Performance Indicators and Professors: The New World of Accountability
by
William Bruneau and Donald Savage

1. Page-counts, through-puts, and quality

In 1968, Joseph ben David published *Fundamental Research and the Universities: Some Comments on International Differences*.¹ Ben David’s and similar books published in the 1970s gave bibliometrics—the study of professorial page-counts in journals and presses—new life. Although academics and journalists had for generations talked about publication rates in Germany, the United States, the United Kingdom, Canada, and so on, it became far more popular after the 1970s than before.

For it dawned on administrators, journalists, accountants, bureaucrats, and politicians that here, at long last, was a tool to simplify their difficult lives. Bibliometrics might at last make it easy to “herd cats,” to compel universities and colleges to become more orderly and rational. That twist in logic—from description to compulsion, from talking about the value of scholarship to forcing it—was part of a larger revolution in higher education management through the 1980s, after the elections of Mrs Thatcher and Mr Reagan, and the rise of new bureaucracies in the measurement business throughout the world. It began with bibliometrics and their like, but soon grew to include a crowd of dubious measures and management devices.

Administrators in health, social services, education at all levels, hydro-electric power delivery, and prison maintenance—all were intrigued by the idea of management-by-number, that is, the finding of quantifiable performances that allowed (no, begged) for reduction to numbers. With the help of numbers, reductions in public funds and budgets could be managed, and new forms of detailed behavioural control imposed—often with the willing assistance of “clients.”

In a recent story, the *Ottawa Citizen* nervously reported Ontario Premier Dalton McGuinty’s plan to “attach strings to hospital funding, demanding ‘measurable improvement in health outcomes’ ” in return for more public funds.² Mr McGuinty has in mind a province-wide system applied to each individual hospital, but failing to take into account epidemiological and social differences from one place to another, failing to notice that an entire new bureaucracy would be required to derive the numbers, and failing to accept that “bad” numbers might have the unexpected effect of requiring more,

---


² *Ottawa Citizen*, 2004 February 04.
not less expenditure (this last is not Mr McGuinty’s plan).3

But let us stick for a moment with bibliometrics, a useful example of one performance indicator, and the uses to which it could be put in post-secondary education.

At first, in the early 1970s, there was significant debate among social scientists and historians about page-count studies, particularly the idea that economic growth and competitive power were in some way connected to page counts and research grant totals. But by 1979 it was broadly agreed this research could not connect the two worlds. By and large, it was accepted that publishing and grantsmanship, and the universities where they occurred, were necessary but not sufficient conditions of economic development in advanced industrial states.4

This was a most significant finding. It may not be clear why great cultural and scientific systems are necessary (but not sufficient by themselves) to the development of societies. Nor are we sure how other factors—the distribution of scarce goods, the operation of markets, the forms of political life—may influence the outcome. But the finding of “necessity,” on good historical grounds, is still crucially important.

One would have thought this would be the end of the matter. But it wasn’t. By the early 1980s, the bibliometrical industry had begun to grow even more rapidly than before. It did not seem to matter that bibliometrical data could not be rigorously linked to larger social and economic phenomena (save growth in the bibliometrical industry).

In those early days, one heard of North American and European university administrators and senior appointments committees sifting through the Social Sciences Citation Index and its counterparts in the natural sciences, looking for grounds to justify the giving or the denial of tenure or promotion. The adage that one either published or perished had been true for a century or more; but now the adage acquired new bite.

Bibliometrics, whatever its virtues and value as a field of inquiry, became a tool for detailed management of academics’ lives. Justification began on the premiss that publication meant “quality.” The logic seemed to be that if colleagues and institutions competed with one another, quality would rise, somewhere, somehow.

It was once thought that colleagues’ works should be carefully read, that one should rejoice when those works appeared in good journals and academic presses, and that one should make inquiries when colleagues published little or nothing. The new view of the 1980s and 1990s went much, much further, emphasizing control of certain crucial features of professorial behaviour, measurable outputs, costs and benefits, and a bureaucracy who would collect and manipulate the new data. (The last half of our paper offers detailed case studies of three jurisdictions, one national and two regional, largely devoted to illustrations in support of these claims.)

Supporters of the new approach further claimed that in publishing bibliometric data, universities and colleges were thereby more “accountable.” It was at first unclear to

---

3 Editorial writer, “(Mis)measure of medicine: The Ontario government is starting down a perilous path with talk of linking hospital funding to hospital performance,” Ottawa Citizen, 2004 February 04,

whom they would be accountable, or why. That unclarity has since been removed: accountability means that the cost of producing research and publication must be weighed against its benefits. The university or college that chooses not to weigh its research activities in that way is, by definition, “not accountable.”

Since there is no finally persuasive way to tie publications causally, and closely to economic and social development, and since even the most fervent bibliometrician would not claim that her numbers point to the long-term cultural or social value of the research she measures, her numbers must be tied to something else. That “something else” is the comparative placement of universities and colleges vis-à-vis their sister institutions.

Twenty years later, the sillier uses of bibliometrics have gone by the wayside. Colleagues do sometimes read the works of those who hope for tenure and promotion. Yet we have the spectacle of the ninth biennial meeting of the International Society for Scientometrics and Informetrics in Beijing, in 2003, featuring (among many others) Michael Davis and James Orsatti talking about “Elite Research Careers: Relationships in productivity, field visibility and interdisciplinary engagement”; Junping Qiu and Jinquan Chen with “An analysis of backlink counts and Web impact factors for Chinese university Websites”; and I.K. Ravichandra Rao, Bibhuti Bhusan Sahoo, and L. Egghe describing “A distribution of papers based on fractional counting: an empirical study.” These essays are cheek by jowl with dozens more from every OECD (Organisation for Economic Co-operation and Development) country on even more recondite topics.

Apart from its sheer convenience in academic decisions—and its attractions as a new field after which unemployed sociology graduates may lust—the continued popularity of bibliometrics is explained by a larger fact. Bibliometrics are just one element in a bigger phenomenon. For twenty years now, one measuring device after another has been introduced into the fields of university management and higher education policy making—and not just in OECD countries.

**From bibliometrics to full-fledged PIs**

Along with page-counts and grant totals, all provincial governments in Canada have

---

5 For evidence on just how popular, see the publications of the Bibliometric and Informetric Research Group (BIRG), at the University of Sydney, “a centre of expertise where research on many aspects of scholarly communication, publication activity and research activity is conducted. Characteristics of research activity are explored within the theoretical frameworks of informetrics and with special attention to the sociological aspects of scholarly communication, information seeking behaviour, information retrieval, citer motivation, and the use and flow of information in the web environment.” Consulted 2004 February 04 at http://birg.web.unsw.edu.au/

The United Kingdom has gone further than any other jurisdiction in its use of bibliometric and grant-based indicators, taking decisions on the opening and closure of entire fields of study, the fates of whole institutions, and the amounts of public funding to be granted each of its institutions, all on the basis of performance indicators drawn up in its Research Assessment Exercise. See below, in this paper, the section on the United Kingdom.

6 For a thorough review of the history and development of performance indicators, see William Bruneau and Donald Savage, *Counting Out the Scholars: The Case Against Performance Indicators in Higher Education* (Toronto: James Lorimer, 2002). Despite the implication of the book’s subtitle, *Counting Out* does present several forms of the argument for performance indicators
got into the business of calling on universities and colleges to give detailed measures and indicators, usually claiming to represent the interests of “quality, accountable higher education.”

The range of indicators runs from public opinion surveys (as, for instance, the Council of Ministers of Education, Canada, and Alberta’s surveys of student opinion in its Measuring Up programme, 1992 onward)⁷ to detailed statistics on through-put rates (how quickly people are graduated). One highly-favoured performance indicator (hereafter, “PIs”) in the early 1990s had to do with rapidity of first employment, in the field for which one was specifically trained. Former Ontario premier Bob Rae was fond of saying that an “accountable” university was the one that taught in fields of study, and in such a way, that young people could expect to be employed; by accountability, he said he meant control through funding mechanisms and control by clients. The role of the traditional administrator, the traditional Board of Governors, the traditional senate, or even the legislature, was of no great importance. Mr Rae opined in 1994 that

[i]f you were to come from Mars and watch TV, your assumption would be that lawyers and doctors and those involved in the criminal world are the three occupations. It’s very important to realize the culture we are up against is a culture that doesn’t recognize enough the importance of science and mathematics... we have to create wealth before we can share it.⁸

The way forward according to Mr Rae (and also the Ontario Council on University Affairs and a number of Ontario university presidents) was through benchmarks and inter-university rankings on PIs.

Another group of PIs more popular in 2004 than a decade ago, has to do with graduation rates, drop-out rates, and retention rates, all of them conceptually and empirically interdependent. These are rampant everywhere in the OECD, of course, not just in Canada. Perhaps the most energetic proponents of PIs, the British, provide striking examples of the consequences of systematic reliance on output indicators. At Luton University in the UK, there are “New rules to allow students to study ‘without fear of failure’....” allowing them “to fail a greater number of first-year courses and be able to continue studying without needing to take re-sits....,” and giving “students the opportunity to learn how to manage their learning without fear of failure from temporary lapses of concentration” (this last quotation from the minutes of the Academic Board).⁹ All this, of course, means Luton can meet its PIs in regard to dropouts and completions in fixed times. The Vice-Chancellor said in response to charges of dumbing-down that the regulations were merely being “adjusted in line with best practice across the sector.” He pointed out that Luton scored 14th of 121 in the Times league table for the quality of teaching. Perhaps Luton is a bit more honest than the rest.

We present a summary list of PIs in Appendix A. That list was meant to encourage scepticism of the idea that PIs reliably encourage, let alone might enforce effective teaching and research.

What that list cannot do, however, is point at a deeper political and moral problem,

---

⁸“How to upgrade education: Ontario needs higher standards, more focus and more challenges for kids,” Ottawa Citizen, 1994 November 01, pp. 58–9.
the movement of academic authority away from the critically-minded, openly-run, publicly-responsible bodies that have the responsibility of actually teaching students, and actually doing research.

We think it remarkable that in public universities and colleges, accounting for grants and salaries and maintenance costs is no longer the quiet preserve of sensibly-dressed CAs (chartered accountants). It has instead become an energetically-contested battlefield. On it, armies of expensive bureaucrats (some in the university, some in government), battalions of professors, squads of professional accountants (some in the fields of comprehensive or “qualitative” accounting), political attack-groups, industrial spies from Maclean’s Magazine, and Special Forces of sharp-eyed inquisitors from think tanks are in contention. These are the main sources of demand for “accountable” governance and financial decision making in PSE.10

At most universities in North America, Boards of Governors have given up detailed oversight to the Vice-President (Finance) and her (large) staff. Under most provinces’ and states’ enabling legislation, Boards are just one of several bodies with accountability “functions” to perform. But alas, Boards are disinclined to carry out those functions. Instead, the President’s Office advises, and generally speaking, it controls Board decision making.

Indeed, one might argue that a typical university president is now a separate financial authority. In Europe, Australasia, and North America, there is increasing fondness for the idea of the President as a CEO.11 One might think this would produce more accountability in PSE, but in light of recent corporate history, that is to ignore new pressures in the public and the private sectors, where productivity (student through-put, high faculty/research grant ratios, and so on) is all.

As an aside, but surely a revealing one, it is worth recalling the recent case of PIs at Enron, applied in this case not only to employees, but to managers as well. Managers at Enron Corporation strongly supported merit pay based on performance indicators.12 All employees were reviewed twice a year for merit through an extensive bureaucratic process. McLean and Elkind’s recent book on Enron concludes that the merit system “…had more to do with manipulating the system than with honestly evaluating talent.” The Chief Financial Officer of Enron, Andrew Fastow, “[l]ike many Enron executives… used the semi-annual Performance Review Committee to push his people ahead and buy their loyalty. Though the original purpose of the PRC had become largely perverted, most executives at least went through the motions. Fastow didn’t bother.” Few will be surprised that “…the entire process consumed huge amounts of time for everyone involved.” Management thought the system produced the best in Enron, rewarding brains, innovation and dedication. “But,” say the authors, “many thought it brought out the worst of Enron: ruthlessness, selfishness and greed.” In other words, the merit system handsomely rewarded the toadies and the crooks. Sufficit.

---

10 On these several groupings of critics, see William Bruneau and Donald Savage, Counting Out the Scholars: How Performance Indicators Undermine Universities and Colleges (Toronto: Lorimer, 2002), Ch. 2.
Returning to the multiple “layers” of bureaucracy at universities and colleges, all concerned with PIs and quality assurance: The “accountability” system run by the university CEO and her/his officers is usually supplemented, at mid-sized and larger universities and colleges, by a third reporting structure. This is a separate stream of accountancy, putatively at arm’s-length. It gives quality-and-completion “assurance” to granting agencies and industrial clients of the university, and checks constantly on the activities of the first two streams. All three streams prepare growing masses of quantitative data, much of it public, and much of it impenetrably technical or abstract.

Then we have Offices of Institutional Analysis. These Offices are supposed, among their several tasks, to link the institution’s financial inputs to results, that is, to various kinds of organizational performance. The Office sees, for instance, whether a university’s per-student allocation of floor-space costs more or less to maintain from one year to another. Or it may link professorial salaries and grants to per-student-annual-overall cost-to-institution. It may even get into the business of tying (a) professorial grants (b) to salaries (c) to published page-counts, and/or (d) to results of standardized student evaluations of teaching.

These overlapping agencies have, without necessarily meaning to confuse anybody, confused and distracted nearly everyone—investigators from Maclean’s, MLAs and MPPs from suspicious provincial governments. In Alberta, to take but one example, the provincial government, in an act compounded of despair and anxiety, created in the early 1990s yet another set of agencies—responsible to the Alberta Treasury Board—to check on the checkers.

Meanwhile, the Council of Ministers of Education, Canada had been in the same business for years, publishing Education Indicators for schools and for PSE. In this, CMEC was a latecomer, as the OECD had been a super-checker since the late 1970s. The provinces, CMEC, and OECD all agreed quickly, in the 1980s and 1990s, that they wanted performance indicators to create a new “environment” of accountability for PSE.

---

13From more than two thousand websites for North American university institutional analysis offices, we suggest the small University of North Dakota, once a university about as public as one could get, which has the following to say for its Institutional Research outfit:

> The mission of the Office of Institutional Analysis is to serve as the centralized data source providing meaningful information for effective decision making. There are three interrelated functions:

> institutional analysis, assessment, and accreditation (institutional effectiveness).

[http://www.ndsu.edu/oia/about/about.shtml](http://www.ndsu.edu/oia/about/about.shtml)

And for contrast, from Michigan (whose equivalent office boasts six full-time administrators, seven professional staff, three computer experts, and an undisclosed quantity of secretarial help), several hundred data files intended “to drive administrative and academic decision making in Ann Arbor and across the university, throughout the State”:

[http://www.umich.edu/~oapainfo/budget.html](http://www.umich.edu/~oapainfo/budget.html)

The North American Association of Institutional Researchers is a vast thing, complete with regional branches and authorities across the continent, and energetic in all things.

The Germans are doing the same thing but on a grander Teutonic national scale with a proposed national quality authority to ensure that the quality authorities in the lander are doing their job . . .

14For a measured discussion of the Alberta history, see the Auditor General, *Annual Report, 1997* (Ottawa: Queen’s Printer, 1997), Appendix A, “Experience from Other Jurisdictions,” at


and PSE public finance.\textsuperscript{15} 

PIs have thus produced two results. They have led to, or at all events permitted sustained cuts in public funding. And they have introduced a novel form of external control to academic life.\textsuperscript{16} There is not yet a shred of evidence that PIs have produced new efficiencies, nor compelled PSE to become, broadly speaking, a “learning organization.”

They cost a great deal of money. One must define PIs, execute them, report their results, and put results into practice—opening or closing a programme here, hiring a battalion of accountants there, and above all, building new bureaucracies at the centre of government. In the examples we give from the United Kingdom and South Carolina, the costs have become so great as to put in some doubt the PIs experiment.\textsuperscript{17}

On the other hand, the premier application of PIs has been the sustained discipline over public financial contributions to post-secondary education. Adjusted for inflation, provincial contributions to public post-secondary operating funds fell by 8.1% between 1992 and 2002.\textsuperscript{18}

To put this baldly: there has been a near-universal failure not only to estimate the cost of accountability regimes, but also to ask the simple question whether they are justified by the benefits—improved quality and standards—they are supposed to produce.

By our definition, long before the advent of PIs—merely the latest in a series of management fads running back to the 1910s\textsuperscript{19}—the universities were already accountable. The key elements in true university accountability were and are the University Senate (and its Finance Committee) on the one hand, and the Board of Governors (we have in mind an active, independent, and informed board). There is indeed a problem with this approach to accountability: it is the moribund condition of Senates and Boards nearly everywhere in Europe, North America, New Zealand, and Australia. But we are ahead of ourselves. Let us stop to see how and what PIs have wrought in three important cases.

2. The New Accountability Movement: three examples of PIs at work

\begin{itemize}
\item \textsuperscript{16}By this we mean direct bureaucratic interference in the work of PSE, but also direct interference based on contractual provisions between universities and colleges on one hand, and industry on the other. See for example, \textit{The Olivieri Report} (Toronto: Lorimer, 2001), and further, David Healy, \textit{Let Them Eat Prozac} (Toronto: Lorimer, 2003). The latter volume shows how a pharmaceutical company reached into the affairs of the University of Toronto to make impossible the appointment of Professor Healy in 2001, just because of Healy’s publication of research on the danger of the drug Prozac taken under certain conditions.
\item \textsuperscript{18}“University Finances,” \textit{CAUT Education Review}, 5, 2 (2003): 3.
\item \textsuperscript{19}Robert Birnbaum, \textit{Management Fads in Higher Education: Where They Come From, What They Do, Why They Fail} (San Francisco: Jossey-Bass, 2001).
\end{itemize}
**The United Kingdom**

The striking feature of accountability in the United Kingdom has been its cost. In the 1990s, centralized quality assurance exercises spiralled out of control mainly because both Conservative and Labour governments, along with their bureaucracies, had an incurable itch to micro-manage the universities.

The two main agencies of the government were the Quality Assurance Agency (QAA), supposed to measure the quality of all departments and faculties in the country, and the Research Assessment Exercise (RAE), supposed to measure the quality of research. By 2000 the former cost £250 million a year and the latter £27 million not including the indirect costs of staff time. These funds did not purchase the hiring of a single professor, the creation of a single scholarship, or the purchase of a single computer. A single subject review by the QAA cost between £40,000 and £200,000, not including the time spent by departmental-based subject teams. When the Higher Education Funding Council (HEFC) commissioned an outside report on costs, the consultants included a dramatic picture of the wall of paperwork required for a single subject review at the University of Leeds.

The visitor from Mars might think that this vast apparatus was created because British universities were seriously corrupt. On the contrary. The HEFC reports on fraudulent matters and keeps a web site for whistle-blowers. It concluded in its most recent report that such financial matters were trivial and usually involved fraudulent cheques of minor amounts. Besides, British universities had over many years put in place a system of external examiners to ensure the quality of graduates, although “marketisation” of British higher education overseas has led to some academic scandals. In contrast, when central government set up a much-trumpeted system of Individual Learner Accounts in 2001, whereby students could purchase courses from the private sector or from higher education colleges, the scheme collapsed in a cloud of allegations about corruption having spent £60 million above its two-year budget of £202 million.

Bureaucratic proliferation coincided with a dramatic decline in the support of higher education. The central government began to cut the funds in the early eighties while student numbers were increasing significantly. The unit of resource (student fees plus government grants) fell from an index of 100 in 1970 to 40 in 1990 - a triumph of efficiency in the minds of the Thatcherites. Building grants and other supports were axed. The consequences for the faculty were clear. Between 1980 and 1990 the United Kingdom was the only country in the European Union with real negative growth in university salaries. There has also been a dramatic increase in the use of casual academic labour.

---

20 For more details see Bruneau and Savage, op. cit., Ch. 3, “The United Kingdom: Assessment without End.”
23 *THES*, 200, June 18. Most non-financial complaints in the UK involved the abuse of administrative power.
24 *THES*, 2002 December 21, 28.
The RAE exercise left a bad taste, mainly because the government used the exercise to try to justify centralization of research at Oxford, Cambridge, and London. Much excellent research was done elsewhere, despite the financial argument for centralising medical and engineering research. The government would perhaps have been better off announcing its policy, than trying to camouflage it. The RAE also wrestled with the conundrum common to such policies—does one put all the money with the very best or does one use one's money to ensure that some of the others join the elite group?

The irony of all this was not lost on the university community. Here were governments dedicated to the view that less government was better government and that individuals should be set free. Nevertheless they created bureaucratic centralized monsters. As Professor Shaw of Stirling University in Scotland noted:

> Education policy exhibited the distinctive new-right pattern of marketisation and bureaucracy. This was quite predictable since transaction costs, duplication of services and the creation of measurable indicators to mimic price-signals all require form-filling, the multiplication of administrative posts and the creation of a world safe for the accounting profession.\(^{25}\)

Another irony is that Conservative politicians, who disliked the idea of integration with continental European models, transformed their relatively decentralized system into one that looked more and more like the centralized educational bureaucracies across the Channel.

The Thatcherite ideologues also claimed they favoured the highest possible standards. Two events showed the hollowness of that claim. In 2001 Bradford University, as part of its business plan, closed its European Studies program even though it was the only one in the university to receive the top rank in the RAE exercise. Nothing could more clearly indicate that bums on seats and dollars in research grants were more important than quality. In 2002 Birmingham University closed its Cultural Studies program even though it received the highest marks for its teaching.\(^{26}\)

The Director of the University Centre for Russian, Eurasian and Central European Studies at Leeds suggested that the new British model more and more looked like the old Soviet command economy:

> Our activities take place within a rigid hierarchy that runs up through the head of the department to the school, faculty, the university as a whole, and thence to the Higher Education Funding Council for England, the functional equivalent of Gosplan, the high command of the Soviet planning system...Our task is not to generate high quality of learning and teaching but to satisfy the current demands of the inspection system, which means producing a Potemkin village, paint scarcely dry on the walls, for the week of inspection by the Quality Assurance Agency.\(^{27}\)

In the last few years the Labour government has begun to put money back into the system. But it has preferred competitive special grants for specified purposes rather than increases in general grants. This has led the universities into ever more expensive bidding exercises for smaller and smaller sums, leading some to conclude they lost, rather

---


\(^{27}\) \textit{THES}, 2001 March 2.
This system of PIs went full tilt throughout the late eighties and nineties. It is remarkable that British universities tolerated it for so long. Eventually the more famous among them rebelled and it looked as if the house of cards might collapse. The government gradually acknowledged the accountability burden, particularly through the Better Regulation Task Force. It began to dismantle the centralized assessment structure, notably the QAA.

It moved to restructure the QAA so as to impose a “lighter touch” in its reviews, and possibly in the future to devolve assessment to the universities themselves. It also came to realize that high-quality faculty were necessary for the well-being of the country. Treating them as the enemy was unlikely to be productive. In addition the market has also been a significant force. As large numbers of faculty retire as early as possible because of the life of grunge and fewer want to take their places for the same reason, the government finds it more and more difficult to meet its announced policy of greatly increased accessibility.

But never underestimate the staying power of the quality audit bureaucracy. The “light touch” is beginning to look just as bureaucratic as its predecessor and just as given to meaningless jargon. As a lecturer recently suggested to THES, what students want to know from their prospective department is “what will I learn; how will I learn it; how am I examined; and what career prospects are there for me.” Besides, how much it will cost? It should not be impossible to set these things out in clear English without the benefit of quality auditors.

The universities were just one element in a more general scheme of performance funding begun under Margaret Thatcher, but taken up by Tony Blair and Gordon Brown. The Treasury applied the same enthusiasm for detailed micro-management through PIs in its treatment of local government and more particularly and disastrously in the railway business. Having dealt with British Rail, Blair and Brown set about to do likewise with the London Underground, seeking to break up the Underground into four or five private companies to be held to account by indicators dictated by Treasury. At the end of the day the Treasury spent $600 million on consultants and had created a 3,000 page contract for the new companies, none of which yielded a penny for improvements in the system. Meanwhile London’s Mayor hired the man who had reformed and improved the Boston and New York undergrounds (a former official of the CIA), who proposed the public/private system and its PIs be scrapped and replaced by a central public authority with the power to issue bonds—cheapest way to raise money—to pay for necessary upgrades, and to let construction contracts to the best bidders. Central government agreed finally to give up private contracting and to adopt “Red Ken”’s
South Carolina

In the United States, South Carolina is the papacy of PIs and of PI-driven funding. In 1996 the legislature mandated the South Carolina Commission for Higher Education to put in place over three years a system whereby all public funding would be determined by a set of PIs set out in legislation. At the time South Carolina correctly claimed to be the only state in the union where all government spending for higher education would be determined by performance-based funding. Performance was to be based on “critical success factors” in nine areas:

- mission focus
- quality of faculty
- classroom quality
- cooperation and collaboration
- administrative efficiency
- entrance requirements
- graduate achievements
- user-friendliness of institutions
- research funding

The legislature mandated these areas plus thirty-seven performance indicators designed to show how the universities and colleges did in each of them. The number of PIs eventually reached 77 as a consequence of sub-dividing by the Commission for Higher Education which designated to carry out the new program.

By 2001 the Legislative Audit Council reported that at best three per cent of the funding was performance-based and that most, as it always had been, was determined by student numbers although this was disguised by making student numbers a performance indicator.

How had this come about? One must first consider the mixed motives of the legislators. PIs were the latest business fad and that fact alone coloured the debate. So, too, did the desire of some legislators to stick it to the professors, whom they considered lazy and privileged. The philistine streak in populist politics is by no means dead in South Carolina.

Some legislators were concerned about transfer arrangements between institutions. Others paid particular attention to large first-year classes even though these were not as common in South Carolina as elsewhere. More importantly, legislators thought there were too many universities in South Carolina, particularly two-year institutions. They thought PIs would be a magic formula that would scientifically mandate closure of some of them. Thus the members of the legislature would escape political blame. They failed

---

31 For further details, see William Bruneau and Donald C. Savage, Counting out the Scholars, Ch.5.
to see that since they themselves had created these institutions at least in part because of local pressure, their constituents would be most unwilling to close them and would put up a fight. Not surprisingly, the Legislative Audit reported by 1991 that not a single college had been closed. It is impossible to abolish politics.

The legislators also hoped they could cut taxes so South Carolina would remain one of the lowest-taxed states in the South. The comparison with North Carolina is striking. In 1998 the funding per FTE student in North Carolina was $7,862 and South Carolina $5,367. The average for the South was $6,037.33

A look at university libraries is also telling. South Carolina has two major universities, the University of South Carolina and Clemson University. The Association of Research Libraries annually ranks American libraries. In 2001 the University of South Carolina ranked 50th and Clemson did not make the list of the first 100. The University of North Carolina ranks 17th, Duke 25th, and North Carolina State University 35th. Money spent on the research libraries in South Carolina might have been more productive than that spent on administering PIs.

There were problems with the PIs system from the beginning. The legislators had set some that were contradictory. Some rewarded those who discouraged recruitment of students from out of state, a practice that hardly promoted competitive excellence. Fixed graduation rates encouraged the dumbing-down of the curriculum, although the CHE denied this was so. There was confusion between efficiency and excellence. Incentives to increase faculty workload by increasing faculty/student ratios clashed with others which rewarded small classes. Clearly it was more efficient for one faculty member to lecture to 800 students although, in all likelihood, not as educationally successful. The Commission tried systematically to track all graduates of the state’s colleges and universities and to record what their employers thought of them. It abandoned this as too expensive, it being an invasion of privacy.

Demand for accreditation sometimes produced peculiar results. Clemson University has a master’s programme in fine arts and architecture. Although the programme was never meant to produce professional architects, the system penalized Clemson for not seeking accreditation in architecture. To do so would have cost a fortune and would have saddled Clemson with a professional architecture school it did not want, at great expense to the taxpayer. It was also difficult to figure out how to apply the one size fits all mentality to specialized institutions such as the College of Medicine and the Citadel, the state’s military academy.

Other aspects were also perverse. The Legislative Audit Council noted that if the system had been imposed in its entirety, the University of South Carolina’s two-year campus at Sumter would have received more funds than the main campus in Columbia because Sumter had a higher performance score. In general full implementation would have meant annual variations in budgets of 30% to 40%, much of it because of minor changes in statistical results, making forward planning impossible.

There was also debate whether PIs should reward quality or encourage improvement. This was by no means just a theoretical argument. Historically, the state, whose

population was one-third African-American, had seriously underfunded all-black institutions such as South Carolina State. Was “rewarding excellence” simply a code for giving more funds to historically white institutions? What would happen not only to South Carolina State but also to programmes at the College of Charleston and at Marion College aimed at potential students from low income areas which were predominantly black? On the other hand, the research institutions complained that there was no way under the system to reward excellence already achieved and that research was seriously undervalued.

The PI system also eliminated the pre-existing peer-evaluated subject reviews which the Commission held every eight years. Proper subject reviews focus on quality, not on management fads. This development, however, faithfully reflected the current orthodoxy that quality reviews are to difficult to quantify and should be replaced by numerical output indicators.

This is not to say that the picture is entirely negative. The CHE tried its best to make the application of the indicators rational. It did create an improvement fund which was, in effect, a small tax on the richer institutions but it did not think that significant funds would be made available by the legislature. It encouraged accreditation in the non-research area. Most of the programs at the University of South Carolina and at Clemson were already accredited but that was not true elsewhere. Teacher education improved. It pushed remedial education out of the four-year universities. There was increased clarity in transfer arrangements and in recruitment of minorities. There were better and more useful statistics. Certain PIs did indeed encourage excellence - percentage of faculty members who were full-time, faculty credentials as certified by the Southern accrediting agency, and on whether salaries met or exceeded national averages.

However, administrators complained that success as measured by the PIs was not rewarded with more money. The pattern of funding was similar to that in many parts of the country—relatively flat in current dollars at the beginning of the decade and rising gently toward the end until it came to an abrupt end in 2001.

There has also been much reluctance to calculate properly and fully the costs of the system, particularly in administrative and faculty time. The Legislative Audit provided one telling example—the PI requiring all institutions to record credit hours of each individual graduate to see whether the institution should be penalized for allowing the student to take too many courses. This required manually pulling the records of every graduate to see whether or not they had taken more hours than minimally required.

The system also created a united front of research institutions which together recommended a revised system of twelve indicators but only if the legislature provided comparable resources. “Simply stated, the Research Universities are willing to accept performance-based funding as long as the General Assembly and CHE are willing to accept funding-based performance.” In other words, out-of-state comparisons should only be made with institutions with comparable funds.

Instead, the Governor responded in 2001 with across-the-board cuts that paid no attention whatever to the PI system. “We could’ve surpassed the sun, the moon and the stars this year, and it wouldn’t have made any difference”, said Scott Ludlow, the chief business officer of Clemson University. Thornton Kirby, executive secretary to Clemson’s board of trustees provided the proper epitaph. “It is hard to see the value in
working hard for a system that doesn’t reward the effort.”

South Carolina reconsiders

In 2002 November conservative Democratic governor Jim Hodges was replaced by an even more conservative Republican, Mark Sandford. Since then the governor and the legislature have come to admit that the great South Carolina performance funding venture was a bust. The governor and the legislature have come up with two new ideas. The first is to finance students through the new South Carolina state lottery, modeled after the one in Georgia that created the widely popular Hope merit scholarships. Merit scholarships, at least in North Carolina, are a way of taxing the poor to assist the rich. It is not terribly surprising that polling showed 68% of those earning $100,000 or more were favourably disposed to the Hope scholarships but only 35% of those earning less than $20,000.

Further, South Carolina legislators had not noticed the North Carolina experiment was in financial trouble as it promised more than the lottery could sustain. The North Carolina legislature has noticed, but polls suggest why they have done little about it—64% of voters would oppose a tax increase to meet the funding shortfall. Needless to say, the polls also show the very rich are strongly opposed to any measure that would cap the scholarships.

In any event South Carolina went ahead. Meanwhile, the legislature neglected to indicate on what the money should be spent, with everyone from grade school to the research universities chiming in. There was much to be said for spending more money on the school system, as South Carolina has the worst high school completion rate in the country compounded by its past of racial discrimination (34% of black residents 18 to 24 lack a high school diploma; 21% of whites in the same age group did not graduate high school). In the end, some of the money went to universities, even as the legislature cut funds to universities and colleges in two successive years by 3% and then 10% in 2002 and 2003.

The Governor then proposed another solution. He blamed the State Commission on Higher Education for the fiasco over performance funding. It was too weak, he opined. It was, of course, the Governor and the Legislature that created the PI problem, not the Commission, which had struggled to make sense of an irrational legislated system. The Governor proposed to abolish the Commission and replace it with another one firmly under his thumb to eliminate waste and duplication. The Legislature rejected the first version of this idea.

The Governor also stated that any state-supported university or college opposing the new centralized system could privatize itself. The state government would give them full title to all their own lands and buildings provided they renounced any state aid. Not surprisingly there have been no takers. The universities wanted a state board composed mainly of their own trustees and asked for greater independence in budgeting matters.

34 “Colleges don’t expect to see bonuses”, The Grenville News, 2001 May 22.
Meanwhile the State Commission hired consultants who produced a report suggesting the Commission be replaced by a new body composed partly of political nominees and partly of business and community leaders. The consultants stated that the Governor Sandford’s privatization proposal “would not bring the institutions any closer to working on the problems that need to be addressed...If anything, it might drive them from working on the problems...They might feel less commitment to public purposes.” The general feeling is that nothing will happen in this legislative year. *O tempora, o mores.*

**Québec**

Québec’s enthusiasm in the 1960s and 1970s for public post-secondary education exceeded the rest of Canada, if not the world. In just over twenty years, the older francophone universities in Québec and Montréal were transformed into vibrant secular institutions, and the province’s systems of training in education, law, pharmacy, and the other professions modernized. Whether in agriculture, silviculture, aquaculture, engineering, or computing science, Québécois institutions were by 1985 immensely better financed and far more accessible than at any time in the province’s history.\(^*\) In the humanities, arts, and social sciences it would not be too strong to speak of a rebirth, as the ancient system of collèges classiques disappeared.

A large multi-campus provincial university, the Université du Québec, served areas distant from metropolitan Montréal but also in the city’s core—thus symbolizing and embodying the innovative forces of the day. Women became more numerous than men in many programmes of study, and more quickly than in Anglophone Canada. Provincial commitment to research funding, in tandem with rising federal support, made institutions from Sherbrooke to Laval “competitive” with counterparts across North America.

All the while, a culture of collaborative teaching and research, and participatory governance (as for example, elected rectors), was sustained by public finance at levels previously unknown and untested. Funding from Québec joined finances from the federal capital to make research and publication an integral feature of post-secondary educational life. Meanwhile a new province-wide system of Collèges d’enseignement général et professionnel [CEGEP], offering the final year of secondary education and the opening years of post-secondary education and training, and did this in large centres and small. Every one of these innovations implied significant capital outlays in the service of social, cultural, and industrial development, all as matters of public policy.

But after the late 1980s, a new language and new politics took over Québec with remarkable speed, completeness, and even brutality.\(^*\) Now it was Québec’s turn to hear the language of performance, job readiness, private sector linkages, and targeted


\(^{35}\) Cf. Claude Hamel, “Les universités québécoises rendent aussi des comptes,” *Le Devoir*, 1995 juillet 12, with a strong claim that the Université du Québec was well advanced in the adoption of detailed indicateurs d’activité universitaire, and was happy to be a pioneer in this respect. Compare this with Roch Denis, “La thèse de la diversification des sources de financement fait figure de nouveau dogme,” *Le Devoir*, 1998 novembre 6, whose discontent with market-based indicators was, if anything, underlined by a broader review of public opinion in B. Breton, “Seuls les recteurs sont contents,” *Le Soleil*, 1999 octobre 27.
funding, and to experience the shock of massive, damaging, and incessant budget cuts. The great public experiment of the 1960s and 1970s became an exercise in declining public financial commitment.

So complete was the turn in Québec government policy and practice that by 1997 the Fédération québécoise des professeures et professeurs d’université found it had to publish a strong and eloquent plea for the reconstruction of post-secondary education in Québec as a public service. It was an irony and an oddity that little more than thirty years before, the Parent Commission had brought in the very system now disappearing before the professors’ very eyes. The Fédération held that the very idea of autonomous and accountable higher education was at risk. Between 1995 and 2000, nearly 25 per cent of public funding for post-secondary education was lost.

Nowhere else in Canada was the PIs revolution so unexpected and negative in its psychological impact. Here is the official Québec government position on university finance as of early 2000, based on a policy enunciated in 1999 October (all translations by the authors from documents in the original French):

The main objectives of Québec government policy in university funding are as follows:
• to maintain a balanced budget, all the while satisfying government expectations of transparency, equity, predictability, and consistency
• to respect university autonomy and therefore to arrive at agreed performance indicators with each institution
• to decide on the universities’ share of public budgets using a dynamic approach
• to leave room for appropriate and selected actions.

We shan’t comment on the oxymoronic quality of the second point, except to say that it foretold the current regime of contrats de performance.

The government said in early 2000 that it would devote 85% of its budgets to “general financing” of the system, but would henceforward use a system of “targeted funding” for teaching, research, maintenance, reserving the remaining 15% for special projects. Its most recent list of targeted budget items is twenty-five items long. There is little room for autonomy in such a budgetary structure.

To ensure financing of the system produces precisely equal results everywhere in Québec, the government announced in February, 2000 a system of Performance Contracts. Here the Québec government was again opening new ground in Canada. It promised to restore some public funding to the system but under the new Contrats. Over a three-year period, there would be “new” funds equal to 25% of the 2000 budget (itself a much-reduced cousin of the budget of, say, 1988). As Guy Demers, a Ministry official put it in May 2001,

[T]he Minister of Education called upon university-level institutions to participate in an accountability

---

38 Fédération québécoise des professeures et professeurs d’université, L’université comme service publique (Montréal: FQPPU, 1997).
39 An unaffiliated group of Québec university teachers made the same point in a tidily-argued letter-article of 2000 avril 3, once again in Le Devoir: M. Beaulne, et al., “L’étalon de la formation universitaire n’est pas le marché du travail.”
exercise that is, to say the least, demanding, that they accept publicly to achieve explicit objectives, to explain how they will move toward the results they claim to want to get, and to sign a formal contract between the two parties that seals the deal.  

M. Demers mischievously added that “[e]ach performance contract is unique, thus reflecting the autonomy of each higher education establishment.”

Minister of Education François Legault signed fourteen performance contracts at the turn of year 2000/1, but after a few weeks suggested the money for them was “missing.” After a little political cliff-hanging, the sums suddenly re-appeared. After five years of savage cuts, *Le Devoir* commented that this “cliff-hanging” merely kept the universities appropriately desperate. M. Legault maintained throughout that the Québec government’s historic commitment to students (the lowest tuition in Canada) proved the government would never bring in any policy that was bad for learners.

The method was transparently intended to impose uniformity on a diverse system, to compel “réceptivité” to markets, and to force administrations across the system to adopt industrial techniques reminiscent of F.W. Taylor. At Concordia, between 1994 and 2000, 151 programmes of study were eliminated or fused, and 15 others temporarily suspended. (Concordia University has reversed some of this damage in recent times; on the other hand, recent events at the University of British Columbia show the problem has not “gone away”.)

Under the new regime, universities must balance their budgets by 2003–4 by clarifying objectives (is this a revival of MBO, management by objectives?), increasing professorial and staff productivity, accepting benchmarking (“production de données d’étalonnage”) across the board, and building toward new levels of research subvention (20% in proposed research funding increases at Montréal and Rimouski in three years; 17% at Laval; 100% at Hull). In another manipulative twist, the Minister throughout 2000–2001 reminded everyone that it is traditionally and legally required for any entity receiving 50% or more of its funds from the Québec government to be audited by the Auditor General. The auditing would not stop there, of course; at one point in early 2000, there was talk (later retracted) that professorial work-loads would be also regulated by the province.

The general thrust of the new regime is clearly in line with the historic development of PIs, and depressingly similar to arrangements bedevilling public post-secondary education in the United Kingdom, South Carolina, and so on. The hard lessons learned in those places have neither been or heard nor applied in Québec or anywhere else in Canada.

Lysiane Gagnon wrote in a *La Presse* editorial (2001 March 6) that

in tying the funding that universities so desperately need to performance contracts approved by

---


44 A convenient summary of events at UBC in 2003–4 may be found in Steven Seligman’s summary article, “UBC and the Maclean’s university ranking,” *Queen’s Journal*, 131, 32 (2004 February 06), lead 2, consulted 2004 February
bureaucrats in his own ministry, M. Legault puts universities under the direct control of bureaucrats without competence in the area, and works toward goals that have absolutely nothing to do with the basic mission of universities, that is, the advancement of knowledge.

On the whole the Council of Québec University Rectors and Principals (CREPUQ) has been disposed to accept their new managerial tasks, whatever the drawbacks. By contrast, students and professors have been energetic in calling the Contracts what they are: an engine of underfunding and external control.\textsuperscript{45} In early 2003, the continuation of structural deficits at distant universities in smaller centres (for example, Université du Québec at Rimouski) suggests that the pressure from the centre continues in full force, and that promised financial resources are far from meeting local requirements and natural demand.

Although there are few novelties in the Québec Performance Contracts scheme, certain features show how far it is a blunt instrument. The most noticeable of these features is the uniformity of government demands expressed in the new Contracts and the uniformity of universities’ responses to them. The Bishop’s Performance Contract required the following:\textsuperscript{46}

- a balanced budget
- benchmarking of all programmes (see sec. 3 of the Contract, comparing teaching, library, computing, and other programme budgets [note: no comparisons of programme content] with 12 sister universities of approximately the same size or ambition, a scheme apparently borrowed from CAUBO and \textit{Maclean’s} magazine)
- improved research performance (to fill a Canada Research Chair slot, to get more funds from national research funding councils, and to release more professorial time for research, all the while maintaining the university’s strong commitment to teaching. How Bishop’s would achieve the miracle of releasing professors for research while at the same time maintaining its commitment to teaching was unexplained.)
- increase the graduate rate by 5% (all Québec universities are required under the new regime to graduate at least 80% of entering students in a fixed time; Bishop’s rate was, until 2001, just over 80%).

An Appendix lists a group of programmes already eliminated after years of cuts. Perhaps this list was given to persuade the Ministry that Bishop’s is operating in good faith, or that Bishop’s truly wanted a regime of tighter administrative control at all levels in return for more cash; perhaps it was offered to demonstrate that Bishop’s has already experienced more than its share of pain.

Meanwhile, in return for $100 million in new funding between 2000 and 2003, McGill would (we italicize items in common between the Bishop’s and the McGill contracts):\textsuperscript{47}

- increase McGill’s “market share” of Québec students from 9.3% to 9.8%, and international students from 21.3% of the McGill contingent to 25%
- hire 100 new professors
- build new strengths in bioinformatics, language acquisition, e-commerce, and others
- raise research grant revenues, and sustain the present high rates of publications-

\textsuperscript{46}\url{http://www.ubishops.ca/administration/principal/cont_eng.htm}.
\textsuperscript{47}For a summary, see the \textit{McGill Reporter}, 33, 8 (2001 January 11): 1–2. For the complete text, \url{http://www.mcgill.ca/administration/g/performance_e_long.pdf}. 

18
One market-driven element in performance contract, the manipulation of graduation rates, would (one imagines) have attracted substantial and sustained criticism in Québec. One Rector (Bishop’s) and one professor came out against this particular PI (Ian Irvine, “Performance contracts aren’t the answer [to making graduation rates rise],” *Montreal Gazette*, 2001 February 7) at the height of the performance contracts controversy. There were no others during the quarter-year following the contract announcements. We think this may have to do with the sheer number of PIs imposed on the universities at one time, but for the first time, in some instances, in so public a forum.

48 One market-driven element in performance contract, the manipulation of graduation rates, would (one imagines) have attracted substantial and sustained criticism in Québec. One Rector (Bishop’s) and one professor came out against this particular PI (Ian Irvine, “Performance contracts aren’t the answer [to making graduation rates rise],” *Montreal Gazette*, 2001 February 7) at the height of the performance contracts controversy. There were no others during the quarter-year following the contract announcements. We think this may have to do with the sheer number of PIs imposed on the universities at one time, but for the first time, in some instances, in so public a forum.

mies in the field: that the disconnect is remarkably permissive. That is, it permits and invites an approach to the public finance of post-secondary education allowing “naturally” for sustained cuts and indirect control (although it may well feel “direct”) of professorial and student work.

We note that although PIs allow these things, they are costly in monetary terms, and in terms of quality. In this respect, the British case reminds one of the perfect storm. As Royal Statistical Society indicated in 2003 October,

This is the era of performance monitoring. Data on practically every aspect of public services are gathered, analysed and published in the name of higher standards and accountability. A bewildering array of target are set, and vast sums are spent on measuring who hits and who misses. The consequences of a miss can be very serious: when it comes to hospital budgets, the difference between two stars and three can be more than a million pounds.50

Dollars and pounds count more than moral principle; in the view of the Society, the moral imperative is that PIs must not lie. That is, they must be fully transparent in their final intent, must measure what they claim to measure, and must not be elements in a strategy called (by the Society) “name and shame.”

At the very least universities should demand in advance estimates of the costs—direct, indirect and recurring—of any PI scheme and should publish these figures. If they have not yet insisted on figures for current PIs, they should do so. Senates and faculty associations should demand the costs of any schemes that are internally generated.

We call for a new activism in the field of general public policy accounting, asking its practitioners to support the revival of truly local academic decision making. In the same vein, we ask that those who work in public policy accounting accept that there is a connection between large-scale private finance of research, and substantial constraints on free teaching and research. The dreadful tale of Nancy Olivieri and the University of Toronto is just a leading example of a large-scale development in university governance. The curious thing is, PIs helped to make possible a university where the Olivieri crisis was not just possible, but inevitable.

On governance, we think politicians’ and high bureaucrats’ fondness for simplistic accounting, and for equally simplistic notions of accountability, have produced far more negative than positive results. There is a fascination among politicians and bureaucrats, including the permanent bureaucracy of think-tanks across North America and Europe, with narrowly-conceived descriptions of output in public higher education. Mesmerized by outputs, too many politicians and bureaucrats show a striking disregard for the openness and public participation characteristic of good academic decision making. They have little understanding of the long sequences of decision making that link the research and teaching choices of professors, not to mention the choices of students (some of them rooted in childhood), to—on another hand—academic policy and

academic “outputs.”

One might argue that the New Accountability Movement should not worry anyone. But we are dealing with a movement, a movement of PIs enthusiasts, ideologues, and bean-counters. Its fascination with outcomes, with simple-minded cost-benefit equations, and with a-historical accountability, is characteristic of a movement. Since the heyday of neo-conservatism, and the rise of neo-liberal political economy in the early 1980s, 1990s, and early 2000s, the Movement has undermined the usual forms of self-governance in universities, and put academic freedom at risk.

We have suggested elsewhere a three-part solution to the crisis: (i) open, peer reviews of academic and administrative units on a regular basis, with publication on the internet of the results of each such review; (ii) revival of the powers of the Senate Budget Committee, and (iii) a quick and sharp attack on overlaps in the jurisdiction of accounting and reporting bodies in the university. Our solutions would cost the managers of our PSE system a fair amount of power, but far more importantly, would help to weaken the preternaturally strong ties that now link research and teaching to industry and the research granting system. The result would be a more responsive, responsible, and accountable university—a place where teaching and research continue to improve for the sake of great public objectives—rather than because improvement is in the interests of a company or a branch of government, or because it suits the short-sighted vision of PIs enthusiasts.

APPENDICES

A. Sample Performance Indicators, 1984-2004

These indicators are drawn from policy and practice in Alberta, Ontario, and Quebec; the United Kingdom; the United States; and Australia—all for the period 1984-2004. Detailed references and sources for these PIs may be had in the bibliography for Bruneau and Savage, Counting Out the Scholars, loc. cit.

1. Outcome indicators (sometimes contrasted with "process" indicators)
   1.1 Test scores (national/international and standardized)
   1.2 Test scores (university and/or professor-administered, and ordinarily not standardized)
   1.3 Employment rates of graduates
   1.4 Income levels of graduates
   1.5 Goodness-of-fit between training/education received and employment
   1.6 Publication rates (refereed articles/professor, books/professor)
   1.7 Citation counts
   1.8 Copyrights and/or patents acquired/size of professoriate
   1.9 Research grants received by professors and instructors
      From public sources

From private sources
1.10 Industry funding received (by individual professor/instructor; by department and/or faculty; by institution)

2. Degree and diploma completion rates
   2.1 Time to completion
   2.2 Drop-out rates

3. Qualitative indicators
   3.1 Educational “structures”
       An example: lists of institutions where Senates had significant influence on budget matters, or where Senates had [say] ≥25% members drawn from the professoriate; the degree to which a university or college administration was ‘consultative’; how far lay people may participate in decisions.
   3.2 Educational “practices” (number of classrooms considered to be magistrocentric vs student-centred, and so on)
   3.3 Behaviours of participants (amount of time students spend studying, doing salaried work, and so on)
   3.4 Climate and atmosphere (chilly or not-chilly; closed or open)
   3.5 Curriculum (liberal vs vocational; thematic vs fragmented; science vis-à-vis humanities, and so on)
   3.6 Professorial reward system (teaching vs research vs service)
       Includes time spent on direct instruction vs time spent otherwise
   3.7 Teaching space (this indicator is open to quantitative expression: number of students: number of m²/subject of study; age of building; light & heat)

4. Contextual indicators
   4.1 Resource levels (public and private finance of universities and colleges; industrial support in kind)
   4.2 Government policies
       : on proportion of tax receipts to spend on public education
       : proportion to be spent on higher education
       : and the like
   4.3 Social structure (distribution of wealth, for example)
   4.4 Economic system(s) that support universities/colleges
   4.5 Reputation (usually a question of accreditation)

5. Accessibility
   5.1 By age cohort
   5.2 By sex
   5.3 By ethnic origin
   5.4 By political jurisdiction in which most recently lived
   5.5 By social class
   5.6 By previously attained academic qualification

---

52 On the Canon of Charity in argument, we have listed qualitative indicators that are, in most cases, reported in a thoroughly quantitative manner. It would be a stretch to call them qualitative in the usual received meanings of substantive “quality.”
5.7 By previous work experience

6. Institutional finance
   6.1 Proportion of budget devoted to administrative salaries and benefits
   6.2 Proportion of budget devoted to library and teaching equipment (laboratory equipment, and so on)
   6.3 Proportion of budget devoted to instructional cost (salaries and benefits)
   6.4 Proportion of budget devoted to student services (direct services: counselling, food & lodging, and so on)
   6.5 Proportion of budget devoted to information technologies (computerization, Internet access rates)
   6.6 Strength ratio (from UK): number of days of total expenditure payable from general funds (before the institution starts accumulating deficit)

7. Student choices
   7.1 Enrolment by subject area (useful indicator only if in relation to other indicators)
   7.2 Physical and mental health (visits to hearth professionals, and so on)

8. Professorial choices
   8.1 Proportion of staff engaged in research (as measured by annual publication and/or grants)
   8.2 Proportion of staff engaged in teaching improvement (measured by attendance at workshops, and so on)

9. Administrative
   9.1 Student/teacher ratios
   9.2 Size (in numbers of persons, "layers," or other) of administrative apparatus (staff, line)
   9.3 Level of financial support acquired from private sector (national, international)
   9.4 Accuracy of judgement in reaching financial/accounting objectives (budgeting on target, and so on)
   9.5 Proportion of tenured staff
   9.6 Proportion of sessional teaching staff
   9.7 Size of non-teaching staff
   9.8 Quality of labour relations (measured by time lost to strikes, and so on)
   9.9 Proportion of student fees to total income
   9.10 International student fees proportionate to total income

10. Public support
   10.1 Gallup polls, PDK polls, Decima, and the like
   10.2 League rankings as, for instance, Maclean’s annual ratings of Canadian universities
   10.3 Election results (election/defeat of persons/parties committed to support higher education)

B. Appendix B

Maclean's
Annual Ranking, 1990-present.

*Maclean’s Magazine* annually publishes ranked lists, and claims always to be improving its methodology. In 1994, fifteen Canadian universities refused to provide data for the Annual Ranking. *Maclean’s* ranked them anyway, on a page of their own. In 2003, all invited institutions of higher education in Canada were prepared to assist *Maclean’s*.

*Maclean’s* approach to ranking and rationale therefor are described annually; see, for instance, *Maclean’s*, 1994.11.14, p. 29.

*Maclean’s* divides universities into three categories, medical/doctoral, comprehensive, primarily undergraduate.

PIs on students refer to the “drawing power” of each university, and particularly to retention rates, and to student success in winning national awards.

PIs on teaching include measures of class-size, and number of first-year students taught by tenured faculty measures (way of judging “how much access students have to top faculty”).

“Finances” measures include the amount of operating funds/student; how much of operating budget goes to scholarships.

Library measures include the number of volumes (or equiv.) per student; value of library services as percentage of operating budget; library acquisitions as percentage of operating budget.

Reputation is measured as a function of alumni financial support; and by a poll of public leaders, chief executive officers of corporations, university administrators, and high school counsellors.

Research PIs appear under the label “Faculty:”

1. Percentage of faculty members holding PhDs. [Presumably an indicator of competence to do research.]
   <*Maclean’s* gives no measures of financial-administrative support for research, the institutional environment, or other factors>

2. Number of faculty holding Research Council grants [amounts not considered]

3. Average size and number of peer-adjudicated research grants/eligible faculty member [SSHRCC]

4. Average size and number of peer-adjudicated research grants/eligible faculty member [NSERC and MRC confounded]