

Do Education Systems Count?

The Role of Administrative and Assessment Data

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## **Do Education Systems Count**

The program for this conference on empirical issues in Canadian Education offers a picture of the national and provincial policy and program agenda. Queens University's John Deutsch Institute, Statistics Canada, WRNET and Arthur Sweetman and Patrice de Broucker are to be congratulated for giving us an opportunity to discuss these critical issues. This conference is very important as it creates a forum for empirical story telling, an important event for class rooms, schools, at the school trustees tables, ministries of education and in the federal government's support of human resource development, innovation and the new economy, filling data gaps and scholarly research. In this paper I am suggesting that we need to better understand where teaching and learning performance management data fits in and how are education leaders using or not using data as we work to strengthen empirical research in Education. I am also putting forward the argument that we need to support the creation of research databases that will make data about the K-12 educational system in British Columbia and elsewhere available, in a user-friendly way, to school districts and schools, researchers, policymakers and other qualified individuals and organizations in a wide range of social science specialty areas, subject to privacy and confidentiality guidelines. This paper is not a criticism of our current assessments initiatives. It attempts to take a first look at an under examined corner of our practice – performance measurement and the organization of teaching and learning in our schools.

At Edudata Canada we are working with academic, school district and policy partners to make developmentally focused analyses feasible, that is, making it possible to link changes over time in student-level outcomes (achievement, attitudes, course taking, etc.) to systemic initiatives. In several jurisdictions outside British Columbia, student-level outcome data is either not available,

or it cannot be linked to the appropriate variables at the student level. Reports and analyses issued by ministries of education as well as by national and international organizations such as the Council of Ministers of Education of Canada, UNESCO, or OECD typically emphasize a public-accounts view of education rather than a developmental, student-focused view. They focus on system-level inputs (budget dollars, numbers of students, number of teachers, years in the system, etc.), outputs (number of graduates, numbers of dropouts, etc.) outcomes (Pan Canadian and international assessments.)

The signs of change are all around schools and school districts: information communication technologies, globalization, information overload, public sector restructuring, increasing public expectations, aging workforces, urban and rural community problems, and economic uncertainty (Bierema, 1999). In this context, it is easy for educators to be overwhelmed with the volume of information they could access. When working to cope with this volume of information, how do schools and school districts make sense of the data so that they can function as learning organizations? Dibella and Nevis (1998, 28) describe organizational learning as a series of three processes: knowledge creation or acquisition, knowledge dissemination and knowledge use. They argue that one way to understand the content of what is being learned is to ask what knowledge is being produced, acquired or disseminated in the organization.

A central empirical issue in Canadian education is performance management for the improvement of student achievement. The Organization of Economic Development and Cooperation (OECD) has described performance management as an area where "... managers in schools must not only think as managers of people and physical/financial resources, but also as managers of knowledge (OECD, 2001, 22). What does the information we collect, publish,

analyze and leave unexamined tell us about how to improve student achievement. Policy makers, practitioners and the general public use indicators to evaluate the performance of education systems and to inform decisions about education priorities and directions. It is only occasionally that we collect performance information about the teaching and learning of areas like reading, writing, mathematics or social responsibility. We do not collect sufficient information or provide trend information about curriculum, instructional practices, policies, and student background and attitudes. When we do gather such information we too often fail to invest in analyzing it and in disseminating the research in a manner that supports schools, teachers, administrators, students and parents.

The Pan Canadian Educations Indicators program sets out the Canadian context by providing population trends, estimates of children living in low-income situations, information on the educational attainment of the population. Nationally and provincially we profile: characteristics and features of the education system, which include educators, education finances, education outcomes, results of pan-Canadian and international achievement and assessment tests; graduation rates at both the secondary and postsecondary levels, and labour market outcomes experienced by individuals with different levels of education, focusing on the transition of recent postsecondary graduates from education to work. We do an excellent job of producing highlights and overall trends about the provincial education systems for policy making.

Statistics Canada, Human Resources Development Canada and the Council of Ministers of Education and the provinces have invested in The Programme for International Student Assessment (PISA) an international assessment of the skills and knowledge of 15-year olds, the School Achievement Indicators Program (SAIP) to assess the performance of 13- and 16-year-old students in mathematics content and mathematics problem-solving, reading and writing, and

science; and the Third International Mathematics and Science Study (TIMSS). These programs focus on assessing the skills and knowledge of students. To a lesser extent, we collect information from students, teachers, and school principals about instruction, home contexts, and school characteristics and policies.

Assessment, professional development and different forms of school accountability are being implemented across Canada and around the world. In my home province of British Columbia, school boards will soon enter into contracts with the education ministry, identifying weaknesses in their educational programs and listing goals for improvement (i.e. district initiatives to organize teaching and learning) as part of the Liberal government's policy for enhanced student achievement (Steffenhagen, 2001, 1.) The contracts will give trustees freedom to decide what students in their communities need, but it will also force them to make and document improvements. The Minister of Education, Christy Clark, has said that the government "... will build a system that measures and makes accountable those bodies that are responsible for delivering education," Clark makes the point that. "(s)chools and school boards will figure out how they're going to get student achievement up to the standards that we expect of them" (Steffenhagen.) .

In his testimony on October 16, 2001 before the British Columbia Legislative Standing Committee on Education, the Deputy Minister of Education Emory Dossell described accountability plans as follows:

We're asking them [superintendents] very specifically to look at the data they have. We have lots of data that we've collected. Look at the data; analyze the data. If in fact you have analyzed the data, have looked at that data, then based on that, what decisions are you going to make in order to increase the student achievement of the kids within your particular district? What plans are you going to put in place?

The plan that they put in place in Delta can clearly be different from the plan they put in place in Coquitlam or that they put together in Prince Rupert or Bella Coola or whatever the case may be, depending on their area of expertise, the population that they're dealing with and so many factors. In the first instance, are they focused on kids, and are they focused on kids' student achievement? That's the discussion that's taken place.

As Dosedell notes there are different approaches to improving student achievement. Cultivating a performance management culture is an essential strategy for improving student achievement.

North Vancouver and Langley School Districts like other school districts across the country are working to build up education information related to its curriculum and instruction performance.

North Vancouver priority performance projects are:

- ❑ Reading- The core foundation framework, firm foundations and early identification and intervention of students at risk for reading failure
- ❑ Mathematics- Grade 7-8 transitions, early numeracy
- ❑ Safe and Caring Schools- Service delivery model, managing violent incidents
- ❑ Improving the School Success Rate of First Nations Students- Removing obstacles to success, reading numeracy and writing, school completion rates, attendance

The draft mathematics performance plan set out in Figure 1 describes their over all approach to performance management.

**Figure 1 Improving Success Rates in Mathematics**

<b>Goal: To Improve Success Rates in Mathematics</b>		
<b>Objective</b>	<b>Strategies</b>	<b>Key Performance Measure</b>
Improve Math Proficiency at all grade levels	Write and implement a Math 44 instrument  Reduce the Gap between the intended and attained curriculum	Reduce the grade 8 and 9 failure rate by x% in June 2003 x% in June 2004

<p>Improve the success rates of students in grade 7 and 8 transitions in Mathematics</p>	<p>Implement the resource through inservice over 2000/01 year with grades 6, 7 and 8 teachers</p> <p>Test grades 7 and 8 students in June 2002</p> <p>Use data to revise resource and inservice materials</p> <p>Use materials in classrooms in grade 6-9</p> <p>Test all students in grades 6,7, 8 and 9 in June 2003</p>	<p>Foundation Skills Assessment Results and District Test</p>
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As Figure 1 details, performance management requires input information about curriculum, instructional practices, policies and standardized outcome information. The North Vancouver School District in their presentation to the Standing Committee on Education (November 2001) argued that “what the reforms of the past two decades have taught us is that specific goals, deliberate plans and powerful strategies to achieve these goals, accountability systems tied to these goals, well trained and supported teachers and support systems, strong leadership and teamwork produce the best results.”

Another example of performance management can be found in the Langley School District where a variety of external assessments are used in their education program. In this district assessment and reporting are a means to provide feedback regarding individual success or progress towards the achievement of significant learning outcomes. The following excerpt from the Langley strategic plan illustrates how they link assessment and reporting to successful academic achievement.

**Figure 1 Strategic Plan 1997 - 2000**

**Successful Academic Achievement with Skilled and Knowledgeable Learners**

Strategic Goals	Key Strategies. The district will:
<ul style="list-style-type: none"> <li>• To improve the level and standard of literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Set standards of literacy in grades 3, 7, 10, and 12.</li> <li>• Provide support through the provision of assessment and in-service</li> </ul>
<ul style="list-style-type: none"> <li>• To improve the standard of attainment in knowledge, skills and application of Mathematics</li> </ul>	<ul style="list-style-type: none"> <li>• Set standards for achievement in Math in grades 7, 10 and 12</li> <li>• Provide support through the provision of in-service and assessment</li> </ul>

A variety of assessment and reporting resources are used in Langley. Grade 12 examinations are used to support accreditation/school growth plans and provide instructional assistance.

Foundation skills assessments are used to monitor student achievement overtime, support accreditation/school growth plans and provides instructional assistance. Results from School District numeracy student assessments, science performance assessments, goals mathematics and tests of awareness of language segmentation are provided to teachers while school and district results are provided to principals. The district compiles Reading text levels and phonic awareness results for students and schools. These different assessment results are used to monitor and support early literacy within the district. Trends and schools needs are used to identify and support early intervention programs.

Performance management of instruction and accountability in both Langley and North Vancouver involves understanding student perceptions about their instructional experiences as well as their self-perception and attitudes toward subjects like reading, mathematics, out-of-school activities and home resources. It entails knowledge about teachers' use of instructional



materials, activities, and time and topic coverage (implemented curriculum), classroom resources, assessment practices, and teacher education and training. It also includes descriptions of school characteristics, school resources and school policies related to these subjects.

The Council of Ministers of Education in September 1999 stated that their “ actions will continue to be guided by five themes: accountability, quality of education, accessibility, mobility, and responsiveness to learner needs”. It is clear that in Canada we have proceeded to use and or create education administrative, assessment and examination data to plan and report on our actions at every level of the education system. What is not clear is what we are doing or not doing in relation to performance management. Some key questions are:

- ❑ where does performance management data fit in? and how are education leaders using or not using data?;
- ❑ as educators use data for performance management, is there any organizational learning going on?; and
- ❑ are educators acting as leaders?

As discussed at the start of this paper, reports and analyses issued in Canada focus on system-level inputs (budget dollars, numbers of students, number of teachers, years in the system, etc.) and outputs (number of graduates, numbers of dropouts, etc.). Developmentally focused analyses along with achievement information are among the performance management tools needed by educators to improve student achievement.

Each year across Canada, about \$40 billion is spent on K-12 education. In BC, the figure is approximately \$4.8 billion. Despite the magnitude of this expenditure, a lack of appropriate data infrastructure means that it is extremely difficult for policy makers, school districts and

researchers to access the data needed to conduct research on the efficacy of the educational system. We need to understand:

- ❑ what makes our schools successful and how tax dollars for education are invested; and
- ❑ how educational variables are linked to health and well being, and
- ❑ what is the nature of the relationships between success in school and success in the community and the labour market?

In addition, separate data sets have never been organized into a centralized and accessible, research-oriented database. The data collected by the ministries of education and other educational stakeholders is collected primarily for administrative purposes, including budgeting and accountability. Although the data works well for those purposes, it is not widely used by school districts or researchers. A major obstacle confronting researchers wishing to use this data, is that they must spend a great deal of time learning about how the data is organized and how the information may have changed over time as the data-collection instruments were revised. Only school districts or researchers with access to considerable resources of time and money—as well as the expertise involved in working with large datasets—can cope with the requirements of such a steep learning curve, and doctoral students or beginning researchers are often not able to benefit from the available data. At Edudata Canada we are also working to set up data projects to support school districts and researchers to investigate questions about performance management, policy and best practices in education.

In closing if we are to champion outcome data and developmentally focused data, it is also necessary that we, as a professional community, need to speak out when assessment snapshot data are used out of context and inappropriately as baseline measures of school performance. If we are to succeed in supporting education leaders in their efforts to improve student achievement

we need to work together and establish public education tools that actively address the inappropriate use of achievement testing results.

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