

# BC Post-Secondary Education Accountability Framework and Performance Indicators

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# Conclusion

**BC has a mature, operational accountability process.**

**But,**

**Accountability models and PIs rarely result in significant change.**

**Why not?**

**What does?**

# BC Accountability Framework

1. History
2. Where we are today?
3. My impressions of the “Accountability Framework Development”
4. Where universities entered the process.
5. Some “theory” about PI’s
6. Developing PI’s – the process

Stop:

1. What are the indicators (a quick tour, or depending on interest, a long tiresome lecture)
- 
1. Why are we where we are today? (why aren’t they working?)
  2. Other approaches
  3. Advice

# History

- Provincial government: accountability framework: “service plans” (Auditor General)
- Universities: agreed to participate because no funding implications beyond those already recognized (funded fte); *no threat to autonomy or existing strategic planning*
- PI development group: IR people from colleges and universities
- Government emphasis on annual update and aggregation (hence common indicators wherever possible)
- IR people from universities and colleges successfully developed PIs

# Where are we today?

- Annual Service Plans
  - strategic plan re-worked to fit template
- Performance Indicators, actuals and targets
- PI's are
  - Mainly reasonable (meet standard criteria of PIs – clearly related to objectives, directional, understandable, comprehensive, flexible, simple, limited number)
  - Not difficult or costly to produce (most are part of normal IR reporting anyway)
  - Comprehensive (in the way that PI's are often deemed so)
  - Many common indicators; a few particular to some; very few unique

# Where are we today?

- Consensus: not used or useful; only an exercise, but not an onerous one
- Has not been a factor in driving change.
- Cosmetic accountability.
- Some board members sense a disconnect.
- Timing is off: we don't revise the strategic plan annually, so the annual service plan is bland repetition of last year's plan
- Aggregation to provincial level is strange (and strained)

# Where are we today?

- Targets set arbitrarily
- Little explanation or analysis of indicators (accounting tradition: explain change, not lack of change)
- Indicators not used within institution, or by government (even basic funded enrolment targets are disregarded in decisions)
- Most administrators could not tell you what the PIs are, let alone faculty

# Where are we today?

- Significant drivers of quality are not among the PI's: (NSSE, CUSC, Teaching evaluations, Department Reviews, Bibliometrics)
- Ministry of Advanced Education has asked Universities to provide them with a case-level database, for inclusion in the "College Data Warehouse" – opposite end of the accountability spectrum.



# Positive aspects

- Government is very flexible and forgiving with respect to the service plan.
- No connection to funding
- Government goals are so general, all strategic plans fit the mold
- PI's have resulted in detection of some alarming trends.
- Dispelling of myths in government (eg: bad teaching; Arts graduates are unemployed)

# Positive aspects

- Continued funding for useful surveys
- Forced cooperation with ministry (eg. aboriginal counting)
- Forced comparability between sectors (ftes for non-academic programs in colleges)
- Time series with consistency over time and institutions
- Data repositories with interesting trends – sometimes used in decision making
- Analogy with student evaluation of teaching: back-of-mind incentive.

- So...some good indicators, some good surveys,  
-some are in the framework, some are not,  
-but very little (maybe none) substantive change

# Why are we not where we want to be with PIs and accountability

David Strangway: “we are among the most accountable institutions in the world”

(very few of the PI’s catch us by surprise)

we were accountable 50 years ago

# Why are we not there?

- Indicators are not used as a management tool.  
(management challenges are somewhat different)
- Indicators are not used in strategic planning.  
(but opportunistically...by government. Eg. aboriginal)
- Indicators are not integrated into resource allocation, either by government or institutions. (except for standard fte targets)
- Not prescriptive (not “real” research)
- Not compelling (neither convincing nor motivational)
- (Funding by PI’s doesn’t work, but integration into budget process may)

What is a “Service Plan”?

Accountability Framework: Accounting/Auditing model  
Fixed price contract model  
“Piecework” model

**THE ACCOUNTABILITY FRAMEWORK COMPONENTS**

The accountability framework consists of six inter-related components that together constitute an accountability cycle. The following diagram illustrates how the components are related.



“performance based implications”: reallocation and incentive funding

### THE ACCOUNTABILITY FRAMEWORK COMPONENTS

The accountability framework consists of six inter-related components that together constitute an accountability cycle. The following diagram illustrates how the components are related.



Prescription: move \$ around

What's missing from this model?

*What should you actually do?*

Theory

Advice

Diagnosis



## B.C. Universities were asked to provide “Institutional Service Plans”

What is a “Service Plan”? We were told it must contain the following:

1. A Planning context
2. Strategic direction
3. Goals
4. Objectives
5. Key Criteria
6. Performance Measures -- → usually this is associated with “accountability”
7. Performance Targets
8. Summary
9. Financial Outlook

What do each of these 9 items mean? What did the government mean by them?  
What did the universities take them to mean?

The universities provided a cut-and-paste version of their strategic plan/mission statement

# Planning Context

Government's intention: an environmental scan, discussion of issues faced

Universities' responses vary widely:

- from: very specific budgetary woes

SFU has continued to re-assign its non-recurring resources (carryover) to fund recurrent expenses, clearly a non-sustainable practice. Based on reasonable assumptions the outlook for 2009/10 indicates a cumulative shortfall of over \$45 million.

To the very general:

Changes in our economic base are leading to changes in the nature of work. British Columbia's businesses operate both inside and outside our province. The complexities of the global environment demand leadership by individuals who are both literate and numerate, and who have the capacity to

## Strategic Direction: vision, mission, and values

Universities' responses varied widely:

The University of British Columbia will provide its students, faculty, and staff with the best possible resources and conditions for learning and research, and create a working environment dedicated to excellence, equity, and mutual respect. It will cooperate with government, business, industry, and the

*“Our vision is to be a university of choice for outstanding students, faculty and staff of British Columbia, Canada and the world. We aspire to be the Canadian university that best integrates outstanding scholarship, inspired teaching and real-life involvement. .*

The BC Ministry of Children and Family Development has signed a five-year research agreement with SFU for over \$3.5 million to support the work of the Children's Health Policy Centre.

## Goals: high level goals

Ministry suggested goals:

1. An excellent public and private post-secondary education that meets the needs and Aspirations of British Columbians
2. Excellent research and innovation that supports economic and social development.

**Intensify efforts to recruit, retain, and develop the best people.**

**Ensure that all academic programs meet the highest standards of excellence.**

- Fix the course accessibility challenge.
- Ensure the generation of applicants and the required conversion rate of the number of '*admissible applications*' to the number of '*registrations*' are sufficient to meet enrolment targets.

## Objectives: “measureable results”

—  
Deliver a high level of service to all students and potential students.

Support the development of internationally recognized research.

Recruit high caliber faculty to meet the approved Faculty Renewal Plan.

Concepts not well distinguished or defined:

Strategic Plan, Strategic direction, Mission,  
Values, Vision, Institutional commitments



Missing link



Goals, Objectives, Key Criteria, Performance  
Measures, Targets

Message from all of this: “service plan” concept not taken seriously  
-Bureaucratic jargon, apparatus of audit accounting, lack of understanding have  
taken their toll on credibility.

What was the process for creating the PIs

## Creation of the Performance Measures Group

Mandate: to develop common **key performance indicators** for the service plan

Composition: IR directors, ministry director of accountability, analysts  
(in the background, deputy ministers, “caucus committee”, etc.)



**What are Key Performance Indicators?** (or what did we agree to about them)

“Key” : pertaining to important concepts (we were mostly successful)

“Performance” : some degree of institutional control over the objective (mostly successful)

“Indicator” : short and simple; not a research study or a discussion paper, but one number with an easy to understand definition, meaning, and a knowledge of “which way is up”.

## Off Limits



2.Targets and Goals

3.Statistical analysis (inference)

4.Someone's favourite indicators

## **We needed to be aware of, and discuss: many objections to KPIs**

Some critiques of performance indicators (Bill Bruneau, “Counting Out the Scholars”)

- Argument from connoisseurship: you can't measure the really important things (quality, truth and wisdom), but we know it when we see it
- Too hard: the numbers are influenced by multiple factors so we can't use changes in them to measure institutional performance (employment rates)
- numbers preclude judgment (satisfaction rating is not quality...)
- Preclude complex research and analysis
- Not prescriptive
- Not within control of institution
- values are imposed by selection of the indicator, and government chooses the values
- Perverse steering effects (you want higher graduation rates...we'll give you higher rates...)
- Easy to distort (cheat) (eg. Maclean's)
- Driven by economics not by academics
- We will be punished, (incentives are not new money) or, worse yet, forced to compete against each other

Our working assumption:

Citizens, government, students, journalists have the right to ask some reasonable questions about their institutions.

What might those questions be?

Significant, comprehensive set of questions.

Or, what would the minister need to know?

## The Five Big Questions about the System

1. Capacity
2. Quality
3. Accessibility
4. Relevance
5. Efficient

# Capacity

- Are there enough spaces in the post-secondary system?
- Enough spaces in programs?
- Faculty have the means to meet the research needs of the province?
- Researchers have the facilities they need?

# Access

Absence of barriers:

- Financial barriers
- Socio-economic barriers (including aboriginal)
- Geographical barriers
- Educational barriers (developmental programs)
- Transfer from college barriers
- High school articulation as a barrier
- Prioritizing international students?

# Efficiency

- Could costs be reduced? Quality increased?
- Are the production functions right?
- Incentives
- Right mixture of institutions?
- Right mixture of programs?
- Completions versus screening?



# Quality

- Graduates are employed
- Employers needs are met
- Students are satisfied with teaching, learning, curriculum
- Graduates succeed in professional/graduate programs
- Skills are developed to sufficiently high levels
- Content up to date
- Learning resources are adequate

# Relevance

- Skills and programs match demand (student demand and economy's demand). Do graduates get jobs? What kinds of job?
- Research serves social and economic needs
- Are institutions responsive to demands of students?

# A test for Performance Indicators

Could a citizen, reporter, professor, from another place understand the significant features of the system – problems, issues, strengths, weakness, etc.

(test yourself)

# The problem with the questions:

These are as much “system questions” as institutional questions. (don’t always aggregate well)

Rarely, if ever, answerable with performance indicators alone. PI’s are simply too crude.

But sometimes, PI’s are the core statistic, and sometimes a “signal” statistic for more work, and even more thought.

## Process for developing indicators

- started out well
- we handed them existing indicators
- IR pushed for more complexity
- ministry dictated some others
- ministry ruled on targets
- ministry limited complexity
- reluctance to do statistical analysis
- Has not been an on going process – no new
- Indicators have been developed jointly; none
- Have been modified jointly

### Advice for development of PIs

- IR professionals are genuinely interested in performance and indicators.
- government ministry may have similar staff (but intermediate agencies certainly do)
- IR office will do the work – they must be in on definitions
- IR are least resistant to the notion of empirical accountability
- IR are most aware of context and cautions.
- Encourage multiple indicators (psychometrics/measurement theory triangulation)
- Multiple benchmarks
- At least entertain various statistical approaches (regression, significance)
- When targets are ultimately based on “increase” or “decrease”, then there is less need for consistent indicators, or aggregation.
- Encourage diversity of indicators
- Use existing consortia (CSRDE was never accepted)
- Don't force bad measures onto the system

# Capacity

Measure	Target
1. Total student spaces	Funded ftes
2. Student spaces in strategic skills programs	Funded ftes
3. Total credentials awarded	Mysterious form of growth (but not related to intake or fte)
4. Sponsored research funding	>= than previous year
5. Number of highly qualified personnel “HQPs” (faculty, grad students, and post-docs)	>= than previous year
6. Percent of annual education activity occurring between May and August	21% (mystery number – SFU semesters?)

## Performance Measures – Targets & Results

Ministry Objective: Capacity

Total student spaces						
Performance			Performance Assessment	Targets		
2005/06 Actual	2006/07 Target	2006/07 Actual		2007/08 Target	2008/09 Target	2009/10 Target
37,642	37,987	38,264	✓	39,000	40,013	41,023

### Performance Measure Description:

Student full-time equivalent (FTE) calculation based on The University President's Council of British Columbia (TUPC) guidelines.

### Performance Assessment:

UBC **achieved** the target.

### Strategies:

- Review student recruitment, admissions, and scholarship policies and processes to ensure that UBC attracts and retains the best undergraduate and graduate students from across BC, Canada and the world.
- Review our broad-based admission and student financial aid policies to ensure that qualified students with a variety of backgrounds and experiences have access to UBC.
- Continue to develop on-campus residential and social space for students.
- In support of increased access and diversity, develop new programs at UBC Okanagan, Robson Square and Great Northern Way, and seek new opportunities for educational programming in other parts of British Columbia.
- To honour UBC's policy that no eligible domestic student shall be excluded for financial reasons alone, build up our scholarship endowment to \$300 million by 2010.

### Targets:

- ⇒ Develop a comprehensive capital plan that links space and facility needs to a coordinated process.
- ⇒ Raise \$20 million in donations for our endowed scholarships.
- ⇒ Expand residence guarantee at UBC Vancouver by 1000 beds.
- ⇒ Expand residence guarantee at UBC Okanagan by 280 beds.

Story different from reality: reaching for targets, rather than a frank admission that enrolment is limited and gpa's are high

Computing and elect growth has fallen way below targets: forgotten., badly conceived.



## Commentary on Capacity

in effect this is the old fte report ministry has never figured out capacity, even in the aggregate, and these PI's are not what we had in mind for a comprehensive look at system capacity no serious measures of research capacity (eg provincial share of federal sponsored)

### Real issues:

- Research overhead costs (adequate infra-structure for research university)
- University versus college demand; responsiveness of institutions to changing demand
- Vocational versus academic (versus health professions)

# Relevance

Measure	Target
Graduates' assessment of usefulness of knowledge and skills in performing job	Over 90% report "very useful" or "somewhat useful"
Unemployment rate	Must be below rate for high school or less
Number of patent license agreements	>= previous year
U.S. patents issued	>= previous year
Number of start-up companies	>= previous year
License income	>= previous year

Ministry Objective: Relevance

Baccalaureate graduate outcomes - unemployment rate						
Performance			Performance Assessment	Targets		
2005/06 Actual	2006/07 Target	2006/07 Actual		2007/08 Target	2008/09 Target	2009/10 Target
5.2%	≤7.6%	4.4%	☆	Maintain unemployment rate of former UBC students below rate for persons with high school credentials or less		

**Performance Measure Description:**

Percentage of degree level graduates and former diploma, certificate and other level students who were unemployed in the reference period prior to time of survey expressed as a percentage of the labour force for that group, compared to the percentage of unemployed individuals with high school credentials or less.

**Performance Assessment:**

UBC **exceeded** the target.

**Strategies:**

- Develop Community Service Learning programs, whereby experience in the field will complement academic study or be integrated with academic credit courses, and aim for participation in such programs by at least 10% of our students.
- Work with innovative internship programs to provide students with opportunities in the workforce during their education. Use the Mathematics of Information Technology and Complex Systems (MITACS) program as a model to develop these programs. MITACS is a Network of Centres of Excellence (NCE) for the Mathematical Sciences. It is recognized worldwide as an effective new model for research & development in the mathematical sciences - one that addresses the imperatives of research, education and technology transfer.
- Help alumni to develop connections with each other and with UBC.
- Invite alumni to assist students in community service, mentoring, co-operative work-term opportunities, and career self-management.

**Targets:**

- ⇒ Ensure the quality of teaching and learning experiences
- ⇒ Provide the required skill sets; including good analytic and communication skills

NSSE tells us that we should develop co-op and internships. Employment is never an issue for university grads.

Research “relevance” is naïve.

Commentary of Relevance:

The real issue with Research Relevance is Knowledge Transfer

# Quality

Measure	Target
Percent of graduate who rated instruction “good” or “very good”	>= 90%
Percent who rated various skills development as “high” or “very high”	>= 85%
Percent “satisfied” or “very satisfied” with education	>= 90%

Ministry Objective: Quality

Baccalaureate graduate assessment of quality of education – skill development							
Skill Development (avg %)	Performance			Performance Assessment	Targets		
	2005/06 Actual	2006/07 Target	2006/07 Actual		2007/08 Target	2008/09 Target	2009/10 Target
	81.5% (+/- 2.2)	≥ 85%	78.8% (+/- 1.2)	✓	≥ 85%		
<i>Written Communication</i>	75.6% (+/- 2.5)	n/a	70.5% (+/- 1.4)				
<i>Oral communication</i>	74.9% (+/- 2.5)	n/a	72.3% (+/- 1.3)				
<i>Group collaboration</i>	78.3% (+/- 2.4)	n/a	75.3% (+/- 1.3)				
<i>Critical analysis</i>	92.2% (+/- 1.5)	n/a	88.4% (+/- 0.9)		≥ 85%		
<i>Problem resolution</i>	75.3% (+/- 2.5)	n/a	73.7% (+/- 1.3)				
<i>Reading and comprehension</i>	85.3% (+/- 2.1)	n/a	82.7% (+/- 1.1)				
<i>Learn on your own</i>	89.1% (+/- 1.8)	n/a	88.6% (+/- 0.9)				

**Performance Assessment:**

UBC **substantively achieved** the target.

•UBC is committed to improving the satisfaction levels.

% reporting “high” or “very high” level of development at university:

<u><i>Skill Development</i></u>	Year of Survey (2 years out)			
	2002	2004	2006	
Written Communication	n/a	80.2%	81.4%	70.5%
Verbal Communication	n/a	77.8%	77.5%	72.3%
Read and Comprehend Material	n/a	84.9%	85.6%	82.7%
Group Collaboration	n/a	74.5%	75.4%	75.3%
Critical Analysis	n/a	88.1%	89.1%	88.4%
Problem Resolution	n/a	71.4%	73.7%	73.7%
Use of Mathematics Appropriate to Field	n/a	57.3%	63.7%	48.6%
Use of Computers Appropriate to Field	n/a	50.5%	59.0%	53.9%
Learning on your Own	n/a	88.4%	87.6%	88.6%

# Efficiency

Measure	Target
Degree completion rate (7 year)	>= previous year
Student satisfaction with transfer	>= 90%

## Ministry Objective: Efficiency

Degree completion rate							
	Performance			Performance Assessment	Targets		
	2005/06 Actual	2006/07 Target	2006/07 Actual		2007/08 Target	2008/09 Target	2009/10 Target
Direct Entry Students	78.5%	≥ 78.5%	77%	✓	≥ 77%	≥ previous year	
Transfer Students	83.4%	≥ 83.4%	76.5%	✓	≥ 77%	≥ previous year	



# Efficiency

- Everyone stayed away from \$ per fte, student faculty ratio, faculty costs, class-size, \$research/\$academic
- (avoiding complexity, responsibilities, ambiguity
- Quality and Efficiency in Opposite Directions)

# Access

Measure	Target
University Admissions GPA cut-offs (direct entry)	Contribute to system level target of 75%
College Transfer Admissions GPA	System level target of 2.2
Number and percent of aboriginal students	>= previous year

Ministry Objective: Access

## Number and percent of aboriginal students

Performance			Performance Assessment	Targets		
2005/06 Actual	2006/07 Target	2006/07 Actual		2007/08 Target	2008/09 Target	2009/10 Target
354	≥ 354	627	☆	≥627	≥ previous year	≥ previous year
0.9%	≥0.9%	1.3%	☆	≥1.3%	≥ previous year	≥ previous year

# Comments on Access

- real issues are: Financial Aid, School system
- Ministry unable to accept that financial aid and student loans issues could not be captured by a single indicator.
- Articulation with schools...another ministry

# What does work?

“examine what colleges are doing to assess their own performance and how they make use of what they find”

Derek Bok, *Our Underachieving Colleges*

“...least in evidence in the universities I studied were processes or structures that encouraged the internal transfer of new knowledge on improving teaching and student learning”.

(Dill, 2003)

# What does work?

- NSSE
- Graduate surveys
- Student evaluation of teaching (formative, not summative)
- Organizational Cultural change
- scholarship of teaching and learning
- CCLA
- Targeted interventions (empirical and evaluated)/Chris Conway
- G13 comparisons: (eg: Time to completion)
- Carl Wieman: evidence based practice of teaching (not TQM; findings from learning theory, psychology, neuroscience, history of science)
- Provincial student flows, bottlenecks, co-ordination (excess demand studies)
- Small-scale IR has more potential than is realized – micro analysis
- Evidence based decision making is not TQM – (Social Science, “the Q” is the hard part)

# Changing (slightly) the practice of IR

- From “accountability” to “applied research”
- From descriptive to prescriptive
- From input/output to process
- Advocacy to Values based
- Desultory to theory based
- Report (publish) evidence-based practice (Conway’s big little book of good practice)
- Integrate IR with classroom, program, discipline
- Recognize the force of anecdotal information in forming narratives and theory
- More direct collaboration with faculty

- Less data collection → more analysis
- Less data collection → better data
- Smaller and fewer surveys → clearer objectives
- Enhance the credibility of the data

# The role of Governance

- Funding processes and research for evaluating educational programs, identifying problems, experiments...
- “examine what colleges are doing to assess their own performance and how they make use of what they find” (Derek Bok, Our underachieving Colleges)
- Board reports on institutional evaluation, research, innovation
- Publication, dissemination, discussion
- Comparatives and the associated analysis (G13) as a substitute for competition, and aid to understanding
- Greater attention to financial accounting as data collection versus audit