

"Power corrupts, PowerPoint corrupts absolutely" Why Digital Technologies Did Not Change the Social Study's Classroom.¹

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Abstract

The dreams and predictions of a digital classroom never quite materialized in the social studies history area. For a variety of reasons teachers keep the technology just outside the door peeking in but never truly welcomed. Not welcomed because of the nature of courseware initially offered, not welcomed because the technology was advanced for the sake of technology itself and was imposed on the teacher. For teachers to invite digital technology in attention should be on the curriculum, the teacher's delivery of curriculum and how the technology can assist and advance deeper understandings.

Nothing seems to enhance that feeling of inadequacy than having the computer crash in the middle of a presentation. Worse still, you cannot troubleshoot. Technology has rendered you helpless. Digital technology has robbed the teachable moment, usurped your role as a competent, in charge teacher. The lesson has been compromised, maybe to the point of being corrupted; your confidence shaken, and your faith in digital technology has been seriously put to the test. Are various aspects of digital technologies in a history or social science classroom corrupting good teaching? With valid reasons, given their experiences of the past twenty five years, some teachers would say yes. They see parts of digital education as a sham. If Ned Lud were alive today, he would be appalled by the inroads digital technology is making into the classroom; he would weep. Should Ned praise history and social science teachers or repudiate them for their reactions? Is it O.K. to be a Luddite? Yes, but at your own peril as there is a real danger that you and the traditional classroom will be left behind. As a result of advances in digital technologies both students and the greater community already see certain aspects of the traditional school as out of date, out of touch. Teachers have not had the full opportunity to sit back and reflect on an appropriate response or devise an adequate pedagogical style. Education via digital technologies can be a powerful tool but digital pedagogies have not sparked the collective imagination of teachers in the same way other teaching methods and media have. The impact of digital technologies on teaching and learning has been minimal.

(Sandholtz, 2004) Social Science teachers are not wilfully blocking digital technology and might even embrace the technology if they only knew how. What is stopping teachers is a lack of appropriate software, support, and hardware coupled with a philosophical and pedagogical framework for use of the technology in the first place. Examples of moving digital technologies beyond an electronic transfer of pen and paper are only now emerging. Teachers see the case for digital technology as a learning tool is powerful, but there are too many barriers in the way for classroom teachers to utilize digital technology with the same ease they might use videos and text books. This has to change and that change is coming.

The advanced billings for computers in the classroom have not lived up to all the fanfare. For the past two decades digital hardware was oversold to schools and has been under used (Cuban, 2001). The technology was marketed, especially in the States, as a solution to the "crisis in the classroom." Such hype was generated that school councils were seduced into thinking that if our school does not have the latest hardware our kids will be left behind in a highly competitive global marketplace. Technology was looked upon as a salvation to problems yet imagined. Children will be left behind if they are not engaged with the latest electronic learning toy. Currently there is a series of ads on television from a reputable toy company aimed at parents with two or three-year-old children with the not so subtle message, "if you don't buy our brand of animated electronic toy your child will not learn." If electronic devices such as "Speak & Spell" performed as advertised then maybe there would be no need for provincial literacy testing. Marketing outperformed results.

The Ministry of Education of Ontario became caught in the drive to create a digital learning environment. Ontario intensified the rush for a digital advantage by asking and trying to answer the economic question, which is more important the hardware or the software? In the mid 1980's the province started out with the best of intentions with the ICON computer. The hardware was impressive for its time. To complement the hardware, the Ontario Ministry of Education simultaneously published software. Unlike commercial software, ICON courseware was directly linked to the curriculum. There were some outstanding pieces of courseware such as *Decide Your Excellency* and *Taxi*. *Decide Your Excellency* allowed students to run and develop an emerging country. This simulation had a direct correlation to the then Grade 12/OAC Politics and Grade 13/OAC Geography Courses. Through the use of role-play *Taxi*, a micro economics simulation, taught factors of supply and demand from graphing principles to elasticity. The simulation was a direct fit with the then current 12 and 13/OAC Economics course without having to adapt the curriculum expectation to the software. If the same thought and care that went into the courseware design had gone into textbooks, the textbooks of the late 1980's would have been brilliant. The courseware directly addressed a variety of learning styles, and the courseware's general overall layout was more thoughtful than the existing crop of provincially approved textbooks. The failure of the ICON, for a variety of reasons, meant that teacher-designed courseware was not advanced. Other computer programmers' material was pushed forward in the guise of courseware but the programmers were looking for the next "killer app" or to show case the latest bit of code, not always the best pedagogical device.

As the ICON was failing there was commercial software available but none of it would run on an ICON. That was part of the problem, which platform to use. You could buy commercial software for the classroom but you may not have a computer to run it on. The majority of software applications available were basically making the computer a glorified typewriter or calculator. Some software was outstanding but you had to stretch to give it a direct curriculum fit. *SimCity* had amazing potential for classroom application. *Balance of Power* and *Ports of Call* were two other possible applications for classroom use. Even if the software

resources did not have a direct correlation to the current curriculum, they were excellent teaching devices that could be incorporated into an OAC Independent Study Unit: master the simulation, once the simulation is mastered detect the developer's point of view on certain topics and compare the developers' point of view to what you have learned in the course. Raising taxes in early versions of SimCity was just not allowed. Mass transit and its impact on the urban environment were not reflected properly. *Balance of Power* had a definite pro American bias in the game of global super powers. These titles were also great simulations for studying the decision-making processes and the application of those decisions to a "safe" virtual world. Much of the other social science software seemed to be a direct transfer of existing board games (such as *Risk* or *Monopoly*) to a digital format² There was another problem associated with all this software, a perceived bias against gaming. Gaming and role-play were not widely accepted as a valid classroom learning experience. This was playing and not considered "real learning." This bias against gaming and simulations was another "brick in the wall" barring acceptance of digital technology into the classroom. To compound the platform issue was the debate, and not fully resolved, of MS-DOS (Windows) versus Apple. Which platform is most appropriate for a social studies /history environment?

A commonly held belief, at the time, was that computers in the classroom were for the sciences, maths and business. In a history classroom the appropriate computer application was more word processing. Should a computer lab be created for the humanities it would be under the control of the English department as some administrators felt those departments were the ones teaching the literacy skills directly related to the early educational use of computers. Control of computer labs was the next hurdle to over come. If computer labs were the temples then computer science teachers and IT specialists were the temple monks protecting the shrine from non-traditional users. Administratively the computer lab made sense. As a means to foster adoption of digital technologies into a social studies environment the lab was an inhibitor (Barrell 2003). Rather than being spontaneous, the lab had to be booked in advance, students signed in and so forth. Some machines worked; some did not. The average classroom teacher did not have sufficient technical background to resolve the problem if issues arose with either the hardware or software. The problems were legion. It was just easier to stay in the classroom with a textbook that would boot every time. To use a print source the teacher did not have to be a publisher. In order to show a video, the classroom teacher did not have to know how to make documentaries or trouble shoot a VCR. Some of the digital hardware did not have the durability or reliability of even the cheapest VCR. Occasionally stories were told of VCR eating tapes but "digital letdown" was commonplace. It is human nature to want to have some semblance of control and authority but when the kids are showing you how to trouble shoot, whether this takes place in a computer lab or the classroom, there are still occasions when that is ego bruising. Your expertise, rightly or wrongly, feels as if it were on the line. Having routine computer malfunctions coupled with an anxiety that you feel that you cannot fix digital problems, just takes too much away from creative teaching. Naturally the path of least resistance was in a print medium.

Costs are a huge factor in this but, if education policy makers wanted teachers to adopt digital technologies, why weren't teachers given individual machines? There appeared to be no concerted effort to get machines into the hands of individual teachers. Many departments saw six or seven teachers sharing one machine. Administrations appeared to be promoting the use of digital technologies for administrative reasons more than pedagogical. Mark management programs immediately come to mind. Digital technology, so it seemed, afforded greater accountability and conformity. From an administrative perspective there may have been some

merit to this idea of accountability; however, immediately there were budget cutbacks the burden of technical support was downloaded to the classroom teacher and away from the computer support staff, whose department's strength was downsized. Classroom teachers were getting a mixed message. Technology is vital to teaching and learning on one hand yet administration seemed to be saying indirectly to do your job in the classroom you could do it without computers; digital technologies are not that critical to education experience because that is one of the first places we can cut budget. If you needed a computer to do the job we would have provided you with one with proper support.

As the machines became more reliable and numerous in both the schools and at home, some teachers became increasingly innovative with the use of digital hardware. Some schools saw teachers creating electronic course packs. The entire course was outlined on a school web site with readings listed, due dates posted, and assignments outlined. The bonus for teachers was materials could be instantly updated and students and parents knew exactly what was expected. Other teachers looked for ways to move content from the printed page into an electronic format. This was an innovative step in the right direction but was still limited to those who felt comfortable with web page design. Teachers soon found that they were forced to be more organized than ever before but once in place, courses and materials could be easily adjusted. A plethora of course web sites were created. Now students and teachers could publish. Students could see a new, immediate purpose for writing and writing well, they would be publishing to the greater audience of the World Wide Web. The web allowed students to communicate farther a field, to gather different points of view and have a universe of information open to them. The problem here for the classroom teacher was what skills to teach, the traditional skills associated with a conventional classroom or web design, FTP and so on? Commercial interests saw the same opportunities and Learning Management Systems such as Black Board and WebCt were being adopted by numerous learning organizations. Students were seeing the potential of web and were utilizing the technology. "As an active and aware global citizen I will publish a web page about ..." All great ideas but do they take teaching and learning to a different, innovative space? Philosophically, how is an electronic course pack any different from its paper version? Once you remove the technology, what is the difference between putting a poster up in the hallway and publishing a webpage? To be effective the poster must stimulate thought and action. By posting a webpage how do you attract the world to come and look at your page; how do you generate repeat visits? In many respects this is still a paper and pencil exercise yet this is where many students want to go.

Digital devices are moving forward at an increasing pace and creating new dynamics for the classroom. Contemporary students are excellent at finding information. Through the use of search engines and other electronic databases, students seemed to be engaged in a virtual game of "Where's Waldo?" (Case, 2004) Students can find Waldo anywhere but once found, they seem unwilling to engage him in conversation. Cut and paste is not higher order thinking. Students are constantly downloading images for an essay and assignments that are not appropriate to the task. Are teachers effectively teaching students how to use and evaluate information? Text messaging is changing the way students communicate; a new literacy is evolving. Camera phones create new concerns (Wujec, 2005). Take a picture of the test and pass it around. A form of Morse code could come back. Put your phone on vibrate. The answer to question number 25 is one vibrate for A, two for B. This says nothing to the number of times classes have been interrupted by a cell phone ringing Use a cell phone to take a picture of the teacher or a fellow student and create a fan web site or electronic place to belittle. The most popular student is the one with the fastest thumbs in the class, the one who can send more messages than anybody else. A good citizen shares their "play list." Character education may take on greater import when students actively seek out cheats so that they

might advance in a game. How should educators respond to an environment that actively promotes cheating when the players do not even perceive themselves as cheating? Acquired a car radio that was electronically encoded to prevent theft? Find the reactivation code on the web. How do we respond to bullying when students have become through digital technologies, emotionally detached from their physical communities? With the pace of information transfer the concept of perseverance takes on a new flavor. Is it any wonder that A.D.D. seems to be on the increase? (Menzies, 2005) School itself seems irrelevant. Home digital technology is in direct competition for the student's attention and is winning over the technology of the school. Public space is turning into a very private space, "All alone in my Apple iPod." With two ear buds in place the teacher is blocked. Community means new things in a digital world. Groups come and go, are fluid in their nature. When students can enter forums and chat rooms with anonymity, how do we teach our students to disagree agreeably? The implications for the classroom are immense.

Although this sounds extremely negative and teachers would seem justified in being reluctant to accept digital technology yet, there are enormous opportunities for digital learning with positive consequences for students. Teachers do not have to be "a techno genius" to use digital technology effectively in the classroom but the approach to the technology has to be customized and rethought. An American study found that the impact of computers in the classroom over the last twenty years has been minimal. The emphasis in teacher training and digital technology has been if you build it (the technology) teachers and students will come (the curriculum).

"Our research offers a paradox for furthering the use of computers in classrooms if we take away expectations for technical skills and allow teachers to focus on developing curriculum, evaluating learning materials, and thinking about how to provide better learning opportunities for their students, teachers are likely to use technology more effectively and creatively in their teaching."(Sandholtz and Brian, 2004)

Simple, known skills are a great way to start. Although not a dynamic as web page design most teachers are comfortable with word processing so, therefore, they should use word processing to assist in day-to-day activities. The emphasis is the curriculum not the technology; technology complements the curriculum. So how do teachers use the technology to complement curriculum? Start in a teacher's comfort zone. The tables feature of word processing can provide opportunities for students of all skill levels to demonstrate their understanding of a subject. In a civics or political science class there has to be some discussion about political philosophies, philosophers, and the structure of society. Present your content as you usually would but then ask the students to pick out what they think is the most significant aspect of the each particular philosophy. That significant idea can only be presented as a cartoon - no words allowed. (I usually select four philosophies/philosophers and the definition of political philosophy). Each student puts their name on each political illustration and randomly numbers the illustration. Using the table feature of word processing software create a tracking sheet for the class. The students lay their work out on their desk for public viewing. The class walks around out and attempts to identify the philosophy or philosopher implied by the illustration and records their impressions on the tracking sheet. The student knows quickly if their individual illustrations got the message across and what ones need to be improved. By using digital technology as a background tool many learning styles and learning outcomes can be successfully addressed. The same technique can be used

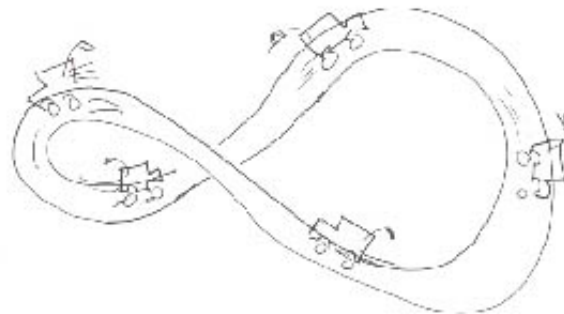
as a review technique. Using the table's feature, ask a series of questions. Each student must find a fellow student who can answer the question. The answer is given orally. Each student signs off on the answer sheet. Then the answer sheets are collect and taken up. "Hardeep you and Trong signed off that Trong told you the answer to... . Could you tell us what Trong said?"

CHV021 CIVICS: Political Philosophy Illustrations

My name: _____

Put up your illustrations so that they do not make the use of the names written in class

	cartoon #1	cartoon #2	cartoon #3	cartoon #4	cartoon #5
BAWLEY, R					
BUNDOO, S					
CARDWELL, D					
SINGH, H					
WONG, I					



H. Singh #3

Another simple way to have students and teachers use digital technology together is to have the student write their response or essays etc. on one side of the table and the teacher comments are on the other (Russell, 2004) Written assignments can be emailed, handed in on a disk or some type of memory card. Both examples of using word processing tables help students advance their understanding of content, foster student responsibility for their own learning, and allow the classroom teacher to use their understanding of word processing as a stepping stone into further use of digital technologies. This approach is not revolutionary by any means. By allowing classroom teachers to become more comfortable with the software and hardware in their personal situations, they will be more willing to utilize the technology in the classroom. Of course there are going to be technical issues that always arise; however, the emphasis is on teaching and learning with technology first; technical expertise is a secondary emphasis.

Review Sheet for Course on History, Fall

By Name:

Find someone who knows the answer to the question asked. Have them sign it if they've reviewed the question. You are to include the name of the reviewer and your thought if not correct. Only one answer and question for each student based on the next question.

Question	Who Answered	Explain to Me
Q1		
Q2		
Q3		
Q4		
Q5		
Q6		
Q7		
Q8		
Q9		
Q10		

Haymore Sandholtz and Reilly's findings were reinforced by my own experience within my department and the introduction of a data projector or LCD projector. I just showed the department how to hook up the projector to a computer or a DVD player. If they had problems, they could come to me for help. Within three months the projector was constantly in use. My department was using it: as a glorified over head projector, to show the class web sites, power point presentations, to take virtual tours and yes, even show movies. Teachers were using a single computer and data projector as a tool as freely as they had used overheads and VCRs. Soon the students were constantly asking to use the projector in their own presentations. One projector was not enough.

The projector itself allowed teachers to demonstrate and reinforce aspects of what we know of brain learning theory; the brain is a visual learner. To create a visual understanding of the passage of a bill through Parliament why not take the kids to Ottawa? As the introduction to the lesson tour Parliament Hill first.

http://www.parliament.ca/text/explorethehill_e.html One data projector and computer allow the teacher and the students access to an environment they may not always see. Similar trips can be accomplished with such sites as the British Broadcasting Corporations virtual tours http://www.bbc.co.uk/history/interactive/virtual_tours/ and especially the dioramas of WWI trenches http://www.bbc.co.uk/history/worldwars/wwone/launch_vt_trench_life.shtml. These are easy demonstrations with the computer being used as a tool to support the lesson. No extensive technical expertise is needed just sound pedagogical practice supported with digital technology. There is no need to book labs or waiting for computers to boot.

As educators become more comfortable incorporating digital technology into the social studies' classroom, they will start to demand more of the technology, to push the boundaries of digital applications. Teaching in a computer lab using teacher designed web sites becomes a less daunting task. Digital technology will allow students and teachers to do the discipline as never before. (Gadfield, Nov 2000) Three web sites demonstrate this, as does the work of this year's Governor General Award winner Sheila Hetherington. All works were designed with sound teaching principles first and digital technology as an assistive device:

Pax Warrior www.paxwarrior.org is an intricate, "Interactive Documentary" walking students through many of the gut wrenching decisions faced by Romeo Dallaire. Pax Warrior is a simulation and collaborative learning tool that weaves the tragic story of the UN experience in Rwanda placing the user in the shoes of an UN Commander trying to maintain peace. Students learn content as well as develop empathy for UN Peacekeepers and survivors of the Rwandan genocide.

The Virtual Historian www.virtualhistorian.ca engages learners through state-of-the-art digital technology and pedagogy. Learners reexamine historical events using a variety of primary resources and create their own hypothesis.

People for the Prairies <http://www.theclares.ca/prairies/> is a redesign, not a direct transfer of an outstanding paper-based learning tool We Are Canadians, to an online application designed to take full advantage of an extensive digital enhancement and environment. Students are given a role, a persona to assume. Staying in character each student then has to make an informed decision or critical challenge "Do I immigrate to the 1900's Canadian Prairie West or not?" Students must visit various e-learning centers to gather appropriate information and then prepare a justification to either stay put or go. The decision must be made in character. A random generator selected a student's persona, and once picked, the student cannot change personas. Because of the random nature of assigning students to a role and research conducted both online and off, students will hopefully develop an empathy and, a historical literacy for a particular role. By highlighting aspects of technological innovation and its impact upon society the web site addresses numerous expectations raised within the curriculum.

Sheila Hetherington has gone in a unique direction. Using digital technologies Sheila is encouraging her students to research and create historical documentaries that are of near broadcast quality. The finished products are excellent digital documentaries but more importantly the technology is utilized to force the students to do the historian's craft.

By easing teachers into digital technologies, not as hardware and software specialists, rather as pedagogical specialists, digital technologies will be utilized in more and more history and social science classrooms. As teachers become comfortable with their level of digital sophistication and realize that it is a tool to assist in learning, not the object unto itself, greater acceptance and demand for quality resources will arise. Our students are going to a digital environment. History and Social Science teachers have to be there to bring all the rich perspectives of our subject disciplines. Generally the discipline was slow to adapt for a myriad of legitimate reasons. The focus must be curriculum first with digital technology as a tool to assist learning. If this is the focus, greater will be the demands made by social science teachers of the technology resulting in better quality history and social science applications. The better the applications the greater the comfort level and willingness to accept the technology into the history classroom. The original push to put technology in the classroom centered on the technology not the teacher and was a failure. Many teachers rightfully resisted the incursion of technology but unfortunately advances digital technology outpaced all predictions. To successfully create a digital social studies classroom focus on the teacher, the curriculum and the technology will follow.

End Notes

¹ Title borrowed from Tufte, Edward "Power Point is Evil" Wired Magazine 11.09 <http://www.wired.com/wired/archive/11.09/ppt2.html>. Visit Tufte's web site for information on ways to produce graphic displays www.edwardtufte.com/tufte/ .

² If you look at current textbooks you can see how they have been re-mediated to reflect aspects of web design. This does not mean web pages are superior instruments of learning rather demonstrates the influence computer software and web pages have had over the past decade.

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http://www.parliamenthill.gc.ca/text/explorethehill_e.html A panorama of Parliament Hill and the House of Commons and Senate

http://www.bbc.co.uk/history/worldwars/wwone/launch_vt_trench_life.shtml. The British Broadcasting Corporation's website

www.paxwarrior.org A role play site were students must face a similar decision process as Romeo DeLarie

www.virtualhistorian.ca A site underdevelopment at The University of Western Ontario Faculty of Education

<http://www.theclares.ca/prairies/> A site designed to engage students into a decision mode of do I immigrate to the Canadian Prairie West in the time frame 1890 to 1914

<http://www.wired.com/> Wired Magazine

<http://www.tcrecord.org> An online education journal

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