

## FORUM

# Teaching with Technology\*

## Three Questions Concerning Distance Education

DISTANCE EDUCATION has a facilitating and democratizing effect on education for many people. In Canada, with remote communities and a smaller population base than the United Kingdom or the United States, the expansion of distance education opportunities for many people has real potential for improving the quality of life and enhancing employment capabilities. Distance education is also a rapidly expanding industry. There has been some concern over the negative impact of web-based shopping on local economies, and this same fear has been expressed about the consequences to the financial viability of small regional universities when distance education corporations infiltrate academia. Certainly, some university administrators see this as a threat, whether or not their fears can be substantiated.<sup>1</sup>

The difficult financial straits that many universities find themselves in is hardly news. Rising fees, attrition of faculty, replacement of tenure-track jobs with temporary, low-paying positions, increasing student-teacher ratios, hiring corporate-minded administrators and engaging in labour struggles with employees have not erased the money problems of universities. Distance education has been touted as a way to increase “production” while keeping costs disproportionately low. After all, most of the infrastructure (library, staff, faculty) are already available. It is believed that a certain amount of expansion may be possible by pushing these resources a little further, if actual material classroom space were not limited (assuming the space is being somewhat utilized outside of traditional daytime teaching hours). But virtual space is crying out for expansion, and the distance classroom of students’ own premises or workplaces is infinite, even if “distance” only means an apartment two blocks from campus.

It was these considerations that precipitated my encounter with distance education at the University College of Cape Breton. In the mid-1990s university administrators announced that if the doors were to remain open, 60 per cent of the university’s students would have to be involved in distance education courses by approximately

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<sup>1</sup> The financial strangulation of higher education is a generalized condition. Universities are increasingly pushed to be efficient, competitive and entrepreneurial. See John Smyth, ed., *Academic Work: The Changing Labour Process in Higher Education* (Buckingham, U.K., 1995).

2005. We were told that within a very few years the American universities would be allowed to enter the Canadian distance education market and that we had a short period of time to acquire a share of this market before Atlantic Canada would be flooded with American programmes. The university, we were told, was behind the rest of the Atlantic Canadian universities in establishing a presence in the world of distance education. Thus, there was a sense of great urgency about expanding our small number of distance courses, which up to that time were primarily correspondence courses.

These are the circumstances under which my colleague Rusty Bittermann and I undertook to convert the core courses of our department into a distance-learning format. There were several reasons that I was interested in this project. Because our courses were centred around small-group problem-solving directed at real community issues, I felt that this format was particularly suited to helping small, isolated communities enhance their abilities to cope with local issues. There is a difference between selling a manual, such as with traditional correspondence courses, and being a part of a participatory, reciprocal relationship of mutual education – a strong possibility given the original student empowerment hopes of the Problem Centred Studies programme. This would be particularly important should we be engaged with First Nations or isolated traditional communities. Courses offered through the Problem Centred Studies programme could develop leadership, citizenship skills, democratic participation and personal involvement at the local level. Through facilitating learning among diverse communities, distance education could be a vehicle of increased communication between southern, northern, urban, rural and isolated communities. This possibility was centrally important to my own interests in teaching political studies and social justice activism. Indeed, these dimensions of problem-based learning are what originally attracted me to the Problem Centred Studies Department at the University College of Cape Breton.

I was also interested in the distance education project because I felt it would enhance access to post-secondary education for Atlantic Canadians who could not afford to attend a campus-based institution. I had also noticed that among on-campus students a kind of acculturation occurred in the first few months of term. Many on-campus students who entered university excited to learn assimilated gradually into a student culture of low expectations and low performance. Consequently, I felt this homogenization and reduction of expectations might be avoided by off-site access to the learning process.

Finally, I was interested in developing our courses for distance students because it was my experience that while the original degree documents that described the Problem Centred Studies courses planned a rigorous and intelligent programme, in actuality the programme had been gutted of intellectual content, had shed its direction and had been unfaithful to both Problem Centred Studies principles and basic educational expectations. I thought that it might be possible to be more true to the original ideals and intellectual strengths of the Problem Centred Studies programme off-campus than on.

From my research and experience with this project, there are three issues I would like to address regarding distance education. First, I question the assumption that distance education is necessarily a panacea for the financial woes of universities. Second, I draw attention to the importance of having infrastructural adjustments in

place before programmes are offered. And finally, I am concerned with governance and faculty issues which cannot be left to work themselves out on an ad hoc basis.

Distance education can be a way to partly address funding shortfalls of universities because the cost per unit is presumably less than the cost per student in a classroom. It is also the case, however, that the cost of distance education can be greater. There is some literature that suggests that “In spite of their initial lure, distance education strategies can be incredibly expensive in terms of both resources and money”.<sup>2</sup> With distance education the fixed costs (infrastructure, equipment and course development costs) are high but variable costs (course delivery and distribution) are low when compared with classroom teaching. But this depends on the numbers. For small enrollments, classroom teaching is frequently the less expensive option. Costs for starting up distance education courses can be significant. As the number of students increases, technology becomes more cost-effective. Thus distance education relies on economies of scale, and this may be difficult for some small universities in Atlantic Canada to achieve. Drop-out rates for distance education are high. Distance students require enormous support, both in terms of attention and the quality of course materials (which must be clear, well spaced, attractive and self-explanatory — not qualities of your average off-the-shelf textbook). Even if the cost per unit can be kept low enough and the enrollment numbers high enough for individual courses to be profitable, it is often the case that when the drop-out rate over the cost of the degree is calculated, the cost per *graduate* may still be higher than in the conventional learning environment. It simply cannot be assumed that jumping onto the distance education bandwagon is going to be cost-effective for small institutions which have smaller infrastructures to begin with.<sup>3</sup> These institutions may have unique offerings, such as the Problem Centred Studies courses at the University College of Cape Breton, but such programmes typically have small enrollments. Consequently, they are already expensive to run. Converting to distance education may do nothing to reduce a drain on overall university budgets.

Profitability also depends on the distance education system used. Richard Freeman refers to three models – the Traditional Model, the Bought-In Model and the Materials-Creation Model. Each involves increasingly higher fixed costs. Both the risk and the number of students required to reach the financial break-even point rises accordingly. The safest system is the Traditional Model, where simple conversions of existing courses are used, and where the course proceeds only if enough people register to make it financially viable. The risks are low but the financial return is also low.<sup>4</sup> To have a meaningful overall impact on struggling university budgets, distance education has to take much bigger risks, undertake significant fixed costs before income is generated and go for the mass market.

For only one or two courses it is more cost-effective to contract out. For example, eCollege.com will either develop and host a whole course for an institution, or simply

2 Charles J. Fornaciari, Monique Forte and Charles S. Matthews, “Distance Education as Strategy: How Can Your School Compete?”, *Journal of Management Education*, 23, 6 (December 1999), pp. 703-18.

3 Greville Rumble, *The Planning and Management of Distance Education* (London, 1986), pp. 63-82 and *The Costs and Economics of Open and Distance Learning* (London, 1997), p. 105.

4 Richard Freeman, *Managing Open Systems* (London, 1997), pp. 136-8.

post existing courses on the web. But to develop effective discussion forums, provide quality tutoring and marking, ensure constant student support and provide quality course materials is labour-intensive, and the institution still has to pay the costs.

A commonly-held belief posits that the most advanced relevant technology is necessary in order to deliver an efficient distance education course. However, at least in the short term, this will increase costs. The proportion of fixed costs within the total cost can exceed 50 per cent.<sup>5</sup> Costs of going “big” include graphic designers, media producers, web programmers, instructional designers, project managers, interface designers, curriculum development specialists, researchers, administrators, support staff and a general manager. Networks, computers (average life less than four years) and support staff are required. Constant software upgrades and staff development are on-going costs; indeed, one may argue that the high cost of technology is recurrent in most of the major areas of hardware, software and development.<sup>6</sup> Thus going distance in a significant way and taking advantage of economies of scale is not always the road to reduced spending.

To finance distance education costs it is necessary for an institution continually to go after new markets, which in turn means more spending for market assessment, promotion, studies and advertising. Given the increasingly competitive market in distance education, achieving a productive share of the market requires an on-going aggressive strategy. All this money has to come from somewhere, and that source is likely to be the operating budget of the university. Eventually the budgetary effects of the fixed costs of distance education will trickle down to faculty and departments and may be addressed in a number of ways. In some cases “inefficient units” may be closed out while another strategy is to eliminate faculty positions, convert existing courses to a distance format and shift the balance away from on-campus courses toward distance education.<sup>7</sup>

At the University College of Cape Breton there was a great sense of urgency to have the distance version of the Problem Centred Studies courses up and running within a year, which meant there was no time to do a needs assessment among our potential students. One might assume, however, given the chronic high rate of unemployment in Atlantic Canada, that distance students might well be interested in acquiring job skills but would have little expendable income with which to achieve this education. It was one of my hopes that students, especially those from isolated communities who had had to leave school with their education incomplete,<sup>8</sup> would be able to complete their degrees via distance. Thus questions concerning hidden costs for potential students were important as we began to convert the Problem Centred Studies courses. If the infrastructure necessary to deliver quality distance education

5 Rumble, *Costs and Economics*, p. 105.

6 A.W. (Tony) Bates, *Managing Technological Change: Strategies for College and University Leaders* (San Francisco, 2000), chapters 3 and 4.

7 *Ibid.*, p. 159.

8 Most of the students in our degree scheme, Bachelor of Arts in Community Studies, were the first in their families to attend university. As a result of the collapse of the fishing, mining and steel industries in Cape Breton and Newfoundland, many people were forced to find alternative futures. The University College of Cape Breton also had significant numbers of retraining adult students and single parents whose partners had gone away to find work. And, because of the small-group work in our programme we knew well the extreme hardship of many of our students.

courses is not already established, distance students themselves may end up paying institutional costs for which they had not planned.

One infrastructural issue of particular concern to us at the university was the access available to reading and research materials through library facilities. In response to our inquiries, we were told by the Extension Department, which would be offering these courses, that in spite of this push for a rapid development of distance education courses, there was no allocation for increased library services. Librarians already struggling with their own tight budget to maximize library services for existing on-campus students would now be asked to find money within their own fiscal resources to provide as yet unnamed and unidentified services to distance students. Is it expected that these costs will be absorbed by existing library budgets already stretched to their limit, or will they be passed along to the department or to the student? In addition to distance education problems in using traditional library services, questions also arise which deal with the new technologies. For example, if an electronic reserve room is developed, who establishes and maintains this? Does the library have enough and appropriate full text/image databases to fill the needs of distance students?<sup>9</sup>

At the University College of Cape Breton some enthusiasts were suggesting we market our courses to East Africa, which was perceived to be an emerging market for distance courses. This raises many more questions about adequacy of library holdings (not to mention questions of neo-colonization and abuse of vulnerability). Large institutions are able to provide extra funding to the library to cover such expenses, but for small universities looking to increase distance enrollment these basic aspects of library access could prove to be a significant expense.

The result may be that distance students are left primarily with internet resources. While the internet has greatly increased our access to information and texts, I do not think there are many of us who would be content with students doing all their research entirely on the internet. In any case, for an economically disadvantaged student or those living in remote areas, computer access may be limited. Our concern when developing the problem-based learning courses for distance education was that we consider the most remote, economically-disadvantaged student. We envisaged students who may only have limited computer access and may only be able to use someone else's computer, or have access to one in a band or government office, for a few hours a week. This was indeed the case for some of the students I talked with who had to return home because they ran out of money or because they had family responsibilities.

The heart of distance education is student independence, and this means faculty have to think about the difficulties of the distance learner and how these can differ

9 I doubt if this situation was unique, and it raises questions for small universities generally. How will library-held books and journals be made available to distance students? Will books be available via mail? Who will pay the postage in each direction? How many person-hours does it take to package and mail books from the library to distance students? What about photocopying? Will distance students be able to obtain photocopies of articles from non-circulating journals? If so, who will do the photocopying? How much library-assistant time will be allocated to this activity? Some of these and other questions of cost and access are addressed in George P. Connick, *The Distance Learner's Guide* (New Jersey, 1999), pp. 75-6.

from those of the traditional student on campus. In Atlantic Canada students come from diverse backgrounds, cultures, communities, educational experiences, varying ages and with different goals. Yes, we can simply convert existing courses to distance and let students self-select as to their ability to cope, but this approach would not be conducive to retention. Our job is not the same at a distance as it is on campus. For faculty to acquire new skills related to distance education, such as course design, distance education technology and new pedagogies, requires resources, time and commitment on everyone's part.<sup>10</sup>

Even getting textbooks can be a problem for many distance students. For example, bookstores often have a policy that cheques must be cleared before they will ship materials. This would delay course work for regional students, let alone for international students such as the East African students proposed by some administrators at the University College of Cape Breton. Months could go by before students received basic course materials.

To make distance education work for an institution, credible and respected leadership is required.<sup>11</sup> In places for which distance education is an act of fiscal desperation and which lack a coherent vision of how distance education fits within a university's comprehensive educational plan, it is difficult to ensure quality and current programme offerings. In small institutions it is left for faculty to monitor distance courses to ensure quality, currency and effectiveness.

Post-industrial markets are volatile and quick-shifting. For distance education to be economically advantageous for an institution, it is best not only to go after economies of scale (the modernist industrial imperative) but also to actively seek out and cater to niche markets (the post-industrial marketplace of small-scale and rapid change). The decentralized model of university governance has meant power at the level of departments and faculty. This makes for an awkward and slow method of institutional decision-making. To increase distance education programming flexibility there will need to be a move toward centralization of power (while maintaining a de-centred model in terms of work). Top-down decision-making allows quick decisions, but this shift in governance would require a major shift in university culture and structure.

Changes accompanying distance education have their parallel with the post-industrial workplace. Even within the academy it is possible for labour to become polarized, with a highly skilled, higher-paid echelon of those who teach on campus and/or develop distance courses, and a lower-paid, less qualified level of contracted instructors who conduct the courses on-line (possibly from home), supervise on-site, answer telephone inquiries and mark assignments. In this scenario, we would see the de-skilling of academic jobs as many well-educated individuals see their roles reduced to the supervision and administration of packaged courses.<sup>12</sup> The courses

10 Roger Lewis, "Staff Development in Conventional Institutions Moving Towards Open Learning", in Colin Latchem and Fred Lockwood, eds., *Staff Development in Open and Flexible Learning* (London, 1998), pp. 24-9. For a detailed example of the esoteric concerns of designing courses for distance education, see Derek Rowntree, *Teaching Through Self-Instruction: How to Develop Open Learning Materials*, (New York, 1990).

11 Finding such leaders is no small task. As the skill-set necessary for running today's university looks more like that of the M.B.A. than the Ph.D., universities are going outside the academy to the corporate world to find their presidents. See Ross H. Paul, *Open Learning and Open Management: Leaders and Integrity in Distance Education* (London, 1990), pp. 55, 59.

would be devised and updated by small and flexible operation units, able to quickly develop courses for niche markets of students, such as specific industries or sectors of the community. These workers would be well-paid and have secure jobs.

Professors are highly educated, independent, relatively autonomous and are trained to be researchers, not professional teachers. In the post-industrial academic workforce, the emphasis is on routine, structure and form. Consequently, the focus is on the transmission of knowledge, not the production of it.<sup>13</sup> It is likely that over time, a sessional instructor in the post-industrial academic distance education workforce may shift her or his own relationship to knowledge. As they administer more and more courses to make a living, contract instructors may not (as is often the case already) have time or the resources to conduct their own research. Consequently, they may lose the sense of knowledge as a produced, human product and begin to teach academic content as objective, trans-historical fact. This relationship to knowledge follows a consumerist model. It does little to build critical-thinking citizens, and it is a foolish, short-sighted waste of our educated, creative colleagues who have a significant contribution to make to an intellectual world beyond the academic “sweatshop”.

Regardless of whether or not this speculation pans out, however, proper distance course development, delivery and revision takes time away from other pressing activities such as research. There also may be considerable administration and supervisory work if a course involves on-site tutors or lab instructors. Distance education demands may take up time usually spent engaging in the traditional academic requirements of research, classroom teaching, course development and community service. However, there is usually little recognition in the tenure and promotion process of the unique demands on faculty of distance education. This aspect of distance education must be counted and rewarded as legitimate university academic labour if people are expected to rise to the needs of the distant learner.

Another problem we found at the University College of Cape Breton was that, after we had spent a year rushing to develop the Problem Centred courses for distance education purposes, we were not allowed to teach them as part of our regular load. Given that the department strongly “encouraged” everyone to teach one or two overloads already, it was unimaginable to take on the distance education versions as well. Because distance students have a high drop-out rate, and given the unusual nature of the Problem Centred courses, we had scheduled 12 months for students to complete each Problem Centred Studies course (on-campus courses were two-term). We also realized that the distance students would need constant support, especially if they lived in isolated areas or did not have strong academic backgrounds. Consequently, we anticipated that teaching the distance education versions would require a significant commitment of time on-line with the students. It was also clear that whoever taught these courses needed to have the particular experience of having taught them on campus and an understanding of weaknesses likely to be exacerbated at a distance. However, as the courses had the purpose of generating money for the

12 Greville Rumble, “Labour Market Theories and Distance Education III: Post-Fordism — the Way Forward?”, *Open Learning*, 10, 3 (November 1995), pp. 25-7, 32.

13 Bates, *Managing Technological Change*, chapter 5.

university, they were to be offered through the Extension Department and would be taught by an instructor who would be paid \$200 per student. Problem Centred Studies courses at the University College of Cape Breton are operated on a watered-down problem-based pedagogical model. Each course is based on a team approach, with problem-solving groups ranging from five to nine students. Even on campus, they require considerable attention and, frequently, intervention (in spite of the hands-off myth of the department) to be successful. On campus an instructor would have two of these groups at the same time, located in adjacent rooms. However, we did not expect groups at a distance to be any larger than about seven. But even with nine at start up, the instructor would receive \$1800 less taxes for the entire year's teaching of this course. This is a particular example, but it does lead us back to the issue of compensation and career consequences for faculty who engage in distance learning. If courses become standardized in content and form, and if the point of an education is nothing more than the accumulation of bits of apparently true facts, it becomes harder for faculty to argue for their relevance or their value.

In the end, we never did teach the courses we worked so hard to write. I still believe that distance education is a valuable way to provide education for those who will not otherwise have this privilege. But it must be done with integrity and commitment to the learner. For many small universities, such as those in Atlantic Canada, the idea that distance education will fix broken university budgets is questionable. Furthermore, the infrastructural issues are often hidden and complex and need to be addressed before distance courses are open to registration. And finally, the faculty and governance issues are of concern to us, not because of crude self-interest but because faculty hold an implicit duty of care to be vigilant of the educational realm on behalf of our students who trust us to prepare them for uncertain futures.

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