

Performance indicator use in Canada, the U.S. and abroad

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A brief snapshot of PI use in the U.K. and abroad

Since the 1980s, performance indicator use in postsecondary education has multiplied across OECD nations. The U.K., France, the Netherlands, Scandinavia, Australia, and New Zealand have been using performance indicators to monitor higher education targets for years. Countries in the Mediterranean as well as central and eastern Europe are beginning to establish PIs. As we will discuss in later sections, many U.S. states are well into performance monitoring, though some are ratcheting down efforts after hitting glitches in the process. Kyrillidou characterizes the accountability and quality assessment movement as an international phenomenon, though every jurisdiction has expressed this in a unique way and many governments are reconsidering earlier takes on PI use.

The United Kingdom: In the U.K., the use of performance measurements in higher learning has grown into a virtual cottage industry. The government has centralized quality assurance exercises, beefed up bureaucracies to monitor quality performance, and accrued heavy administrative costs in the process. Universities – or higher education institutions (HEIs) -- are beholden to the Quality Assurance Agency for Higher Education (QAA) and the Higher Education Funding Council for England (HEFCE). HEIs must yield to a range of performance indicators that monitor access, non-completion rates, outcomes and efficiencies for learning and teaching, graduate employment, and research output (HEFCE 2003). A central agency, the Higher Education Statistics Agency (HESA), gathers and analyzes data. Bruneau and Savage (2005) describe successive U.K. governments fixated on quality assurance as having “an incurable itch to micro-manage the universities”. They lament that increased government expenditures in the U.K. have been dedicated to tracking quality measurements but “did not purchase the hiring of a single professor, the creation of a single scholarship, or the purchase of a single computer.”

The scope of PI monitoring in the U.K. has led to contentious debate about how indicators are used. The Research Assessment Exercise (RAE) has been heavily criticized for its methodological emphasis on measuring outputs. Through RAE, funding councils make decisions on how much funding each institution should receive on the basis of quality ratings. A university that rates high will receive more funding than one that scores poorly. There are dozens of areas of assessment but, over time, the most important performance indicator has become the number of published articles in refereed journals. It has translated into rewarding older, established universities at the expense of others. The OxforDs and Cambridges of the U.K. do well under this formula; in fact, they thrive, increasing their research output and simply delivering more research. The RAE funding has become a self-fulfilling prophecy: universities that score well get more funding and continue to score well or even improve. Others fall further behind. Overall, the RAE exercise has been heavily criticized by universities as contributing to reduced quality in teaching and research. There are also concerns about the impact of the U.K.’s quality movement on the working lives of faculty. Atkinson-Grosjean et al (1999) note that many universities have separated the functions of teaching and research as a result – and faculty workloads have increased. Faculty are now hired and promoted on the basis of their publication record and teaching is assessed through external audits and peer reviews

(Sporn). Atkinson-Grosjean et al (1999) reference a U.K. study (Dominelli and Hoogvelt 1996) that describes the impact of quality assessments as the Taylorization of academic labour. “Taylorization is achieved through the fragmentation, sequencing, and commodification of faculty work ‘into component parts or activities, each part being translated or ‘operationalized’ into empirically identifiable and quantifiable indicators or measures’. ... The elimination of professional autonomy is another key aspect. Functional analysis defines ‘competencies’, which are then further defined by performance criteria – the assessable outcomes.” (Atkinson-Grosjean et al 1999)

Following years of debate and critique, much of the Thatcher and post-Thatcher experiment in higher education has been questioned. Older universities revolted against the level of detailed, centralized assessment in 2001. Since then, centralized oversight of university performance is being revised. The use of PIs continues but remains contentious. And a new development: the government announced in March 2006 its decision to replace the RAE exercise in 2008 with a successor that is yet to be developed. It also announced plans to abolish two, perhaps three, of the UK’s eight research councils.

Australia: The introduction of performance initiatives has been equally contentious in Australia. Universities in Australia are subject to regular quality reviews assessing teaching and learning, including internal and external reviews of course and program offerings, curriculum, staff appointments, probations, promotions and performance management reviews (NTEU 2004). More than half of Australian universities’ government funding is tied to performance requirements (Atkinson-Grosjean et al 1999). They write “Resulting changes have proved so extensive, the process is often referred to as the ‘Australian Experiment’.” The use of performance indicators to measure quality in Australia’s higher education sector mushroomed over the course of the 1990s. Mikol notes “The push for the inclusion of indicators as measures of quality occurred as government funds diminished and higher education expanded.” She also observes that federal government performance funding schemes intended to enhance quality actually created a “climate of competition among Australian universities” as institutions scrambled to publicly prove they were delivering quality programs. Though universities are subject to considerable monitoring through quality assessments, the Australian government continues to explore ways to expand the process of performance measuring and performance-related funding. But the effort is not simply focused on quality, it is very much market-driven. Australia’s higher education network is tightly connected to a market of international students. Many of the quality monitoring efforts underway are indicative of heightened competition among Australian universities for a share of the international student market. Though some may argue competition is healthy, it can be wasteful as well – and it should not be confused with efforts to improve quality.

New Zealand: Bruneau and Savage (2002) observe that higher education in New Zealand “followed the lead of the United Kingdom” and has its roots in the neoconservative revolution that swept the country in the 1990s. In New Zealand, universities have been regarded as ‘corporate entities’, students considered ‘customers’ and the teacher-student relationship turned ‘contractual rather than pedagogic’ (Atkinson-Grosjean et al 1999). Universities in New Zealand have been subject to many new

regulations and requirements in the name of accountability and efficiency. They have been mandated to undergo regular performance reviews based on a range of PIs. They have had to produce an annual Statement of Service Performance, reviewed by the Government Audit Office, reporting on how they have achieved their stated objectives. They have had to report to the government's Tertiary Ownership Monitoring Unit (TOMU), its Academic Audit Unit, its Tertiary Ownerships Monitoring Unit.

Debate in the mid- to late-1990s centred on the difficulty in choosing performance indicators that actually measure quality and efficiency. Critics in New Zealand pointed out the fallibility of relying on PIs that measure outputs such as the government's desire to require institutions to record the number of calls for information about courses they receive and express those calls as a percentage of enrolment data. Measures of accountability have been so contentious and constraining, 23 New Zealand academics who left to work overseas wrote an open letter in 1999 "attacking New Zealand's political establishment for neglecting to nurture 'a research culture with the right mix of funding incentives, and devotion to the spirit of intellectual inquiry'" (Bruneau and Savage 2002).

The current government is sorting through fundamental questions of how quality in higher education can be benchmarked, with an eye on lessons learned from years of experimentation. Minister for Tertiary Education Dr. Michael Cullen has said, "The more one aims for quality, the more removed one gets from the real world and its priorities and timeframes. ... Quality ought not to imply graduates who need to be retrained by employers in order to be useful. And relevance means more than just this year's skills." (Tertiary Update December 2005).

The history of PI use in the U.S.

Universities in most U.S. states have embraced the accountability movement. In an effort to gauge the level of institutional quality within the higher education sector, state government authorities have implemented one or more of the following models of institutional accountability: performance funding; performance budgeting; and/or performance reporting. As of 2000, 37 of the 48 U.S. states used PIs in some way – and many plan to expand their efforts (Fisher et al 2000b). Since many U.S. policies influence Canadian policy, this section explores more fully the U.S. experience with PIs and performance funding – and carries lessons worth considering.

Over the past three decades, many state governments have linked institutional performance with government budgetary support. Performance funding "ties specified state funding directly and tightly to the performance of public campuses on individual indicators...and focuses on the distribution phase of the budget process" (Burke, 2001). Tennessee was the first state to implement performance funding. That was in 1979. During the 1990s a number of the other states adopted this model.

Over time, the drawbacks of performance funding in the postsecondary education sector have become apparent. Between 2001 and 2003, four states – Arkansas, Colorado, Kentucky, and Minnesota – discontinued the practice, and none has been added since.

According to the Rockefeller Institute, the decline in the use of performance funding in the United States may be attributed to the idea that ‘...its desirability in theory is matched by its difficulty in practice. It is easier to adopt than implement and easier to start than to sustain.’ (Burke et al 2000)

Similar to performance funding, state governments link institutional performance with budget allocations through performance budgeting. Performance budgeting “allows governors, legislators and coordinating or system boards to consider campus achievement on performance indicators as one factor in determining campus allocations” (Burke 2001). Whereas performance funding may be described as linking budget to institutional performance in ‘a direct, automatic, formulaic manner, the link in performance budgeting programs is loose, indirect, uncertain and is more flexible than performance funding.’ (Education Policy Analysis Archives). In 2000, performance budgeting was practiced in 28 states. However since that time, the number of states using this form of institutional accountability has declined. The most recent statistics available shows that as of 2003, 21 states still use performance budgeting. (Burke et al 2003)

In performance reporting, there is little or no explicit connection between performance and funding; government agencies do not base funding of higher education institutions on their performance. Instead, by publicizing these reports showing college and university performance based on key indicators, the implicit expectation is that institutions will realize where improvement is needed and endeavor to make the necessary changes. The reports usually are sent to legislators, the governor, campuses and in some cases, the media. *Measuring Up* is a prominent example of a series of performance reporting on a national scale. Published and released by the National Centre for Public Policy and Higher Education, *Measuring Up 2000, 2002, 2004* is a collection of state-by-state report cards for higher education. These biannual reports are designed to evaluate institutions based on preparation, participation, affordability, completion and benefits.

Complex System of Quality Performance Indicators

The process of categorizing performance indicators vary from state to state. The organization of these indicators tends to be complex. Over the years, states have used anywhere from 5-37 performance indicators (Burke 1997). For instance: Missouri – 24, Wisconsin - 21, Kentucky – 16, Virginia – 14, Washington – 13. Alternatively, states opt for fewer ‘main/major’ indicators and include a detailed list of supplementary indicators (Colorado Commission on Higher Education 2005). More widely used indicators include unit costs; faculty teaching workload rates; student-staff ratios; analysis of cohort progression and attrition; rates of passage on professional licensure exams; analysis of the ethnic, gender and social backgrounds of their students and the outcomes of degree programs in terms of the number of degrees awarded.

Here are a few working examples of selected state systems of accountability:

Illinois: The Illinois Board of Higher Education employs performance reporting but in 2002 Illinois discontinued performance funding and performance budgeting. The system

in place is characterized by a detailed ‘performance indicator policy framework’ which involves three levels of indicators: state-wide indicators (related to Illinois’ overall system of higher education), “common” indicators (for all institutions) and mission-specific indicators (related to each institution’s unique role and mission within the state’s system of higher education).

Tennessee: Since the beginning of the performance funding program in 1978, the Tennessee Higher Education Commission has coordinated the performance funding initiative. The program is administered on five-year cycles; the current cycle covers 2000-01 to 2004-05. The current assessment, criteria, and scoring protocols of the current performance funding cycle were developed with the active participation of TBR and UT staff as well as statewide college and university participation. Tennessee remains the most prescriptive state, having developed an accountability system that incorporates common standardized assessments across programs and institutions, and that bases funding levels on specific test scores and student and alumni satisfaction ratings. Approximately 60 per cent of the indicators used in Tennessee’s performance funding program are devoted to student performance and satisfaction. The remaining 40 per cent focus on academic program and institutional indicators. Tennessee also partners its performance funding program with performance reporting.

Colorado: In 1997, the Colorado Commission on Higher Education -- in collaboration with the governing boards of public post-secondary education institutions -- implemented HB96-1219, which outlined the General Assembly’s initial expectations for a quality indicators system (QIS) for the state’s publicly funded colleges and universities. In 1999, the statute was refined to incorporate state goals and institutional actions as part of a revised QIS. Colorado keeps the overall number of indicators to 10 or fewer (with subcomponents), and the overall system focuses solely on undergraduate education. It is designed to encourage continuous improvement by institutions in achieving high levels of performance; measure institutional performance and accountability; determine funding recommendations and the funding distribution for the higher education system; and build public support for increased funding for higher education. Today, Colorado employs performance funding and performance reporting.

California: California uses performance budgeting to link institutional performance with the quality indicators, and performance reporting to monitor the progress of its colleges and universities for the purpose of encouraging institutional improvement. In 1991, the California legislature passed Bill 1808, directing the California Postsecondary Commission to develop an annual report to provide information on the performance of California’s colleges and universities. The legislation instructed the commission to create the format and content of the report in cooperation with the state’s public colleges and universities, and over a two-year period, this coalition developed a detailed set of performance indicators. These indicators have been divided into five main categories: Population Context, Fiscal Context, Student Preparation, Student Access, and Student Outcomes. The result of each institution’s performance is reported and published in an annual report prepared by California Postsecondary Education Commission pursuant to Assembly Bill 1808.

Louisiana: The Louisiana Board of Regents is constitutionally mandated to plan, coordinate, and exercise budgetary responsibility for all public postsecondary education in Louisiana (State of Louisiana 2001). Performance reporting is a staple model of institutional accountability used by the board, however it also employs funding formulae which allow for performance funding and performance budgeting. In regards to performance funding, the board has established a 'Performance Incentive Initiative' component designed to reward institutions for high performance and to provide incentives for institutional improvement. Performance budgeting is realized in the other two components of the funding formulae. In the 'Core Funding' component the board uses enrolment management strategies that disconnect changes in enrolment from being immediately or completely recognized in the funding target calculation. The third component is the 'Quality/Campus Improvement and State Priorities' which is designed to make strategic investments in programs, including workforce and economic development programs.

The history of PI use in Canada

Perhaps the best known, highest profile use of performance indicators in Canada can be found outside of government efforts, in the national news magazine *Maclean's*. The magazine has been publishing its annual ranking of Canadian universities since 1991. From the beginning, the ranking exercise has been heavily criticized for its methodology. Critics (Kong and Veall 2005, Shale and Lui 2002a and 2002b, Cramer and Page 2005, Schultz 2001) have questioned the integrity of the data *Maclean's* collects. Critics say the data it is based on narrow criteria that disregards universities' individual missions. They ask what it means to "claim that a given university is number 1, another number 2 and so on?" (Shale and Lui 2002a). They are also concerned the ranking exercise creates a competitive atmosphere that encourages universities to do well enough to rise along the *Maclean's* rankings without necessarily addressing the question of improving quality education. Schultz (2001) writes "it is not how your institution improves, it is how your institution places in relation to its peer."

Another measure of quality that is gaining in Canadian profile is NSSE, the National Survey of Student Engagement that tries to capture student satisfaction in almost 500 U.S. colleges and eight Canadian universities. NSSE calculates benchmark scores that are converted to a 0-100 point scale. Students are randomly sampled and fill out self-reports. As Kuh (2001) notes, "The accuracy of self-reports can be affected by two general problems. The most important factor ... is the inability of respondents to provide accurate information in response to a question." He asserts the NSSE research design team focuses on developing clearly worded and well-defined survey questions that have high face and content validity. The survey is becoming increasingly popular as more Canadian universities consider participating in it to gain a richer appreciation of their students' perceptions.

In terms of the provinces, there are various activities underway to collect PI data at both the provincial system-wide level and at the individual institutional level. Some provincial

governments have established their own performance indicators to monitor post-secondary institutions' performance, though not every provincial government's accountability practices are the same. As of 2005, there were reportedly no performance indicators in place for Manitoba, Newfoundland and Labrador.¹

Among those governments that employ performance indicators, the use of these measures varies from province to province. While some provincial governments use indicators to directly tie institutional performance to funding – Alberta and Ontario – there are a number of provincial governments that do not practice performance funding and employ variations of performance budgeting instead. As of 2005, British Columbia is reportedly considering using performance measures linked to funding, and though Saskatchewan is in the process of developing performance measures, PIs will not be linked to funding.² For many provinces where funding is not directly linked to institutional performance on system-wide indicators, the institutions themselves still take part in performance reporting.

There is a stark difference in how performance indicators are used in Alberta, B.C., and Saskatchewan, for instance. In the case of performance funding, the amount of government funding allocated to an institution is stringently linked to that institution's performance on a specific set of indicators. Any deviation from performance-based funding results in a punitive effect, where universities are allocated less funding. The rigidity in performance funding is palpable, as is the case in Alberta.

Alberta: Alberta's history of linking funding with institutional performance on specific indicators dates back to 1994.³ The following government-determined funding envelopes were created: an Access Fund designed to support innovative, cost effective methods of increasing the number of student places while addressing labour market needs; a now defunct Learning Enhancement Envelope to support the development of technology-based educational opportunities; an Infrastructure Renewal Envelope providing matching funds for equipment and facilities; a Research Excellence Envelope meant to address declining research capacity in the system; and a Performance Envelope that rewards performance and productivity. The Performance Envelope was divided into a learning component and a research component, each accompanied by a number of PIs that were also chosen in consultation with the provincial postsecondary institutions.⁴

¹ “Advanced Education: A Cross-jurisdictional Overview of Accessibility, Affordability and Quality,”

² Ibid.

³ “The Other Side of Alberta's Performance Based Funding Mechanism: The Research Component,” Office of Institutional Analysis, University of Calgary, 2000.

http://www.cirpa-acpri.ca/prevConferences/saskatoon2000/proceedings_pdfs/shale2.pdf

⁴ Ibid.

Learning Component Indicators	Research Component Indicators
Employment rate: percentage of graduate survey respondents employed within a specified period following program completion;	Council monetary awards: National peer group rank in terms of council awards per full-time faculty member (3 year rolling average).
Graduate satisfaction with overall quality: Percentage of graduate survey respondents fully or somewhat satisfied with overall educational quality.	Citation impact: National peer group rank in terms of number of citations per research publication (5 year rolling average).
Enterprise revenue: Revenues less all government grants, tuition fees under policy, sponsored research (universities only), ancillary services and earned capital contributions as a percentage of Advanced Education and Career Development grants.	Community and industry support: National peer group rank in terms of community and industrial funding for sponsored research per full-time faculty member (3 year rolling average).
Administrative expenditures: Administration as a percentage of total expenditures less ancillary expenditures.	Research enterprise: National peer group rank in terms of sponsored research revenues as a percent of AECD grants (3 year rolling average).
Credit FLE: Percentage change in full-load equivalent enrollment from one period to the next.	

Alberta Advanced Education and Career Development, 1997

About two percent of Alberta’s operating grants to universities and colleges are tied to performance, though if an institution deviates from government priorities and /or underperforms in a government targeted area, this can have a substantial adverse impact on that institution’s operations. Take for example the case with the University of Alberta and its underperformance in the area of enrolment in 1997. Fisher et al (2000b) note the University of Alberta was forced to “contribute” 0.5 per cent of its budget to the performance funding envelope when it failed to meet the province’s enrolment target. Another characterization of Alberta’s performance funding is that, by the government’s own determination, it is focused on outcomes rather than inputs (Alberta 2005 a & b). For example, the government tracks university graduate employment outcomes as well as data on employers’ satisfaction with the education and skill level of recent graduates who are now employees. Despite an institution’s performance in other areas of importance, despite that university’s unique local needs and concerns, and regardless of that university’s distinct mission and individual mandate, all universities are required to perform well on these market-oriented, outcome-focused measures.

Ontario: Since the mid-1990s, a several provincial governments have examined the notion of implementing performance indicators and performance related funding in the postsecondary education sector. In 1999-98, the government introduced three Key Performance Indicators (KPIs) that all universities would have to report on. The KPIs are: graduate employment rates, graduation rates by program, and Ontario student loan default rates. In 2000-01, the government announced the university sector would receive a \$16.5 million Performance Fund consisting of two envelopes: an accessibility fund and a performance indicator fund which universities could access if they met the benchmarks. The fund is still in place and was worth \$23.2 million in 2004-05.

British Columbia: In British Columbia, all public postsecondary education institutions are subject to a detailed accountability framework every year, conducted through the

Ministry of Advanced Education.⁵ This framework, which established 19 performance indicators, was implemented in the 2003-04 fiscal year. As in the case of the performance indicators used by the Alberta government, these indicators also emphasize outcomes “to assess the effectiveness of strategies, to indicate whether public expenditures provide value, and to determine whether individual institutions and the system achieve identified goals and objectives.”⁶ It is important to note the government states that it realizes performance measurement cannot be conducted using a cookie-cutter approach. The government asserts the interpretation of performance will require careful analysis and judgment of the different roles, mandates, strengths and challenges of each institution.⁷ Though the British Columbia government has implemented system-wide performance indicators, in the absence of performance funding, its system of accountability is not as rigid or as punitive as Alberta’s.

Saskatchewan: The Saskatchewan government has set out 10 public priorities in an effort to hold universities accountable. However, the government has allowed the universities to determine the way in which they will realize these priorities. As published in the Saskatchewan government’s document, *Public Interest and Revitalization of Saskatchewan Universities*, the government spells out its commitment to preserving institutional autonomy, stating, “...given the concentrations of expertise and tradition universities contain, they themselves are best qualified to determine what they do and how they go about doing it.” In the end, the Saskatchewan government has given the University of Saskatchewan and University of Regina room to establish their own strategic planning processes and their own institution-specific performance indicators.

Quebec: Universities in both Alberta and Quebec report to their provincial governments on average cost per graduate, research expenditures, and tuition revenues. The Ministry of Education in Quebec employs enrolment data to gauge access levels to higher education. The province determines the next year’s operating grants for each university on the basis of some performance measures, such as the number of graduates, the number of new full-time faculty positions, and the ability of an institution to balance its budget.

Maritime provinces: Universities in Atlantic Canada submit proposals for new programs to the region’s quality assurance agency, the Maritime Provinces Higher Education Commission. Approvals are subject to assessment criteria, including (but not limited to) anticipated student outcomes, adequacy of resources, and labour market analysis.

Conclusion:

Canada has much to learn from the international experience of performance funding and performance measurements. As the literature review of PI practices internationally and domestically reveals, attempts to ensure the reliability of PIs are problematic. The literature highlights the debate over whether PIs actually measure the quality of an

⁵ “What is an ‘Accredited Institution in British Columbia?’” British Columbia Council on Admissions and Transfers, <http://www.bccat.bc.ca/system/accredited.html>

⁶ Ibid.

⁷ Ibid.

institution's performance. All too frequently, the goal of assessing institutional quality becomes mired in the process of determining the most accessible measurement criteria. PIs do not necessarily translate into improved quality in our university classrooms. Despite the deployment of such a large number of performance indicators globally, most measures fall short of reflecting the breadth and depth of quality education.

Problems also arise when governments link institutional performance with performance funding and performance budgeting. One of the difficulties associated with performance funding in the U.S. and the U.K., for instance, is that the cost of institutional compliance in meeting a specified benchmark often exceeds the amount of government funding the institution will receive for its performance. Take, for example, cases where the government uses graduation rates as an indicator of performance. In order for a university to perform well, it may have to invest in smaller classes, enhanced academic services, supplementary financial aid, etc. – worthwhile initiatives, but initiatives that come with a cost attached. Under its system of performance funding and budget, the cost the American university incurs to meet the benchmark of a performance indicator is sometimes greater than the amount of funding it will receive. Secondly, when the government makes funding decisions based on system-wide indicators, institutions are forced to meet objectives outside their own internal mission and mandate. Essentially, a university or college is discouraged from paying attention to its charter and fulfilling the objectives of its unique institutional mission. PIs in many instances become proxies for more government control, often at great cost. Meanwhile, governments intent on short-term performance measurement neglect an important aspect of the university's reality: universities have long production cycles. Even when an institution is willing to change in response to financial incentives from the government, the reality is that it takes a long time for those changes to materialize. The results of these efforts will not be seen until several years later. However, performance funding (say, for example, in the United States) operates annually, and this means that the university/college must incur costs long before it receives its performance revenue. In terms of creating new efficiencies, this approach is counterintuitive.

The challenges associated with performance funding become even more complex in the case of smaller institutions that have fewer resources. As we learn from the U.K. experience, smaller and newer universities will undoubtedly find it more difficult for them to perform well. When funding is contingent on their performance, this can lead to cutting the resources of an already poorly funded university. As a result, the institution is less likely to engage in substantial assessment and may simply accept its reduced budget. The purpose of the indicators – to measure and improve the quality of institutional performance – is never fully realized, and performance funding becomes more of a punitive measure rather than a financial incentive. Meanwhile, selection of performance indicators and success standards and the protection of mission diversity are seen as major difficulties in performance funding. An Education Policy Analysis Archive study indicated that performance budgeting and performance funding initiatives in the U.S. did not have the desired effect of encouraging positive change.

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