, 2011 *Preliminary University Operating Transfer Payments* memorandum refers to “41,000 university undergraduate and graduate students.”

struction model – that of a research university where full-time faculty are expected to devote as much time to research as to teaching.

The third revelation was that mandate creep is a well-studied world-wide phenomenon. Scholars have even given it a name: *institutional isomorphism*.

“The essential problem of isomorphism involves unbridled competition among academic institutions pursuing the same goals.”³

It is now widely agreed that an appropriately differentiated system can only be achieved through sustained government steering. The fourth revelation was that there has been extensive study of the relationship between teaching effectiveness and research productivity and that the evidence is overwhelming. I will return to this one in a few minutes.

Let’s begin by looking at the cost effectiveness of Ontario universities viewed as an undergraduate teaching system: what is the trend line in the quantity of teaching per dollar spent?

Although institutions do not publish data on course loads, we know that the number of courses that professors are expected to teach in a year has steadily declined. Twenty years ago the norm in many faculties was 3 + 3. It is now closer to 2 + 2, and it is now more common for productive researchers to make arrangements to teach much less than this.

If we assume that Ontario faculty teach two thirds as many courses per year as they did two decades ago (a 2 percent annual decline), and we multiply this 2/3rds number by the 17/25ths as many faculty per student, we get 0.45. In other words, the Ontario undergraduate education system is only delivering about 45 percent as much faculty teaching per student as it did two

³ *Trends in Global Higher Education: Tracking an Academic Revolution*, Altbach et al., UNESCO, 2009, p 19).

decades ago. This works out to a decline of 4 percent per year. And this calculation assumes that the teaching hours per course have remained the same. But we in U of T's Faculty of Arts and Sciences know that this is not universally the case.⁴

Just think about this for a moment. Each year taxpayers and students together increase the nominal per student resources available to the system by about 2 percent. In return, each year the universities reduce the amount of per student teaching done by full-time faculty by about 4 percent!

Now let's reflect on the quality of the undergraduate teaching that faculty perform. Doesn't the time devoted to scholarship and research help professors be better teachers when they are in class? It turns out that this question has been extensively studied and the evidence is clear – there is no correlation between undergraduate teaching effectiveness and scholarly productivity. This was the fourth revelation from the *Academic Transformation* study.

⁴ On April 9, 2008 the University of Toronto's Arts and Sciences Council approved a change to the Academic Year which reduced the number of instruction weeks in the term from 13 to 12. According to the Council minutes, the Vice-Dean noted this would achieve three goals that came out of the work of the Curriculum Review Steering Committee:

1. To achieve a better balance between academic experience students undergo in the Fall and Winter sessions, now that the majority of courses are taught in [one term] course mode.

2. To introduce two pauses in the Fall Term to give students, especially first year students, an opportunity to digest what they have learned, complete assignments, or catch up on their course work. Currently there is a midsession Reading Week and a pre-exam Study Week during the Winter session, but no breaks during the Fall session.

3. To allow an opportunity between the Fall/Winter and Summer sessions for innovative curricular experiences outside term time, by ending the Fall Winter session by April 30. This will permit students to begin summer jobs and vacate residences and apartments by May 1, and will also give those students who enrol in the Summer session a break before resuming studies after the Fall/Winter session.

<http://www.artsci.utoronto.ca/faculty-staff/faculty-governance/arts-science-council/arts-science-council-2007-08/apr-9-08/Draft%20Minutes%20April%2009.pdf> accessed on March 31, 2011.

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Some very productive scholars are very effective teachers and some – no one in this room, of course – are the opposite. Some faculty who do little research are very effective undergraduate teachers and some are the opposite.

But the quantity and quality of undergraduate education are input issues. The really important question is how much university students are actually learning during their undergraduate years.

Here, recent evidence from the United States is deeply troubling. The Social Science Research Council is sponsoring a longitudinal project to follow over time the performance on the Collegiate Learning Assessment (CLA) of several thousand students at 30 American universities. The CLA is specifically designed to measure the cognitive skills that all of us who teach in universities pride ourselves in being uniquely placed to impart: critical thinking, complex reasoning, and clear writing.

How does the CLA do this? Let me take a minute to read from a sample performance task that students are given and the results marked by competent assessors.⁵

⁵ <http://www.cae.org/content/pdf/CLA.in.Context.pdf> accessed on April 7, 2011.

Sample CLA Performance Task

You advise Pat Williams, the president of DynaTech, a company that makes precision electronic instruments and navigational equipment. Sally Evans, a member of DynaTech's sales force, recommended that DynaTech buy a small private plane (a SwiftAir 235) that she and other members of the sales force could use to visit customers. Pat was about to approve the purchase when there was an accident involving a SwiftAir 235.



Your document library contains the following materials:

1. Newspaper article about the accident
2. Federal Accident Report on in-flight breakups in single-engine planes
3. Internal Correspondence (Pat's e-mail to you & Sally's e-mail to Pat)
4. Charts relating to SwiftAir's performance characteristics
5. Excerpt from magazine article comparing SwiftAir 235 to similar planes
6. Pictures and descriptions of SwiftAir Models 180 and 235

Sample Questions: Do the available data tend to support or refute the claim that the type of wing on the SwiftAir 235 leads to more in-flight breakups? What is the basis for your conclusion? What other factors might have contributed to the accident and should be taken into account? What is your preliminary recommendation about whether or not DynaTech should buy the plane and what is the basis for this recommendation?

Two of the principal researchers on the study, Richard Arum and Josipa Roksa, published earlier this year *Academically Adrift: Limited Learning on College Campuses*⁶ based on tracking 2,322 students in 24 universities, including public and private, selective and less selective institutions. The book deals with the first two years' results. Arum was here at U of T last month and presented the results of four years of tracking the performance of students from freshman to senior.

The conclusions:

“Growing numbers of students are sent to college at increasingly higher costs, but for a large proportion of them the gains in critical thinking, complex reasoning, and written communication are either exceedingly small or empirically nonexistent.

⁶ Richard Arum and Josipa Roksa (2010) *Academically Adrift: Limited Learning on College Campuses* (Chicago University Press)

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“At least 45 percent of students in our sample did not demonstrate any statistically significant improvement in Collegiate Learning Assessment [CLA] performance during the first two years of college. [Further study has indicated that 36 percent of students did not show any significant improvement over four years.]

“While these students may have developed subject-specific skills that were not tested for by the CLA, in terms of general analytical competencies assessed, large numbers of U.S. college students can be accurately described as academically adrift. They might graduate, but they are failing to develop the higher-order cognitive skills that it is widely assumed college students should master.”⁷

They suggest that higher education researcher, George Kuh,⁸ may have had it right in suggesting that on many campuses students and faculty have struck a *Disengagement Pact*:

“I’ll leave you alone if you leave me alone ... I won’t make you work too hard (read a lot, write a lot) so that I won’t have to grade as many papers or explain why you are not performing well.”

We do not have CLA results for Ontario but most people who write in this area believe that many of today’s students learn little from their studies. Ken Coates, the Dean of Arts at Waterloo, has just published, with Bill Morrison, *Campus Confidential*, which asserts:

⁷ Arum and Roksa 2011, as quoted in the Chronicle of Higher Education, <http://chronicle.com/article/Are-Undergraduates-Actually/125979/> accessed April 7, 2011.

⁸ George Kuh, 2003 (*Change*, 35, p 28)

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“Many students – just how many is difficult to determine, but it’s probably a majority – have no deep interest in the material presented in class, or in what they read while preparing essays. They are willing to listen and be entertained, but they are not deeply engaged. To put it bluntly, they are not interested in book learning.”⁹

Our generation of professors is not the first to complain about the academic commitment of our students. In the 13th Century, Cardinal de Vitry wrote that students at the University of Paris:

“studied only in winter and spent the summer roaming far and wide; they went from one teacher to the next, attending no course to its conclusion, only just doing the bare minimum to avoid losing their student privileges.”¹⁰

But in this age of near universal access to postsecondary education we really do need to think about it. Coates and Morrison suggest that grade inflation in most Canadian schools has made high school marks unreliable indicators of academic preparation. They recommend that universities establish their own admissions tests. Anticipating that such an initiative would be resisted by universities worried about declining enrolment, Coates and Morrison suggest that:

“A handful of elite universities – three or four to start – should break out from the pack ... If the top institutions implemented a test, the best students would still apply. A high school graduate

⁹ Ken Coates and Bill Morrison, 2011, *Campus Confidential: 100 startling things you don't know about Canadian universities*, James Lorimer and Company, Toronto, p. 103

¹⁰ Schwinges, Rainer Christoph. "Student education, student life". *A History of the University in Europe: Universities in the Middle Ages*. Ed. Hilde de Ridder-Symoens. Cambridge: Cambridge UP, 1992. 195-243.

is not going to switch from Toronto to Laurentian just because there is a three-hour test to write to get into U of T.”

The declining academic engagement of North American university students is reflected in time spent studying. Labour economists Philip Babcock and Mindy Marks looked at data from surveys of student time use from the 1920s to the present and concluded that in the United States the average time that university students spent studying fell from 25 hours per week in 1961 to 20 hours per week in 1981 to 13 hours per week in 2009.¹¹

If the Ontario experience is similar, we could say that the 1.5 percent annual decrease in study time by students is only slightly less worrisome than the 2 percent annual decrease in teaching time by faculty.

Despite great efforts by many university administrators and faculty, there remains much to be done to improve the quality and cost effectiveness of undergraduate education in Ontario today.

Can universities do this on their own? When academics like Richard Arum or Ken Coates publish their startling findings and call for reform in higher education, they are reluctant to look to government to do more than increase funding.

But Clark, Trick and Van Loon have fewer qualms. We are your classic policy wonks – former government policy advisors who now teach in public policy programs at three different Ontario universities. We know perfectly well that poorly conceived government initiatives can do more harm than good, particularly in institutions like universities with intricate, time-honoured conventions. But we think that well designed government policies can help. Our book will try to provide policy options to allow whichever government is elected in Ontario in October to take the initiative on improv-

¹¹ Arum and Roksa (2011), p. 3

ing the quality and cost effectiveness of undergraduate education in the province.

Well designed policies need clear objectives and they need implementation strategies that are based on realistic assumptions about individual and institutional behaviour. In our book we will try to be forthright about the complexity of the task. We will not claim to have found any magic bullets and we will acknowledge that all government policy initiatives have negative as well as positive consequences, and that all reforms have transition costs.

Our book will try to avoid the more obvious political and ideological landmines that strew the path of academic reform. We will leave others to worry about hiring and tenure practices, university governance, and collective bargaining.

Here is how we formulate our book's reform objective:

to increase the effort that most faculty members devote to undergraduate education and to increase the proportion of students and government resources going to institutions that focus on undergraduate education, without diminishing Ontario's ability to attract and retain the highest performing university researchers.

We develop policy options to advance this objective using five public management principles:

1. encouraging a focus on the core function – in this case, undergraduate teaching,
2. encouraging more specialization and differentiation within and between institutions,
3. encouraging more market-sensitive compensation,
4. encouraging performance measurement, performance management and cost accounting,
5. encouraging transparency and public accountability.

Since all OECD countries have well developed higher education systems and all face similar fiscal pressures and societal expectations, we are examining several to see what lessons they have for Ontario. The most interesting at this point seem to be England, Germany, Australia, several American states, and B.C., Alberta and Nova Scotia.

First, a word about tuition policy. Given the province's fiscal prospects, we recognize that the resource increases needed to sustain and improve undergraduate education cannot all come from government. Tuition will have to increase over time. But we also recognize that, given the lack of choice facing Ontarians who consider a baccalaureate degree a necessity, existing universities are in a position to exercise oligopolistic pricing power.

Frankly, we find it hard to justify asking students to increase their contribution each year if the universities are going to continue to reduce each year their per-student teaching by full-time faculty. Until there is more competition from institutions with a more cost-effective teaching model, such as those I will describe in a minute, we think that continued fee regulation in Ontario universities is appropriate.

Now let's look at system structure. Our signature proposal for reform, first advanced in *Academic Transformation*, is to use some of the money earmarked for enrolment expansion to create three or four undergraduate-only teaching institutions.

We will develop several options here but the key idea is that faculty would be hired from the outset knowing that their job will be to teach at least four courses per term and to teach them well.

These new institutions would be laboratories for applying the techniques that, according to HEQCO-sponsored research,¹² are known to enhance teach-

¹² See for example, *Taking Stock: Research on Teaching and Learning in Higher Education* 2010 Julia Christensen Hughes and Joy Mighty, eds., McGill-Queens University Press, Montreal and Kingston.

ing and student learning. Student learning would be regularly monitored through tests like the Collegiate Learning Assessment. Faculty would be regularly evaluated on the basis of student learning and other indicators of their teaching ability. The curriculum would be designed with many fewer than the 800 undergraduate programs currently offered by the University of Toronto. Marking standards could be explicitly scaled to those of U of T so that a graduate school could be confident that an A-average from one of the new institutions was equivalent to an A-average from Ontario's most demanding universities. Courseware would be shared by, for example, posting the syllabi and related materials on the university's public web site, along with the CVs of the faculty members.

Faculty in the new institutions would have the same designations (assistant, associate and full professor) as in existing universities. Compensation would be sensitive to supply and demand. We believe that there are many PhD holders in Ontario and beyond who will find such positions attractive at salary scales that would not have to be higher than those at existing universities, and there would not be a need to pay the premia that are needed to attract international research stars. Because of differences in teaching load and salary structure, we believe these institutions would provide two to three times as much faculty teaching per student and taxpayer dollar as existing universities. The amount of faculty contact that these new institutions could offer should make them attractive to many students.

Imagine a set of four institutions called *Premier Teaching Universities*. Think of Bill Davis University, David Peterson University, Bob Rae University, and Dalton McGuinty University named for people who would champion the model. They would start small and be located within easy commuting distance of the areas of greatest demand. I can see the recruitment posters now: "*Apply to Bill Davis U ... where professors come to teach, where classes are small and where standards are high.*"

The Premier Teaching Universities would be funded on a different basis from existing universities and they could be given more tuition flexibility because institutional inflation would be better controlled and all student fees would, by definition, go to the teaching enterprise. A substantial proportion of the future operating grant increase envisaged in the 2011 Budget for enrolment expansion could go to these institutions.

We believe that demonstration effect of this new model for undergraduate education would encourage existing universities to focus more on cost effectiveness and teaching quality.

But we think the government could provide additional encouragement through its Multi-year Accountability Agreement process and through financial incentives. We will develop options here that utilize processes with which universities are familiar, if not necessarily enamoured: competitive allocation from special purpose funding envelopes and adjudication of submissions by independent expert panels.

The first step is to separate the funding of teaching and the funding of research by creating a Research Support Envelope that would constitute the total amount of operating monies that the provincial government is prepared to pay for the salaries and indirect costs associated with the research and scholarly activities of faculty. This envelope would be carved out of the \$2.7 billion BIU-driven basic operating grant, folding in the \$27.8 million Research Overheads Infrastructure Envelope that is now allocated on the basis of dollars of research funding awarded by the three federal research granting councils. We will develop a number of options for determining the size of the Research Support Envelope and for allocating it among institutions. We can draw on the detailed proposal for such an envelope developed by the Ontario Council on University Affairs just before it was wound up in 1995.

Our goal is to help the government create a transparent funding regime for research support that university administrators would take into account when they do their hiring and their allocation of teaching duties among fac-

ulty members. Over time, this would lead to faculty members with high potential for research grant success spending more hours on research, and other faculty members spending more hours on teaching. There would be more differentiation and specialization, both within and between institutions.

Now let us look at options for the remainder of the \$3.4 billion operating grant that funds the non-research operations of the universities. In addition to the basic operating grant, there are currently about 20 smaller funding envelopes with separate allocation mechanisms. They include \$131 million for quality improvement tied to the Multi-year Accountability Agreement process, \$23 million in performance funding tied to undergraduate completion and graduate employment rates, \$131 million for undergraduate accessibility, \$103 million for graduate expansion, plus a host of mission-related and special purpose grants such as medical-related grants, the so-called differentiation grant, the bilingualism grant, and the northern Ontario grant.¹³

Universities are now relatively comfortable with the Multi-year Accountability Agreement (MYAA) process recommended in the Rae Review and introduced for the 2005-06 academic year. We think that HEQCO research has sufficiently clarified the key elements necessary to improve undergraduate teaching and learning that the government is in a position to set out expectations in areas such as measuring student learning, reviewing faculty performance, providing teaching assistance, and reviewing program quality. Institutions could be asked to develop an Undergraduate Learning Enhancement Plan (ULEP) to be incorporated into their Multi-year Accountability Agreement. The ULEP would include measurable commitments and targets.

For those in the room who have not recently viewed the U of T's *Measuring our Performance* web site, it is worth looking at the impressive commit-

¹³ These figures are from the April 1, 2011 ministry memorandum entitled *Preliminary University Operating Transfer Payments Totals (PTOT) for 2011-12 and Other 2011 Budget Changes*.

ments and results in the *MYAA Report Back* and the *Performance Indicators Prepared for Governing Council* documents. I have no doubt that our university could prepare an impressive Undergraduate Learning Enhancement Plan.

Would it be advisable for the government to tie funding to each university's performance in the areas set out in its ULEP?

We will develop a number of options here. One is simply to rely on the MYAA discussions each year to encourage steady process.

Another option would be to provide funding for the ULEP initiatives, based on the plan's ambition and quality as judged by an expert panel, with continued funding being contingent on meeting agreed targets. We will likely be recommending that the government task HEQCO with the responsibility for selecting panels and overseeing any adjudication processes related to education quality.

This submission-adjudication option could be taken farther by creating a number of separate envelopes providing a financial incentive to encourage initiatives in a particular domain that is believed to be relevant to undergraduate education quality. For example:

- To encourage the measurement of student learning, a Learning Assessment Envelope could be created to provide \$100 per undergraduate FTE for universities that put in place a credible assessment regime and make the results public.
- To encourage best practices in teaching, a Teaching Excellence Envelope could be created to provide additional funding to teaching support units and related initiatives, including the scholarship of teaching and learning (SoTL).
- To encourage adoption of relevant information technologies, a Learning Technology Envelope could be created to help expand technology support units and related initiatives.
- To encourage sharing of teaching materials, an Open Courseware Envelope could be created to provide \$90 (rising to \$100) per FTE

enrolled in academic units where at least 90 percent of courses provided on-line public access to the course syllabus with a link to the academic CV of the instructor.

- To encourage rigorous faculty performance review, a Performance Review Envelope could be created so that institutions would receive meaningful dollar amounts based on the ratings of an independent assessment of the rigour of its faculty performance review system.

One could generate other funding options focused on cost-effectiveness.

- To encourage greater quantity of instruction in the undergraduate curriculum, the BIU value could be made proportional to the number of instruction weeks in a term. A change in the academic year from a 13-week term to a 12-week term would, for example, reduce the BIU dollars for the FTEs affected by 8 percent.
- To encourage compensation restraint, the government could establish a policy not to fund increases in salary scales and benefit plans above X percent, where X is announced each year in the provincial Budget. Each collective bargaining settlement would be analyzed by an independent panel to determine the effective increase. For those where the increase exceeded X, the funding that would have come from government would be deducted from the university's operating grant and transferred to the Premier Teaching University sector.

We will likely not recommend that the government go this far in creating such highly focused funding incentives. And, in any case, such envelopes should be considered transitional mechanisms while reasonably credible measures of student learning are being developed. If you invite me to speak another decade from now, when all Ontario universities publish measures of student learning and when new institutions with cost-effective teaching models have been established, I will be happy to make the case for the government to back off. At that point I would love to argue the merits of putting

most of the non-research funding back into a single BIU-driven envelope and extol the virtues of increasing tuition flexibility across the system.

Let me conclude by reiterating that even our most micro-managed options will involve little resort to the government's regulatory power, no intervention in institutional governance, no change in the legal framework for salary determination, and no reduction in aggregate university funding. But we realize that our options will, nevertheless, be viewed with horror in some quarters.

A government wishing to implement reforms along the lines we propose will have to think hard about the kind of options it believes necessary. And then the government should be prepared for strong criticism. No matter what options are selected, there will be complaints about micromanagement and reporting burden. There will be accusations of neo-liberal agendas and lack of respect for institutional autonomy. There will be concerns about the loss of valuable research that those professors with increased course loads no longer have time to undertake. In my experience, governments can quite easily withstand these criticisms. The more difficult challenge will be to sustain a principled response to the inevitable representations from institutional and community leaders about the seeming unfairness of the differential impacts of any policy change.

But policy-based reforms are rarely easy in a modern democracy.

Thank you for listening to some initial thoughts on our project.

My two co-authors and I welcome comments and advice from this distinguished audience.

Ian Clark (id.clark@utoronto.ca)