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## Teaching, Art and Technology

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## Résumé

L'auteur établit une comparaison entre le rôle de la technologie dans le domaine des arts et dans celui de l'enseignement afin d'approfondir la réflexion sur sa propre expérience de la technologie et de la pédagogie. Pas plus que les artistes, les enseignants ne devraient pas mépriser la technologie; toutefois, la technologie ne doit pas non plus devenir une fin en soi.

MOTS-CLÉS : enseignement, techniques, art, évaluation, intégration, WebCT, droit, innovation

## Abstract

The author draws on a comparison between the role of technology in art and the role of technology in teaching in order to reflect on his own experience with technology and pedagogy. Teachers should no more look down on technique than do artists. But nor should technology become an end in itself.

KEYWORDS : teaching, technique, art, evaluation, integration, WebCT, law, innovation

If teachers sometimes have the pretension to be artists in their own right, then they might reflect upon how the relationship between teaching and technology parallels the relationship between art and technology. Painters, sculptors, musicians, dancers and actors have long accepted the indispensable role of technique in their work. Teachers are often reluctant to do so, because frequently their “technique” is their persona, and that is not something one discusses in polite company. But as various devices intrude their way into the classroom, as contact between student and teacher is mediated by new modes of communication, and as the learning environment itself is displaced into technological products, teachers can no longer look down on technique. They must come to terms with it. What, then, might they learn from the parallel relationship between art and technology?

If one were to ask an artist about how her work draws on technology, she might identify three different ways in which it can do so. First, art in some sense might be about technology. Istvan Kantor portrait performance, *Machine Age*, (figure 1) depicts robotized figures transformed by technology.



Figure 1. Machine Age<sup>1</sup>.

Second, art might integrate technology into the work. Suzanne Giroux's *Barque n° 6* integrates a video projector, screen, videodisc player and colour videodisc.

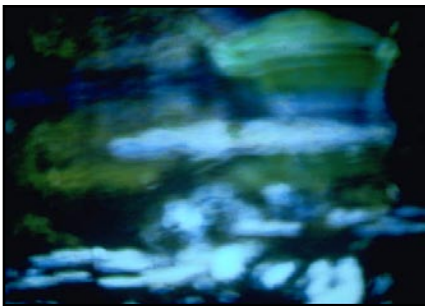


Figure 2. Barque n° 6, 1990<sup>2</sup>.

Third, and most obviously, art might be facilitated by technology. Ulysse Comtois' *Colonne n° 6* required the mechanized construction of aluminum plates.

These three different relationships to technology can also exist in teaching – teaching *about* technology, teaching *integrating* technology and teaching *facilitated by* technology. As in art, the three relationships can co-exist in teaching. But the last two relationships might be mistaken for each other and indeed might occasionally be at cross-purposes.

In art, the overly obtrusive technique can inadvertently do more than facilitate the work and by becoming part and parcel of it, overwhelm it and detract from its form, or at worst render it frivolous or gaudy. One sees only the gadget and loses the aesthetic for which the technique was deployed. This is not at all to say that the artist should avoid integrating technology into her work. Suzanne Giroux's work demonstrates that confident integration of technology can advance what is a relatively new art form – the video installation.

In teaching, as I know from some unhappy experience with early efforts to use technology, there is also a great danger of allowing technique to overwhelm the purpose for which it is deployed. If one spends more time putting bells and whistles into PowerPoint presentations than in mapping out learning outcomes for a class, a danger sign should start flashing. And unless you teach engineering, computer

science, or some other subject bearing on technology, to go beyond integrating technology into your teaching and to allow your teaching to become about technology borders on the obsessive. As teachers, for the most part, our relationship to technology should be that it is used to facilitate learning. If, to make a point memorable and challenging, you can seamlessly cut to a live internet feed – say to compare how a particular news item is being characterized in different sources from around the world – you may be able to enhance your pedagogy. But there is a risk that you are becoming *gadgets*.

One can learn from art, although its aesthetic sense has precedence over pedagogy. Teaching can have its aesthetic, although pedagogy has precedence over it. And just as technology can change the aesthetic of art, so too it can change the aesthetic of teaching. Acceptance of change in aesthetic is notoriously difficult to cultivate. It requires nothing less than to have people change the manner in which they perceive. The teacher cannot be too doctrinaire in imposing the aesthetic changes engendered by technology because after all, learning must have precedence over that. If the artist who was misunderstood in her own time might be a romantic heroine, the misunderstood teacher is arguably no teacher at all.

Thus the teacher must assure that the aesthetic changes wrought by technology are accessible to students. This is particularly so if one seeks to do more than use technology to facilitate making a point that was already made in the classroom. That is, one can expect that students will readily accept a technical improvement in a presentation – say upgrading images from a traditional slide show to a CD presentation. If, on the other hand, one seeks to integrate technology into teaching so as to produce a new environment for learning, that is where one risks being most

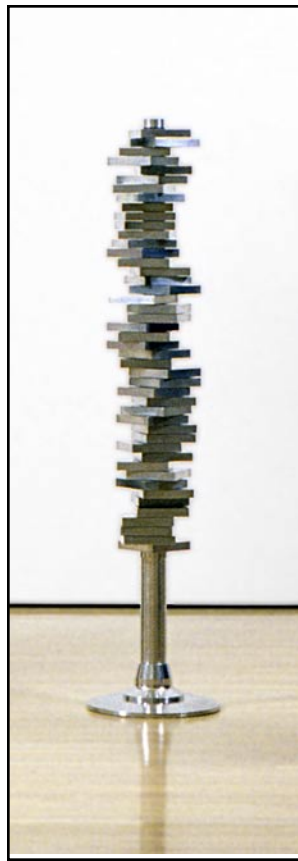


Figure 3. Colonne n° 6, 1967<sup>3</sup>.

misunderstood because that is where one is playing most with students' own aesthetic of teaching.

Let me tell a story about my own teaching that illustrates, I hope, the challenges of changing the aesthetic of learning, the dangers of being too doctrinaire, but also the rewards of finding ways to have students embrace accessible changes.

Teachers in a Law Faculty always struggle to attain a balance between inquiry into law as an academic discipline and inquiry into law as a professional vocation. The balance is struck differently as among different teachers, which is probably a good thing since it gives law students an opportunity to seek out a range of experiences and perspectives. My own tendency has been to emphasize academic inquiry, although I feel a responsibility to give students sufficient guidance so that they can situate themselves confidently in a professional environment. In short, I remain somewhat schizophrenic about my teaching.

So I asked myself, "Could I use technology to help with the professional learning I want to promote and thus free up the classroom to pursue academic inquiry more exclusively?" My class was Business Associations, a standard introduction to the legal form businesses take, with emphasis upon the corporation. In my view, the course should open up an inquiry into the nature of the firm, problems of corporate governance and the social role of the corporation. But at the same time, it should prepare students to orient themselves when they encounter corporate law in practice. The two sets of inquiries can and should be complementary, but they can also run interference on each other. My goal was to develop a set of practical modules that would allow students to negotiate and develop a set of standard business law documents – a partnership agreement, articles of incorporation and a takeover bid – and

to do so within as authentic a professional framework as possible. I wanted them to be confident that they had the skills necessary to take on these tasks should they arise for them in legal practice. But I did not want to use classroom time to engage in those tasks and for this reason I thought the integration of technology could help.

About six years ago, I started looking for software that could help me manage a series of two- and three-way Web-based negotiations among multiple groups of students. My typical enrolment was sixty students and I wanted to have groups of three or four that would make up "law firms" in the class. In the days before WebCT and other learning technologies, I even started discussions with technical people at McGill about how to develop our own software to accomplish this purpose. And then one day, along came a colleague from Melbourne University in Australia who seemed to have engaged in exactly the same exercise I wanted to undertake, albeit in a different course and with somewhat different parameters. He had worked on developing software for a Civil Procedure class that would allow students to file documents and exchange letters with opposing "firms" and had just gone through the first year of the experience. He was enthusiastic about sharing the technology, and so my adventure began.

Arrangements were made to transfer the software to McGill. Unfortunately, I came to have a good understanding of the expression "we do not support that." A vast array of problems concerning servers and networks suddenly sprung to the fore. My sunk costs in the venture mounted ominously, especially as we got into the business of re-writing code. Fortunately, I had one bit of good sense, which was to have recourse to our Centre for University Teaching and Learning and to get the advice of Dr. Laura Winer, who had a font of experience dealing with how technology could be used in learning. She

undertook to survey my students as the project unfolded so as to evaluate whether what we were doing really did contribute to learning. Among the pieces of sage advice she immediately offered was that we should aim to have something simple that worked rather than something elaborate that might fail. By the time I was ready to present the project to the students, I felt that I had something simple that would be successful.

It soon was obvious that the integration of technology into my teaching was becoming so obtrusive that it was overwhelming everything else. I was generating an endless string of questions about the operation of the software. Students at the time were still not completely comfortable even with the operation of e-mail and often approached me with the words: "Do we really have to do it this way? Can't I just hand it in to your office?" Every time the server went down or some glitch was encountered in the software, naysayers became bolder. And since my initial thought was that this was a valuable exercise in which everyone should participate, the obligatory character of the process became a source of more-or-less open contestation. It was not yet a complete failure but the project did not seem headed for dazzling success. I began to wonder whether it was worth pursuing.

The results of the first year's experience led to an abandonment of the software. It was decided to combine e-mail with a rudimentary Web discussion group technique, which meant that most of the aesthetic elements of the software (court "stamped" documents, standard form letters with letterhead, and so on) were no longer available, although the basic functionality of the system remained. This worked better than the previous year and drew upon the fact that e-mail communications with students and between students were increasing. It was also easier to "by-pass" by having face-to-face writing sessions and simply "handing in"

work electronically. Students who found the technology useful used it, and those who did not like it did not have to have much contact with it.

I also attempted to improve my evaluation of student work by making clearer the expectations and objectives for each document submitted. The atmosphere of contestation in the previous year subsided and gave way to occasional complaint. The focus of concern changed from the use of technical means as a “substitute” for the classroom to the fairness of having a group work mode of evaluation, to which law students were not accustomed.

In the following year, again after evaluating student reaction, it was decided to migrate the course exercise to the emerging WebCT platform, which now seemed stable, offered much of the desired functionality, allowed more attention to the aesthetic elements of the exercise, and above all had the great advantage of being “supported” by the University. The major modification to the project was that the exercise was now optional. Students could choose to write additional exam questions instead of participating in the exercise. Those who participated in the exercise could also do the exam questions, with the superior mark contributing to the final grade. This improved student comfort levels enormously. Nevertheless, over 90 % of students chose to do the exercise, which suited my pedagogical purposes.

I should mention that as I displaced the gathering of practical, professional experience into the problem-solving exercises, I engaged in a radical re-conception of the overall learning objectives I had for the course and thorough revision of the materials I would use to pursue them. I all-but-jettisoned the traditional fare of cases and statutes – materials students encountered

while they did their exercises – and substituted leading articles and extracts from monographs. By this time, my course had become part of a vast reform of the law curriculum at McGill University. Business Associations was designated to be a “trans-systemic course,” which meant that it was not to be taught from the perspective of a single jurisdiction or legal tradition (common law or civil law), as in the past, but was to be taught comparatively and in a global perspective. Some of my colleagues suggested to me that at a time when we were engaged in re-thinking materials and content, technological innovation should be put on hold. I certainly sympathized. But having already invested in a re-structuring of my course that I thought was in line with overall curricular objectives, I felt that my technological innovation was worth pursuing so as to allow further scope for the pedagogical innovation I wanted to pursue in the classroom. In other words, I felt freer to explore the boundaries of the new curriculum as it impinged upon my class because I was confident that I had a way of grounding the practical, professional experience students needed for the problem-solving exercises I had begun to implement.

In 2003, I completed the fifth cycle of my “new” approach to Business Associations, and if course evaluations tell the story, students now like what they are learning. Some actually choose the course to be able to do the Web-based group exercises. Perhaps the most rewarding feedback has come from former students out in practice. They have on occasion contacted me to let me know that the experience of the drafting exercise significantly helped them when tackling parallel problems early in their careers.<sup>4</sup> After all, one of my principal motivations at the outset of the project was to help increase student confidence when facing drafting problems in the professional world. Feedback has also confirmed that team learn-

ing, often not emphasized in legal education, requires clear ground rules and a well identified division of labour.

In the competitive and litigious environment that is the law faculty classroom, a lack of clarity can be exploited and undermine the integrity of learning. I have become accustomed to the fact that it is all-but-inevitable that levels of effort are unequal, that free riding on groups will occur, and that an internal, somewhat covert, market for team-mates and best information will arise. The WebCT environment allows for some monitoring of these issues to the degree that correspondence gets exchanged over the Web site. But students can bypass monitoring through e-mail and word of mouth. In the end, one has to strive to establish an ethic of fair contribution through word and deed, and remain attentive to problems that students are very likely to signal themselves. Indeed, it has been my experience that where unequal contributions are signaled, the other side of the story is usually that the complaining group members are unwilling to accept alternative approaches to a problem. On balance, these sorts of difficulties are themselves worth managing because they confront students with the challenge of working at close quarters with colleagues in a quasi-professional setting.

Another significant form of feedback has come from colleagues, some of whom have been intrigued by my project and started doing parallel exercises in their own classes. One colleague with whom I taught alternate sections of a class called Administrative Process, even undertook to run a similar exercise for both of our sections and has continued doing so on his own after I took up other teaching responsibilities. Upgrades of the WebCT platform have facilitated certain management tasks and thanks in part to the policies of the University, most col-

leagues now have integrated course content into WebCT. In short, my teaching aesthetic is no longer so idiosyncratic, which in turn helps to reinforce the legitimacy of the exercise with students.

In retrospect, I was too doctrinaire initially about the use of technology and allowed it to overwhelm my pedagogical objectives. I feel some regret about the two cohorts of students who felt like guinea pigs and in some measure were. Professional developers of software quickly caught up with and by-passed my efforts. Perhaps it would have been better to wait for the appropriate technology to be available rather than to work on developing the tool. The problem of “sunk costs” looms large when one undertakes a teaching innovation. It is helpful to have some form of external review – some sympathetic but critical assessment of whether more energy and effort ought to be invested in the project. This can come from colleagues or, as in my case, from a Centre for University Teaching and Learning. Indeed, such a Centre, properly used within a University, proves to be an important resource for teaching accountability not only to students and colleagues, but also to oneself as an investor of time an effort in the teaching enterprise.

There remain some unexploited opportunities in this project. It would be exciting to build out from legal “inputs” into negotiations and to find ways of replicating the law-business interface that characterizes the kinds of transaction I have been simulating. There is a whole additional level of complexity in coordinating business students with law students. But I sometimes dream of having MBA students studying business organization or strategy work up the numbers that would drive a transaction, while their colleague law student work with the legal parameters that make the transaction possible. It would also be interesting to pursue an

avenue I once explored, to mixed success, with a colleague at a university in Germany, namely to make the exercise work between students in different universities or indeed different countries. Coordinating different term schedules proved difficult for us and we were not quite able to have students exchange documents in a timely fashion. Today’s better course management systems might enable the exercise, and could make it truly “trans-systemic.”

I am convinced that the way I now use the technology that is available for teaching has been enhanced by the experience of trying to work out, if you will, my own teaching aesthetic. I view the online world of student interactions as part of my classroom. The flow of communication it creates between them and me complicates my life as a teacher, but does so in ways I find interesting and often exciting. All of which adds another layer to the relationship between teaching, art and technology. One can indeed learn about teaching from the aesthetic technology produces. ▀

## Notes

- 1 Reproduced with permission from the Canada Council for the Arts site celebrating Kantor’s 2004 Governor General’s Award in Visual and Media Arts: <http://www.canadacouncil.ca/prizes/ggvma/2004/images-e.asp#kantor>. Portrait-performance/super8. Neoist Embassy, Montreal. Make-up: Isabelle Hayeur. Photo: Bretty Nova.
- 2 Reproduced with permission of Suzanne Giroux and of the Musée d’art contemporain de Montréal. Video projector, screen, frame, videodisc reader, colour videodisc. 30 min.152.4 x 213.4 cm (screen and frame). Collection Musée d’art contemporain de Montréal. Photo: Richard-Max Tremblay A 91 9 I 5.
- 3 Reproduced with permission of Ulysse Comtois and of the Musée d’art contemporain de Montréal. Aluminum. 170 x 39 cm (diameter). Collection Musée d’art contemporain de Montréal. A 67 10 S 1.
- 4 For a fuller treatment of the feedback and response of students, See L. Winer, (2002). Computer-enhanced collaborative drafting in legal education. *Journal of Legal Education*, 52 (1 & 2), 278-286. For those interested in pursuing the academic literature, Dr. Winer also cites a number of key recent articles on computer-based learning electronic learning.