

The Global and the Local: Policy and Policy Processes for Education

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Abstract

The “education revolution” must be understood as a critically important part of a more general information revolution—one front in a larger campaign. Policies addressing the implementation and use of new technologies within education find themselves firmly entangled within overall information and economic strategies. Increasingly, education policies find themselves straddling boundaries between educational and economic objectives, even subordinate to them. In this article we identify and clarify some of the most pressing issues arising from the implementation of computer-based technologies in schools. These questions include: technological, infrastructure, human resource and learning policy issues and questions of public policy in an increasingly technocentric and commercial education environment.

A New Policy Context

“It’s like riding the front car on the roller coaster ... It may look like you’re steering the cars, but in fact you’re just holding on.” This is how the head of the U.S. House Telecommunications and Finance Subcommittee, Rep. Edward Markey, described his role as a key policy-maker in 1994. It is a cautionary statement, graphically reflecting the type of shell shock we have witnessed among teachers, principals, boards, and bureaucrats involved in education policy-making across Canada and the United States today.

An information revolution has shaken the world. The effects of this revolution are visible on micro and macro levels—from the details of the way people live their lives every day, to the highest decisions of government. The *Economist* put it this way: “by reducing the cost of communication, IT (information technology) has helped to globalise production and financial markets. In turn, globalisation spurs technology by intensifying competition and by speeding up the diffusion of technology through direct investment. Together, globalisation and IT crush time and space” (The Hitchhiker’s Guide, 1996). Most countries are greeting the emerging communication technologies with new sets of globally harmonized regulatory and economic policies. In the formulation of these policies, they are facing the simultaneous turmoil induced by a series of related fundamental global trends: world-wide policy deregulation in telecommunications, the collapse of traditional national market barriers, economic concentration in truly transnational companies, and breathtaking technological innovation, as communication technologies converge into a digital sea.

This has led to profound questions about the role and nature of policy itself. Are the old values attainable—or even desirable—anymore? Policy-makers everywhere have begun to find their traditional policy contexts inadequate, indeed irrelevant, to their work.

Policy decisions are crucial here. But never have policy makers seemed so overcome with events, so dazed, in such disarray. The information revolution has challenged the functions and capabilities of policy itself.

In *The End of the Nation State*, Kenichi Ohmae questions whether nation states actually function anymore as the primary actors in the world's economy. He cites the corrosive effects on national economic structures of the "four I's": investment capital, industrial production, individual consumers, and information technology. Investment capital is no longer geographically constrained, but flows towards the best investment opportunities. Industry is increasingly transnational, driven by the quest for global partners and markets. Individual consumers increasingly search out the best and cheapest opportunities around the world. And finally, information technology makes all of the above possible, allowing investment capital, industry, and individual consumers to act and work and think and learn on a global basis. Ohmae (1995) argues that "the mobility of these four I's makes it possible for viable economic units in any part of the world to pull in whatever is needed for development ... This makes the traditional 'middleman' function of nation states—and their governments—largely unnecessary. He goes on to describe the concept and practice of "national interest" as a "declining industry."

What is Policy and How is Policy Made in a Global Age?

Policy is that set of written and unwritten rules and guidelines that institutionalize and put into operational forms the social contracts that define our institutions and organisations. Policy is at work at both macro and micro levels of governance and control: in government at all levels, and in virtually all other public and private institutions, including our universities and our school systems. Policy addresses both institutional procedures and institutional goals. It provides a framework for the structure of decision-making within an organization, and it rationalizes the decision-making process in the context of substantive and idealized value sets that represent the goals of the organization. According to Ernest Wilson (1997), policy development typically proceeds in distinct phases. In a first phase, technical issues are propelled into public view and onto the action agenda of senior policy-makers. Policy is then developed in consort with the implementers, who explain the cutting-edge features of their work and the social problems it will solve. Only in a subsequent phase are more critical issues engaged: the institutional, political, and power distribution issues, and the question of winners and losers and how a balance can be achieved among them.

In the realm of fiscal policy, and especially in relation to education, few policies address the ways in which introducing computer technologies into classrooms have interrelated practical implications for staffing and human resource development, curriculum development, professional development, and a range of other issues. Much of the discussion about the need to use computers in our schools is either explicitly or implicitly concerned with changing the way in which our schools operate—making them more "efficient"—changing the way teachers teach, or adapting their goals to better match broader societal ends (AAUW, 1999; National Academy of Science & National Academy of Engineering, 1995). However, a growing body of research has documented few significant changes to educational practices and inequitable social relations as a result of computers in schools (Bryson & de Castell, 1996; Huber & Schofield, 1998; Schofield, 1995; Sutton, 1991).

Canadian public policy in all areas has become concerned with the country's transition to a "knowledge society." This transition has brought increased attention to education, which is considered to be a primary engine and infrastructure of the "knowledge economy." A dramatic result of this shift has been an added emphasis on information technology in our schools. Provinces and school boards are seeking corporate donations and partnerships to increase the critical mass of computer technology (Shaker, 1998; see also <http://www.schoolnet.ca>). Technology implementation has become a key resource issue for education. For example, the Province of British Columbia committed \$100 million between 1995 and 2000 towards computer hardware and software and teacher training. In 1998, B.C. announced an additional investment of \$123 million over six years for the development of PLNet, a network to electronically link the province's public schools, colleges, and institutes. Similarly, the Province of Alberta targeted a Technology Integration Fund of \$102 million to provide "as many computers in the classroom as possible" by April 2001 and, in 1998, Ontario's provincial government committed \$130 million over two years to electronically connect schools and school boards across the province, in cooperation with the private sector. In addition to these kinds of provincial initiatives, the 1998 federal budget committed an additional \$205 million over three years to Industry Canada's Community Access Program and SchoolNet, to promote the use of information technology in schools and libraries. Policies addressing the information revolution are largely intended to map, steer, and facilitate institutional change in light of the promise of a technological and economic revolution. They are often "out-front" policies, leading social change.

Global Policy Convergence

On a global scale we now seem to be faced with a phenomenon that can be called "policy convergence": new, harmonized policy alignments brought on by the communications revolution, and the global economic changes in which it is occurring. Nation states themselves are less relevant. National value systems seem more archaic. The protections of time, space, and cultural uniqueness seem to be washed away

As we are entering a new age of information, so we are entering a new age of policy. Quickly and surely, policies are converging. The policy-maker's job has switched from policing to promoting. The role of the policy-maker in the past has most often been to moderate market forces in light of national, regional, or local goals; but the role now is switching to the moderation of these local goals in light of new global economic and technological imperatives: competitiveness, mobility convergence, globalization, interoperability. The social context and the values that have guided public policy are rapidly evolving in line with the development of a dominant, market-based, macro-economic policy largely identified as "neo-liberal."

In Canada, for example, policy-makers have largely shifted their focus away from cultural protection and protection of the public good in the traditional sense of "protecting national values." The Canadian government's commitment to a globally oriented, privately developed, market-based regulatory framework, the commitment in its educational system to developing "knowledge workers" for the "knowledge society" (which is inarguably a global society), has thrown into question the nationalistic communications and education policy frameworks of the past several generations. As a new communications infrastructure is being established, a new value system becomes dominant, and an entirely new policy framework is developing as well. In

justifying their policies, governments have employed idealistic and simplistic visions of what the information revolution will mean. In their rush to remain competitive with the United States and the rest of the world, few Canadian policy makers are asking truly fundamental social questions about the risks and the changes they may be rushing into.

Education Policy: The Global Meets the Local

The “education revolution” must be understood as a critically important part of a more general information revolution—one front in a larger campaign. In this micro realm we find the same transformation of policy and the same transformation of values that we which find in the larger macro-economic and information policy spheres.

Policies addressing the implementation and use of new technologies within education find themselves firmly entangled within overall information and economic strategies. Increasingly, education policies find themselves straddling boundaries between educational and economic objectives, and even subordinate to them. The “ivory tower,” if it ever existed, exists no more (see also Lewis, Massey, & Smith, 2002).

In our work we have identified and clarified some of the most pressing issues arising from the implementation of computer-based technologies in schools. These questions include technological, infrastructure, human resource, and learning policy issues; questions of sustainability; questions of gender; and questions of public policy in an increasingly technocentric and commercial education environment.

With these questions in mind, we spent two years examining the implementation of computer technologies in Canadian schools. During this time, we visited 32 elementary and secondary schools across Canada . These school visits took us to 17 different school districts in six provinces—Alberta, British Columbia, Manitoba, Nova Scotia, Ontario, and Quebec—where we not only visited schools but also interviewed school district staff and officials, as well as representatives in several of the provincial ministries of education.

Through our interviews and observations, we understood the importance of and need for strategies designed to address how and why choices are made, who makes them, and to what effect, both intended and unintended. Too often the reverse happens: technology changes rapidly and decisions are made in a more or less ad hoc fashion, as administrators scramble in response to the initial promises of technology. And then these same administrators, as well as teachers, students, and parents, must face unforeseen problems and demands triggered by its implementation.

There is a critical need for an approach to the implementation of technology in our schools that pays attention to questions of policy, organizational culture, politics, and decision-making practices. Technology for whom, why, when, where? What value does technology add to the educational experience? How are the decisions made? By whom?

These can all be understood as “local” questions, grounded in the needs of local communities, circumstances, and contexts. Yet these local questions—answers to which we believe are key to

the successful implementation of any plan for education, technology, or otherwise—are too often subsumed by the global issues, objectives, and assumptions of plans to develop “knowledge workers for the knowledge economy.” This is not to say, however, that the “global” is not a political space in which a particular dominant local seeks global control; on the contrary, all too often *global* interests are decidedly local ones freed from local, national, and international restraints. The global does not represent universal human interest (think here of U.S. foreign policy and Iraq), but instead a particular local and parochial interest that has been “globalized” in order to strengthen its local position, interests, economies, and so on (Shiva, 1993).

It is as if a major social fault line has shifted: there has been a shift in our relationship to almost all social activity—which seems increasingly judged and evaluated against a touchstone of macroeconomic objectives and priorities. Education has not escaped this shift. If education had once been an objective, a goal, a final cause, for many of its leaders, movers, and funders it has now become much more purely a means to the end of a more efficient and competitive economy and workforce, captured within the notion of the “knowledge economy.”

The past few years have seen an extraordinary amount of interest and investment in the deployment and use of computers and computer networking in Canadian public schools: hundreds of millions of dollars and millions of hours of work and worry invested into the planning and implementation of technology. Investments are made on the federal level, and they are repeated and/or matched throughout Canada, from Newfoundland to Nunavut . Governments at all levels have made ambitious promises about equipping classrooms with computers, and have devoted significant funds towards fulfilling objectives, including the promotion of computer skills, networking students around the country and the world, and implementing courses through distance education.

How Policy Matters

Our fundamental notions of the purpose and value of education have been drifting, migrating from a primary interest in civic, moral, and individual development, from service to families and communities, to the interests of a developing economic and technological infrastructure. Education as a goal in itself, and as a vehicle for the development of the individuals and citizens, has been largely devalued in the context of these global changes. Technology policies tend to reflect this shift in basic assumptions: technology policies for schools have been developed, implicitly or explicitly, in alignment with a larger, fundamental shift in values that tends to privilege economic activity and technology as ends and favour one-size-fits-all solutions to diverse problems.

Although policy drift reflects social drift, this is not a one-way process, nor is it a simple, one-on-one relation. The global can never properly account for and respond to the local and the particular. The local is always grounded in the reality of peoples’ lives, and it is always potentially a site of resistance and creativity. Policy decisions made at the lower levels—the classroom, the school, the district, the region—feed back in to the system, and ultimately help determine the direction of change and the velocity of change. And the way in which policy decisions are developed encourages or discourages the buy-in of its participants and stakeholders.

Policy-makers and administrators at the school, school district, and governmental levels have a decisive impact on the direction of any school reform (Glennan, 1998). Parents are also important: often the key driver for technology in the classrooms, parents need information to judge the educational “value” of different types of learning resources. They would ideally be part of the policy-making process. And in the classroom, teachers must be given the ultimate responsibility for determining the appropriate application of these tools. It is where we find this type of process that we find successful technological implementation and practice.

Policy Directions

The overall picture we would paint of healthy, policy-making process for education is one in which an enabling, supportive context for experimentation comes from the top and specific applications and innovations come from the bottom, fully grounded in an understanding of local learner needs.

Policy makers might first ask *why?* What is the vision, the reason for change? What are our goals? Where do we want to go? These are the fundamental questions that should be driving technology policy for our schools. Defining and co-ordinating this vision is the first task of policy leadership. Provinces should have technology plans, with clear goals. Boards should have plans. Schools should have plans. And good planning should be rewarded with resources, up and down the chain. These plans have to be grounded in local and regional concerns: what do we want our children to learn? What works best as a learning strategy, a learning technology—why and for whom?

Policy-makers should also see technology as a means, not as an end. They should adapt a “value-added” approach to technology: there is no single solution because there is no single problem. Technology-enhanced learning must not be understood as an alternative to the traditional and legitimate teaching, training, service, and community functions of a school, but as a way to add value to each of these functions in specific cases. How can the introduction of technology enhance learning, help build community and citizenship, expand the horizons of our learners, add value to the education experience, and help us achieve our traditional educational goals, as well as new objectives?

Policy makers should also ask *how?* A transparent and inclusive policy process is essential. At each level, managers need to think carefully and consciously about the appropriate process for the development of policy. These processes need to appear, and in fact must be, transparent and inclusive. They should also be locally appropriate—fit the institution and its history and culture, thereby embodying local/regional knowledge, and including an implementation strategy. We are no longer entirely pioneers—we have a considerable body of successful and unsuccessful practice in front of us and we can learn from those examples. A first step should always be to attempt to foresee the problems, generate possible best practices, critique these practices in light of the local circumstances, and attempt to generate local solutions.

And finally, policy-makers should be prepared to ask *what if?* We must reward experimentation, make room to play and grow, make room to fail. We need to increase the critical mass of examples of successful practice, at the local level. We need good teachers teaching great courses,

made better through new tools. Schools should encourage and legitimize innovation, create an environment that encourages risk-taking, and publicize it. The end result should be a critical mass of good examples, well publicized—as well as mistakes made and lessons learned (which is equally valuable). Policies have to be formulated that support innovation and make it sustainable, once achieved—incentives for innovation, professional development policies, and policies designed to sustain both the technical and human resource infrastructures that are required.

A transparent and responsive policy practice combined with a value-added approach to technology will enable teachers to feel in control of these technologies, and encourage them to become innovators themselves, in their own attempts to fulfil the goals of their professional practice.

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References

American Association of University Women (AAUW). (1999). *Gender gaps: Where schools still fail our children*. New York : Marlowe & Company.

Bryson, M., & de Castell, S. (1996). Learning to make a difference: Gender, new technologies and in/equity. *Mind, Culture and Activity*, 3(2), 119–35.

Glennan, T.K. 1998. *New American schools after six years*. MR-945-NAS.

The hitchhiker's guide to cybernomics. (1996, September 28). *The Economist*, p. 1.

Huber, B.R., & Schofield, J. (1998). "I like computers, but many girls don't": Gender and the sociocultural context of computing. In H. Bromley and M.W. Apple (eds.), *Education/technology/power: Educational computing as social practice*. New York : SUNY.

Lewis, B., Massey, C., & Smith, R. (2002). *The tower under siege: Technology, power and education*. Montreal & Kingston : McGill-Queen's University Press.

National Academy of Science and National Academy of Engineering. (1995). *Reinventing schools: The technology is now*. Washington, DC: National Academy Press. Available at <http://www.nap.edu/readingroom/records/000techgap.html>.

Ohmae, K. (1995). *The end of the nation state*. New York : Simon & Schuster.

Schofield, J. (1995). *Computers and classroom culture*. Cambridge: Cambridge University Press.

Shaker, E. (1998). *The North American education industry and education restructuring in*

Canada . Education Limited, 1.

Shiva, V. (1993). The greening of the global reach. In W. Sachs (ed.), *Global ecology: A new arena of political conflict* (pp. 149–150). London : Zed Books.

Sutton, R. (1991). Equity and computers in the schools: A decade of research. *Review of Educational Research*, 61, 475–503.

Wilson , E.J. (1997). Introduction: The what, why, where and how of national information initiatives. In B. Kahin & E. Wilson (eds.), *National Information Infrastructures Initiatives*. Cambridge, MA : MIT Press.

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