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What's demolishing the classroom?...and does it matter? An historical account of the demise of the classroom as a venue in the teaching learning exchange at GBP.

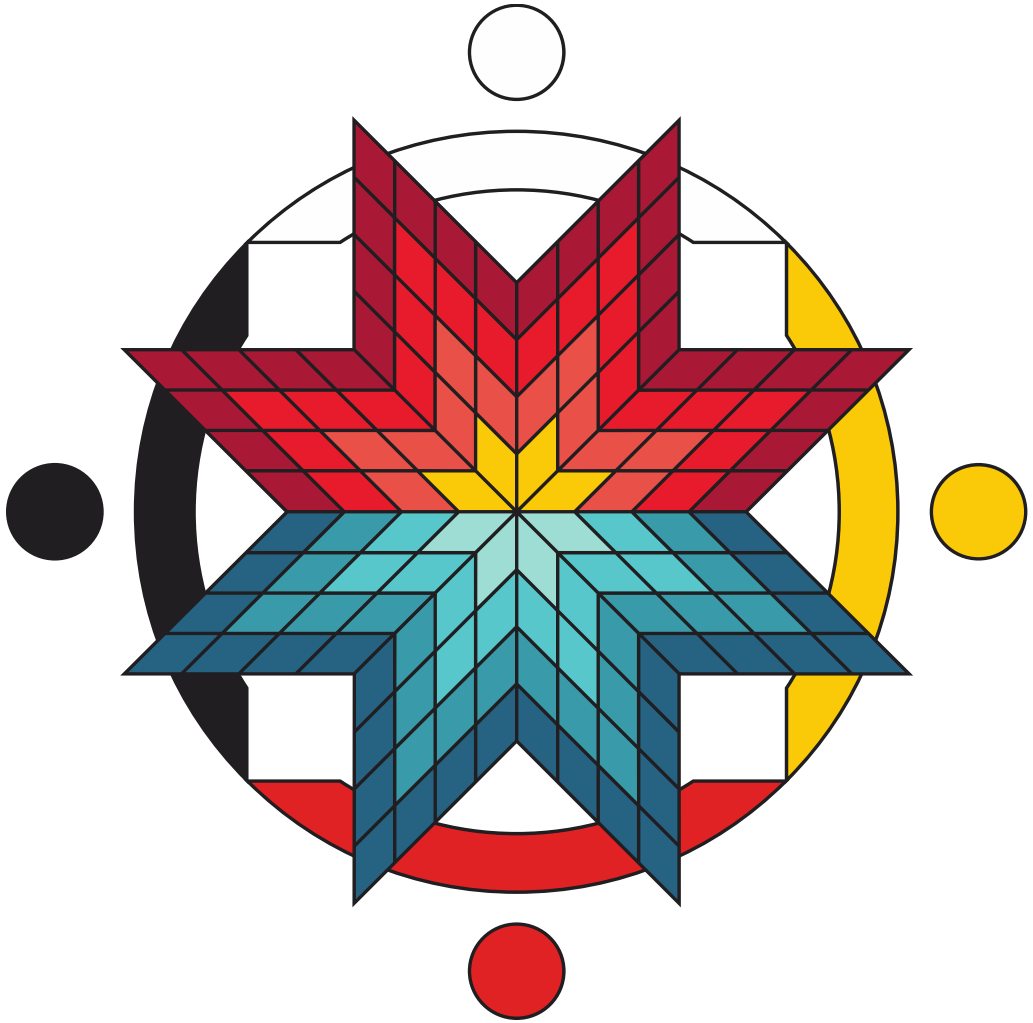
Howard Gerhard

Land Acknowledgement

George Brown Polytechnic is located on the traditional territory of the Mississaugas of the Credit First Nation and other Indigenous peoples who have lived here over time.

We are grateful to share this land as treaty people who learn, work and live in the community with each other.

Learn more about our land acknowledgement.



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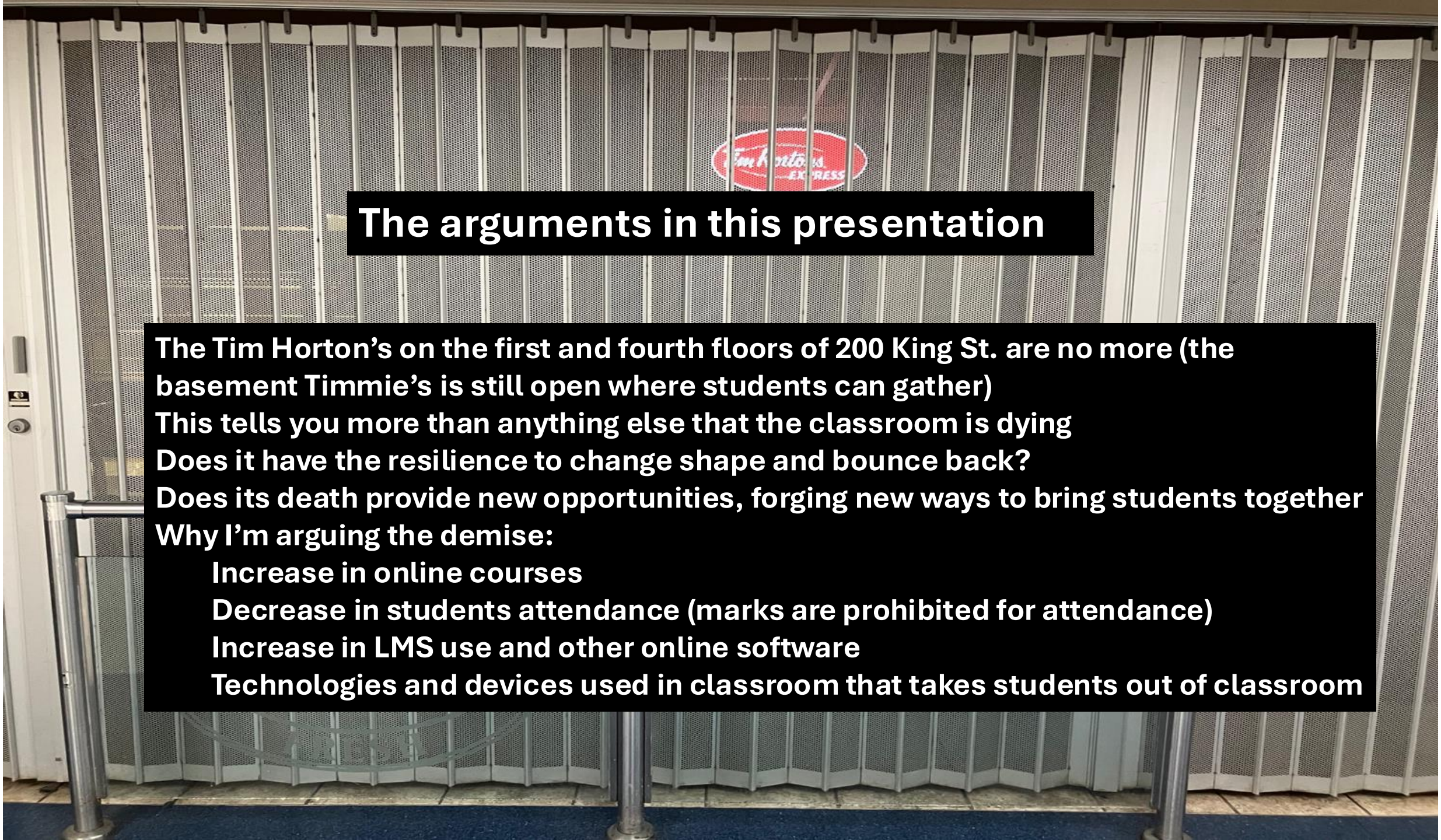
The classroom is dead. Tim Horton's knows it; and anyone walking down the empty halls of a George Brown campus knows it. So what of value in its legacy can we re-envision and reconfigure to replace it? Technology, over the centuries has driven people apart. The history of technology at GBP is a steady stream of tools that have physically separated teacher and student to the point where there is no further advantage to their being in the same room at the same time. But students, on occasion, still need to get in out of the rain. Where can they go? This presentation tries to reimagine such a place, preserving the social advantages that the classroom afforded while reconstructing the idea of its time and space. le



The arguments in this presentation

The Tim Horton's on the first and fourth floors of 200 King St. are no more (the basement Timmie's is still open where students can gather)
This tells you more than anything else that the classroom is dying
Does it have the resilience to change shape and bounce back?
Does its death provide new opportunities, forging new ways to bring students together
Why I'm arguing the demise:

- Increase in online courses
- Decrease in students attendance (marks are prohibited for attendance)
- Increase in LMS use and other online software
- Technologies and devices used in classroom that takes students out of classroom

Agenda

- It’s my birthday on Wed., June 17. I’ll be 80. This is an experiment so you’ll need a piece of paper and a pencil. I have a few to hand out.
- What are the advantages of teaching in a classroom (resilience) and how can they be preserved (new opportunities)
- Past ideas on education without the classroom
- Technology is separating us
- History of the separation between teachers and students
- Attempts at compromise and resurrection
- A new paradigm


Happy
Birthday!

Experiment 1

Antidisestablishmentarianism

Write on blank piece of paper then immediately turn paper over

Experiment 2

- Turn paper over and write it again while singing “Happy Birthday” to Howard
- Sing “Happy Birthday” while drawing a house

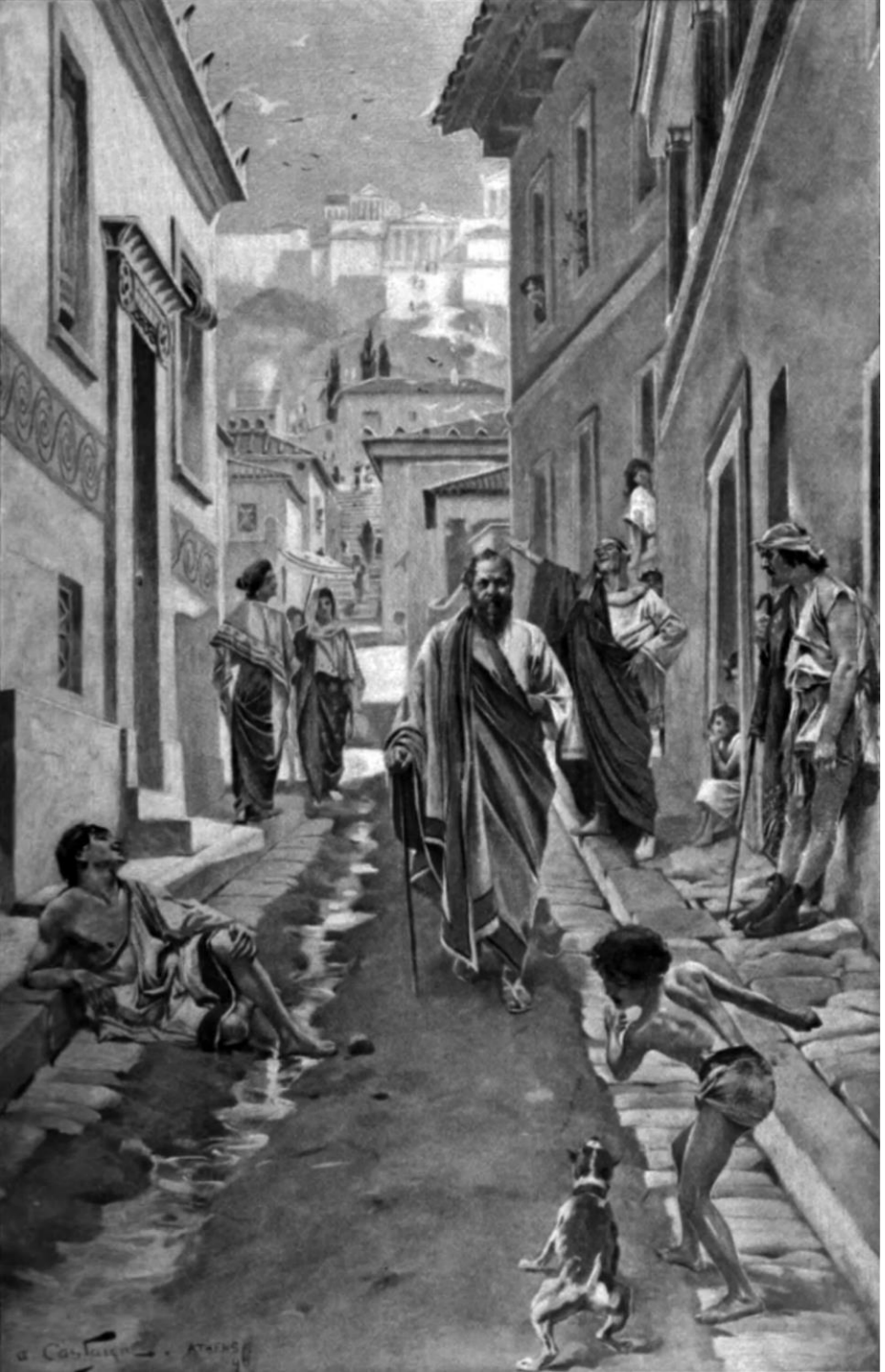
Happy Birthday

- 2 things to take away from the experiment
- First, you can’t do 2 verbal things at one time so students on devices in classroom can’t focus on the front.
- Second this experiment can’t be done virtually, so with the death of the classroom something is lost. What is gained by singing together? Can it be replaced?

Advantage of classroom

- A face-to-face situation invites us to be **spontaneous, flexible, inspirational, open to the exciting and unexpected, all of which enhance learning.** It lends learning an essential, irreplaceable immediacy. Yet fewer and fewer students show up for classes and more and more of them register for online courses. And to paraphrase Yogi Berra, “If students don’t want to show up for class you can’t stop them.” So what is the historical relationship between the introduction of educational technology, the classroom and student learning at George Brown Polytechnic?

- **Education outside a classroom is not a new idea.**
- **Ideas on where and how to educate were diverse.**



Socrates
No classroom but walking the streets asking questions and teaching
Are we to become Socrateses?

“The City is our Classroom”, stretches the idea of the traditional classroom to such an extent that it bursts.
Is GBP trying to move away from classroom teaching?

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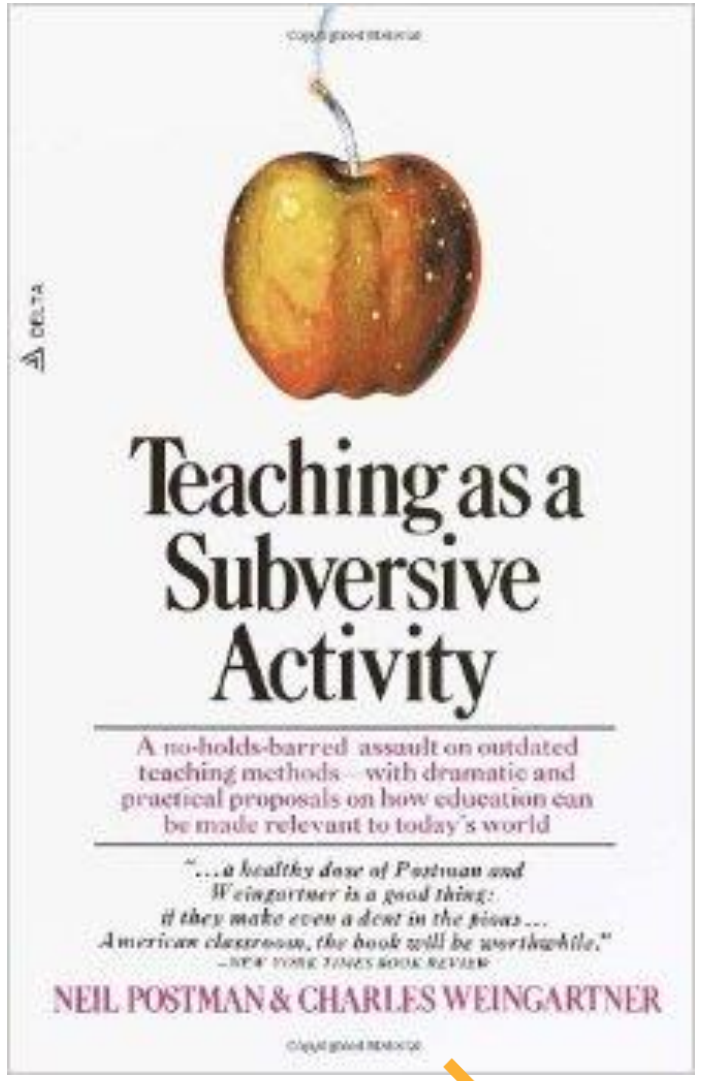
Illich

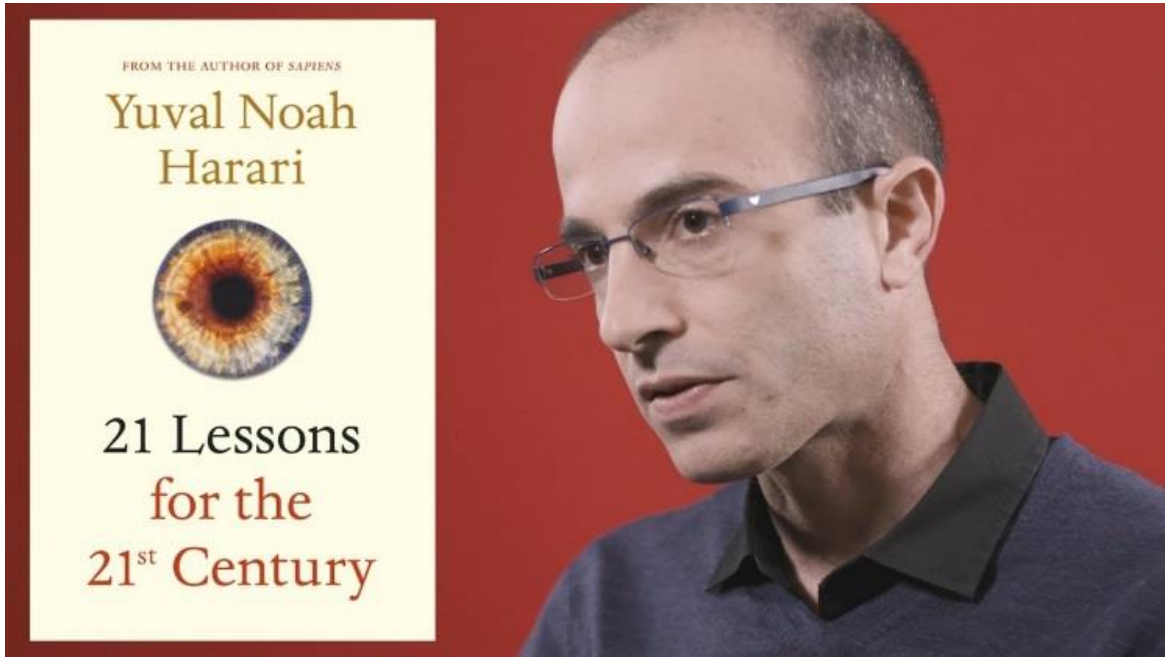
- **“The majority cannot and should not be rallied for discussion around a slogan, a word, or a picture. …. they should be able to meet around a problem chosen and defined by their own initiative….. Each man, … could identify himself to a computer with his address and telephone number, indicating the book, article, film, or recording on which he seeks a partner for discussion. Within days he could receive by mail the list of others who recently had taken the same initiative. This list would enable him by telephone to arrange for a meeting with persons who initially would be known exclusively by the fact that they requested a dialogue about the same subject.”**
- **Illich, Ivan. *Deschooling Society*. 1st ed. Marion Boyars Publishers Ltd, 1971.**
-

Postman

- . But Postman and Weingartner also agree with Illich: **“…about the last place any of us can expect to learn anything important about the realities we have to cope with in our wistful pursuit of life, liberty and happiness is a classroom.”** Most of what we learn we learn outside of school anyway they argue. So why **“spend much time sitting inside small boxes inside of big boxes—even with all of the fancy hardware developed to jazz up the Trivia contest.”**
- **Postman, Neil, and Charles Weingartner. *Teaching as a Subversive Activity*. Delta, July 15 1971.**



- p. 270. “In the middle of town there is a large concrete building divided into many identical rooms, each room equipped with rows of desks and chairs. At the sound of a bell you go to one of these rooms together with thirty other kids who were all born the same year as you. Every hour a different grown up walks in and starts talking….everybody agrees that no matter its past achievements, it [this model] is now bankrupt.”



2018

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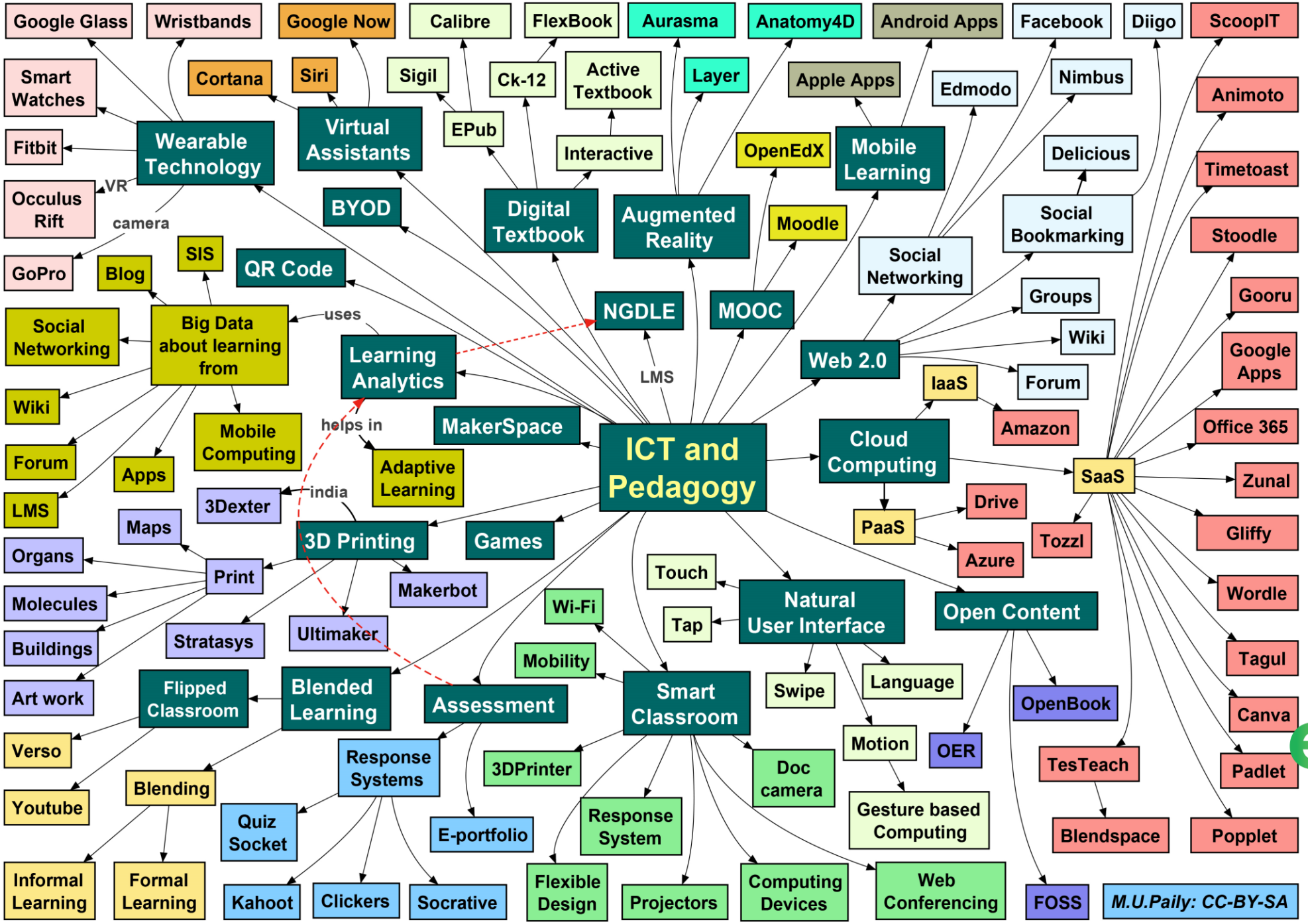

That changed
Fosters equity and inclusion BUT
Focus scatters (individualized)
Information and expertise come from many directions
Does congregating in a classroom inhibit this approach?

Information and Communication Technology and Pedagogy

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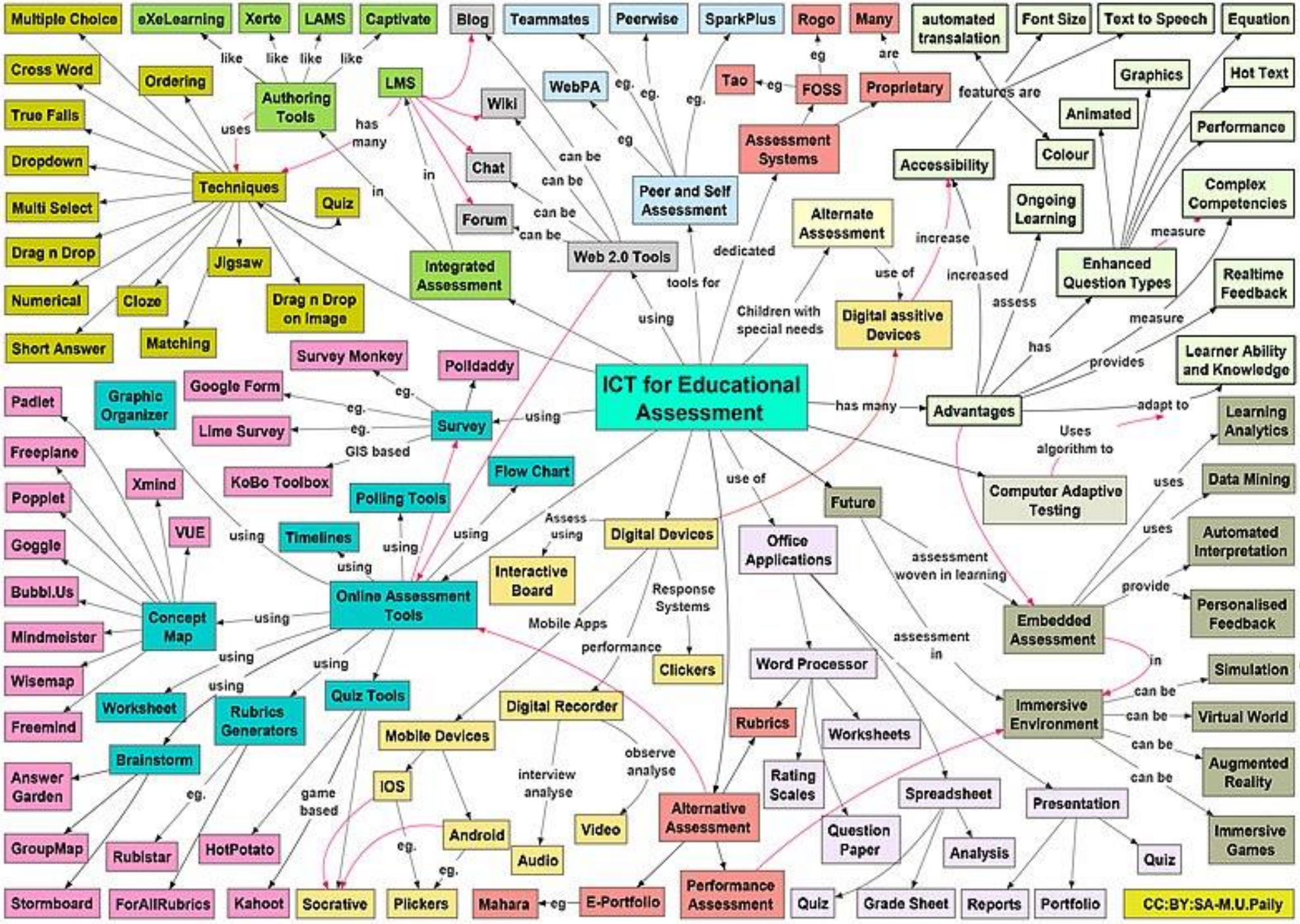


A Mind Map on the Use of Information and Communication Technology (ICT) in Educational Assessment

Assessments now come in many different forms and styles able to include almost all students.

https://en.m.wikipedia.org/wiki/File:A_Mind_Map_on_the_Use_of_Information_and_Communication_Technology_%28ICT%29_in_Educational_Assessment.jpg

Technology is driving us apart

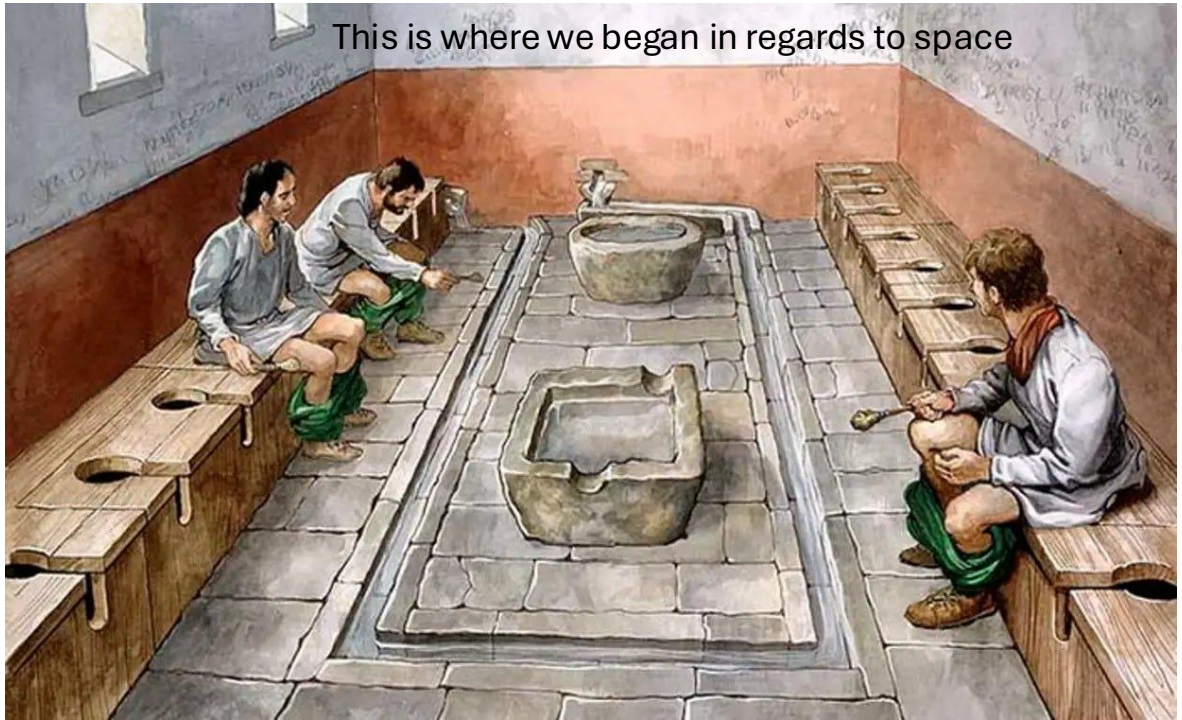
Technology and distance

Sherry Turkle, *Alone Together*
“I feel witness for a third time to a turning point in our expectations of technology and ourselves. We bend to the inanimate with new solitude. We fear the risks and disappointments of relationships with our fellow humans. We expect more from technology and less from each other.

In Roman times men sat next to each other on public toilets talking business while doing their business. Medieval times witnessed dinner manners which included passing a common bowl of wine around the table where everyone took a gulp, wiped their mouth on their sleeves and passed it on. The same with platters of food until technology introduced a degree of separation, the fork. Travelling in the 18th century might mean stopping at an inn and having to share a bed with a total stranger. Our civilization today finds these customs vulgar, uncouth and disgusting. We value and demand separation and privacy. As we civilise we grow further and further apart.

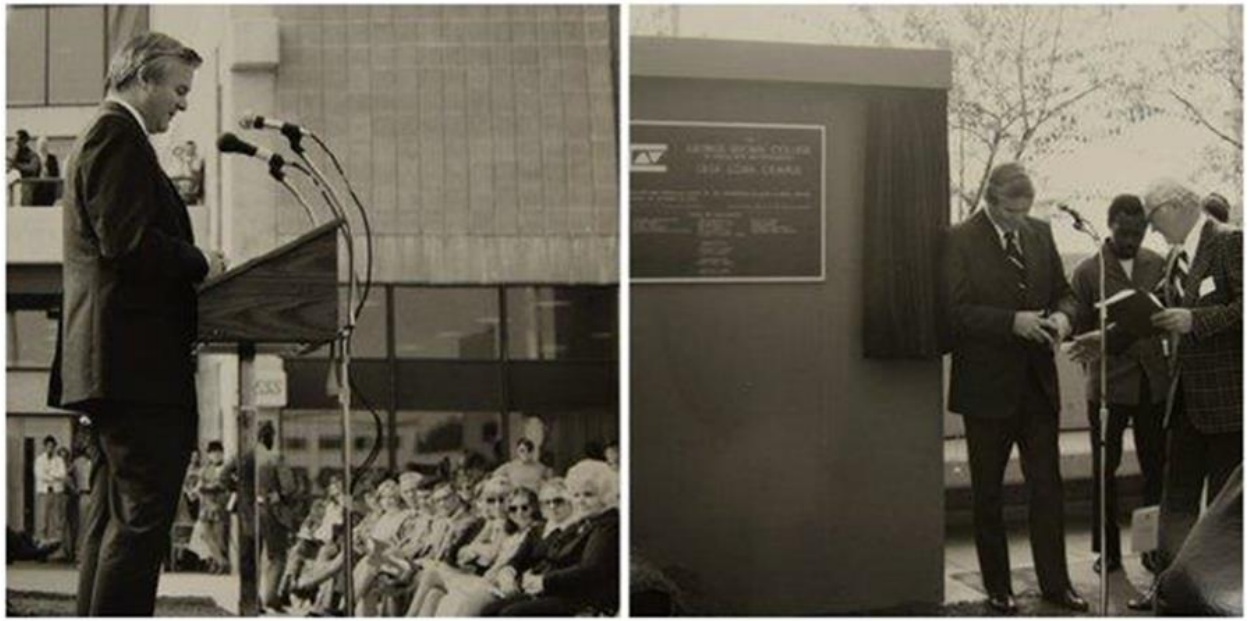
So I went into my local branch of the TD bank to get a certified cheque. The teller gave me a key pad, I inserted my debit card and punched in my PIN. He asked if I had my cell phone with me and I said no that I'd left it at home. Why did he want me to have access to my phone? He wanted to send me a six digit code that I was to enter to prove it was me. "But I'm standing right in front of you" I stated. He finally accepted my driver's license as proof of who I claimed to be. I've had an account with TD since I started teaching and in bygone days I would enter my local branch and be greeted with, "Hello, Mr. Gerhard. How are you? How are the wife and kids? Did that rash clear up with the ointment I gave you?" However, the virtual is now more authentic than the actual. (And yes the rash has cleared up.)

The two extremes/ Regarding Space.



The separation between teacher and student begins

"A broad spectrum of extension programs must be developed to include, along with regular evening classes, staggered timetables to accommodate shift-workers; correspondence courses, and satellite courses offered in outlying districts. ***For these, the resource centre (library) might operate 24 hours a day, if necessary, both on an attendance and on a mailing basis. Educational T.V., through the use of the video-tape recorder would be an important adjunct to such programs****, as would laboratory facilities secured from educational institutions throughout a college area."*
Bill Davis, Basic Documents



Bill Davis speaks at the opening ceremony of Casa Loma Campus, George Brown College, 1973

"Since the 1970's... more and more universities and community colleges have investigated the potential of different technologies (broadcast and cable television, audio and video cassettes, audio- and video-teleconferencing, and computer networks) as viable mechanisms for ***developing distance education courses and have integrated distance courses into their broader academic structure****...." (Burge) In her paper she "defines the need for an alternative to traditional classroom-based learning...."*

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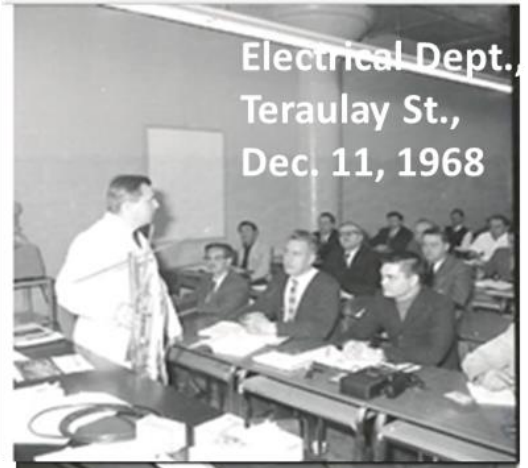
The separation at GBP begins

- GEORGE BROWN COLLEGE…BELIEVES THAT CABLE TELEVISION HAS CONSIDERABLE POTENTIAL FOR REACHING A LOCALIZED AUDIENCE, RECOGNIZING THAT PEOPLE HAVE TV SETS NO MATTER WHAT THEIR LEVEL OF INCOME MAY BE. THE COLLEGE HAS FOUND, …THAT THE LOWER THE SOCIO-ECONOMIC LEVEL, THE HIGHER THE RELUCTANCE TO COME TO AN ESTABLISHED INSTITUTION.THE COLLEGE IS NOT, THEREFORE, REACHING A GREAT MANY PEOPLE WHO MIGHT BENEFIT FROM THE COLLEGE'S SERVICES AND CABLE TV SUGGESTS ONE WAY OF FILLING THIS VOID.

- Author, Jacobs, Dorene E. Title, The Community Colleges and Their Communities. Institution Ontario Association for Continuing Education. Dec. 1970

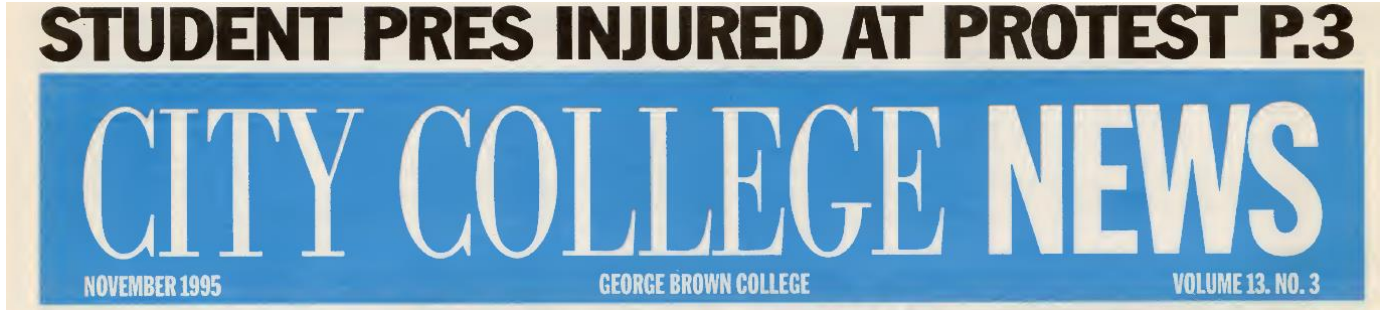


Al Davies of Physical Resources assists computer programmer Jim Stapleton in feeding information into a computer terminal in the main computer room at 146 Kendal. The new computerized telephone directory is one example of how the computer is increasingly being used by the College for the storage and retrieval of information.

Computers and their ascendancy were strengthening their grip on the College. In 1988 the College sent off a report to the Minister of Colleges and Universities, ***George Brown College, Preparing for Its Third Decade***, which proudly proclaimed:

*"**No longer does taking a college program mean sitting in a classroom**. The College has been aggressively developing new forms of educational delivery over the past few years that hold the promise of expansion in years to come. These initiatives also allow George Brown to reach new groups of people with appropriate deliver methods."*

Among the "initiatives" that the College was experimenting with were **independent learning centres** for health science students **designed to allow them to learn at their own pace and which, at the same time, allowed faculty to attend to students on an individual basis rather than lecturing to a full classroom.** Such individual learning was enhanced by a joint venture in co-operation with TV Ontario **permitting students to watch programs from home and contact teachers by phone when necessary.**

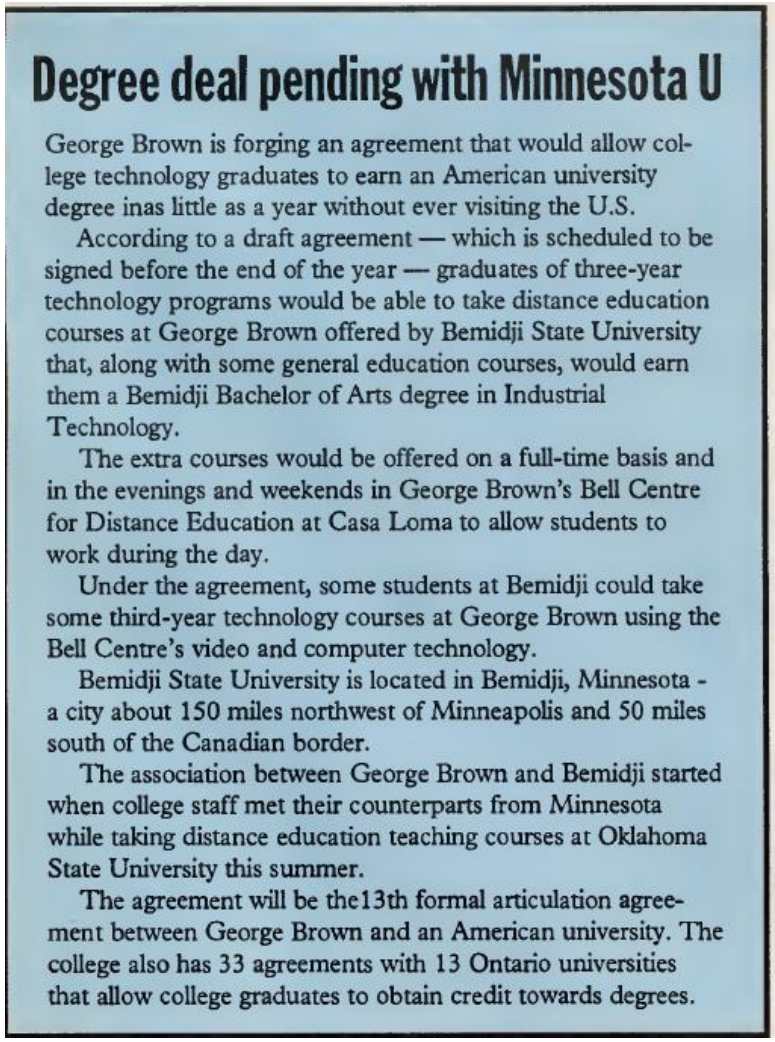


College web site up

Attention cyberspace men and women: George Brown has made a first step into your world. The college recently posted its first world wide web site listing college programs and services. The site, which is accessible instantly from around the world by people with the right computers and software, is at: www.gbrownc.on.ca

Videotelephony, Bell Centre

"The Bell Centre was used as a video-conference facility until 2011 when it was converted to administrative and meeting space. Interest in ISDN conferencing decreased as web browser-based conferencing increased. While video-conferencing has evolved and desktop conferencing has replaced large screen group conferencing, there is no reason to say the Bell Centre was a failure because it is obsolete. I'm fairly obsolete myself." (Colin Simpson)



Degree deal pending with Minnesota U

George Brown is forging an agreement that would allow college technology graduates to earn an American university degree inas little as a year without ever visiting the U.S.

According to a draft agreement — which is scheduled to be signed before the end of the year — graduates of three-year technology programs would be able to take distance education courses at George Brown offered by Bemidji State University that, along with some general education courses, would earn them a Bemidji Bachelor of Arts degree in Industrial Technology.

The extra courses would be offered on a full-time basis and in the evenings and weekends in George Brown's Bell Centre for Distance Education at Casa Loma to allow students to work during the day.

Under the agreement, some students at Bemidji could take some third-year technology courses at George Brown using the Bell Centre's video and computer technology.

Bemidji State University is located in Bemidji, Minnesota - a city about 150 miles northwest of Minneapolis and 50 miles south of the Canadian border.

The association between George Brown and Bemidji started when college staff met their counterparts from Minnesota while taking distance education teaching courses at Oklahoma State University this summer.

The agreement will be the13th formal articulation agreement between George Brown and an American university. The college also has 33 agreements with 13 Ontario universities that allow college graduates to obtain credit towards degrees.

"The Bell Centre was a bold, decisive step at a time in the College's history when there were massive layoffs and program closures. It was established in 1995 as a $4 million joint venture between GBC and Bell, with Bell paying for all the training and equipment and GBC providing the faculty to be trained and the space to house the Centre. The Centre consisted of 3 rooms – two 12-seat computer labs and one large (60 seat) video-lecture room. The large room was used for both broadcast and reception of distance education courses and programs. One of the most popular video-conference programs offered through the Centre was an Undergraduate degree in Technology Management in partnership with Minnesota State (Bemidji) University."

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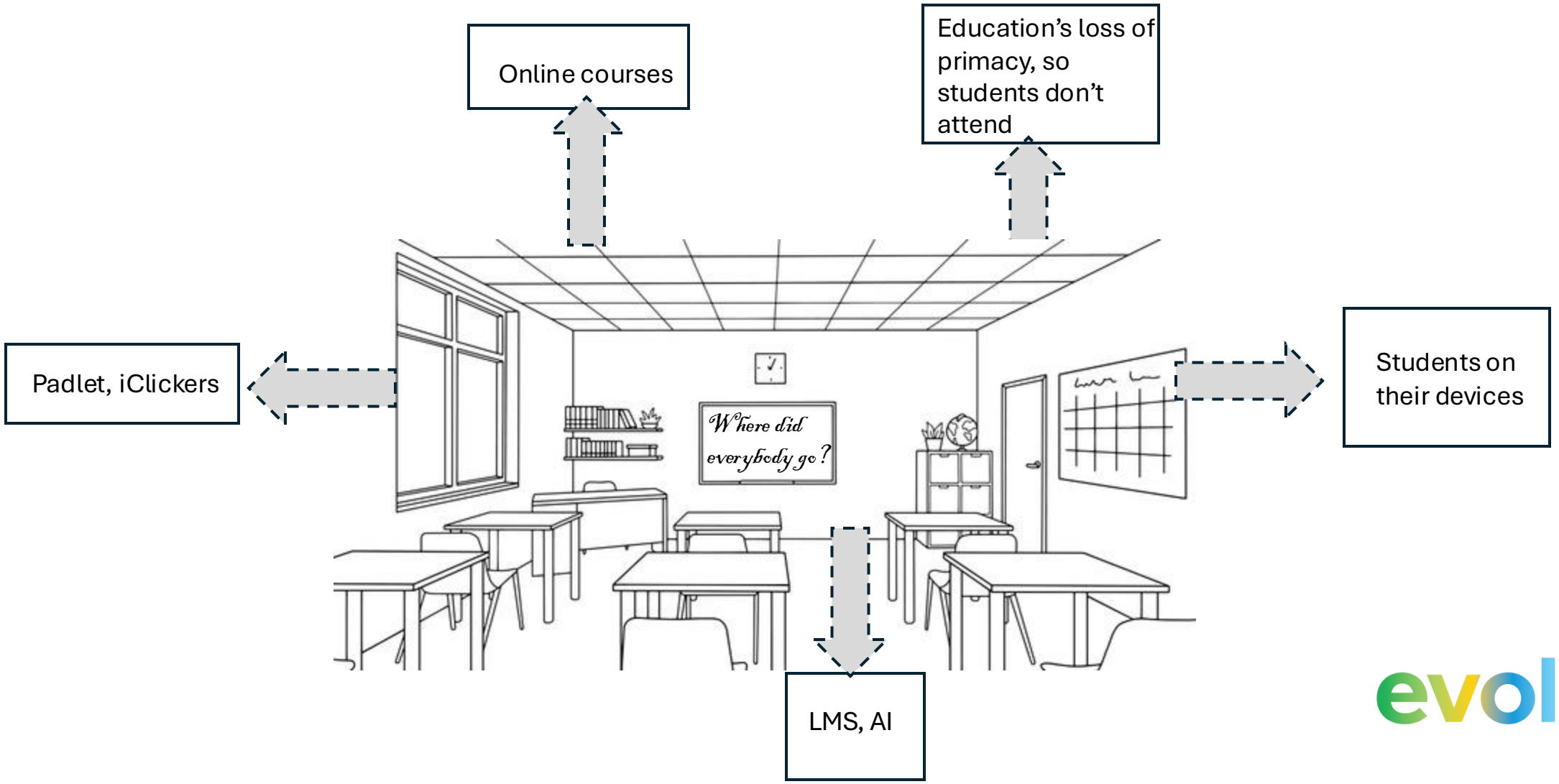

An Academic Computing Working Group report to the Academic Management Committee on January 27, 2011 at George Brown asks:

"What are the college's expectations regarding online courses and programs? ***By 2020 how much of what we teach will be entirely online?*** *How will that change the teaching/learning paradigm?"*

Educause (ECAR): GBC Faculty-Student Technology Surveys

The Educause Centre for Analysis and Research (ECAR) is an American non-profit organization focused on technology issues in post-secondary education. This organization conducts an annual/semi-annual set of surveys which are open to international participation. In 2012/15, George Brown College participated in both the student and faculty surveys developed by ECAR. The surveys were done separately (student and faculty) but many questions were similar, as the **focus of both is on technology use in and out of the classroom as well as attitudes and opinions regarding the use of technology in education**. This report summarizes the results specific to our college.

EDUCause (ECAR): 2015 GBC Faculty-Student Technology Surveys
Summary Report

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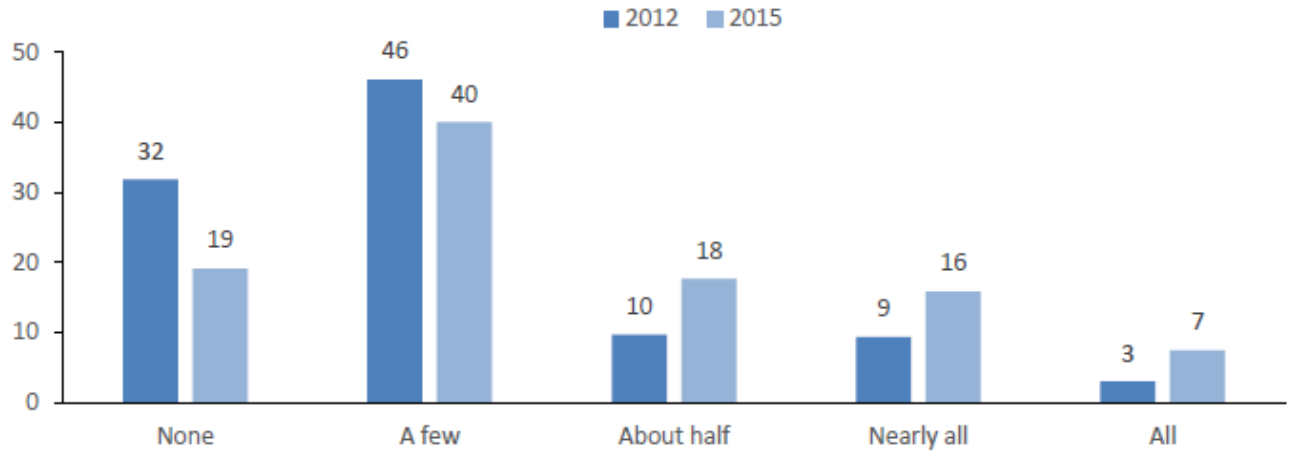
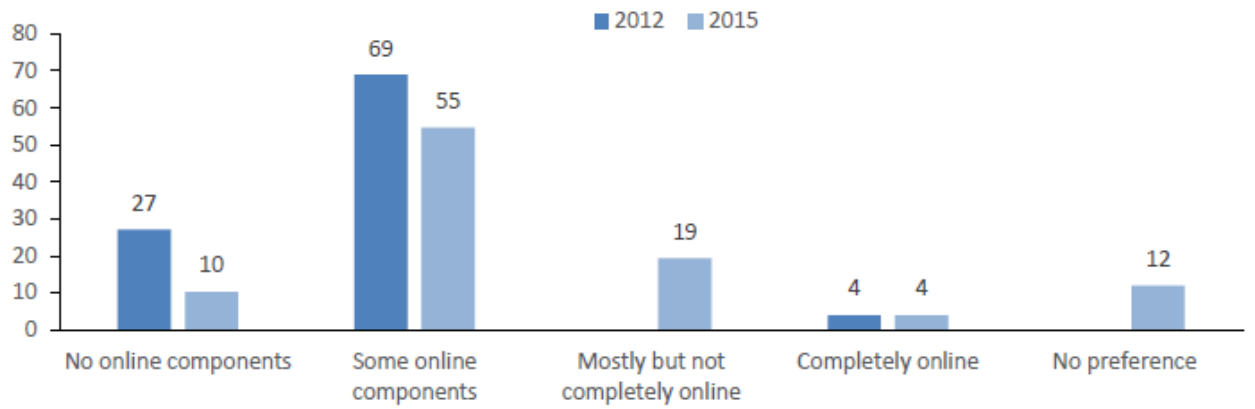
Figure 16. In the past year, how many of your courses/learning environments employed a combination of online and face-to-face interaction? (Percent of GBC student respondents)



In 2012, the question was phrased, "In the past year, how many of your courses have been "blended" courses (with some online components and some face-to-face components)?"

- Unsurprisingly, students in 2015 are more likely to report that more of their courses have a combination of online and face-to-face interaction. In 2012, almost a third reported that none of their courses used this combination vs. 19% in 2015.

Figure 17. In what type of learning environment do you tend to learn most? (Percent of GBC student respondents)



- Attitudes towards an online component have also slightly shifted since 2012, with fewer students reporting that they learn the most in environments with no online components.

Term	In-Person Only Cours	Online Courses	Online Percentage	
201701	1546	150	8.8%	
201702	1727	135	7.3%	
201703	890	87	8.9%	
201801	1629	161	9.0%	
201802	1771	176	9.0%	
201803	912	103	10.1%	
201901	1628	177	9.8%	
201902	1748	190	9.8%	
201903	642	131	16.9%	
202001	1316	270	17.0%	
202002	1508	328	17.9%	
202003	996	137	12.1%	
202101	1539	310	16.8%	
202102	1550	429	21.7%	
202103	638	416	39.5%	COVID
202201	1462	437	23.0%	
202202	1456	588	28.8%	
202203	739	356	32.5%	
202301	1549	377	19.6%	
202302	1563	539	25.6%	
202303	839	265	24.0%	
202401	1389	664	32.3%	
202402	1488	713	32.4%	
202403 i.e. 2005	737	433	37.0%	
Grand Tota	**31262**	**7572**	**19.5%**	

Pre 202003 Online Average	**11.3%**
Post 202003 Online Average	**27.8%**

Per each term, each unique course is counted either as in-person only or as online, which includes unique courses that are either only online or are hybrid (a combination of in-person and online).

The COVID pandemic was a watershed moment for online education. Students were told to stay home and work online. After the pandemic they did not come back.
Today the courses where face to face classes are a necessity (culinary, health sciences, construction) constitute a significant percentage of all classes but purely academic courses are increasingly online.

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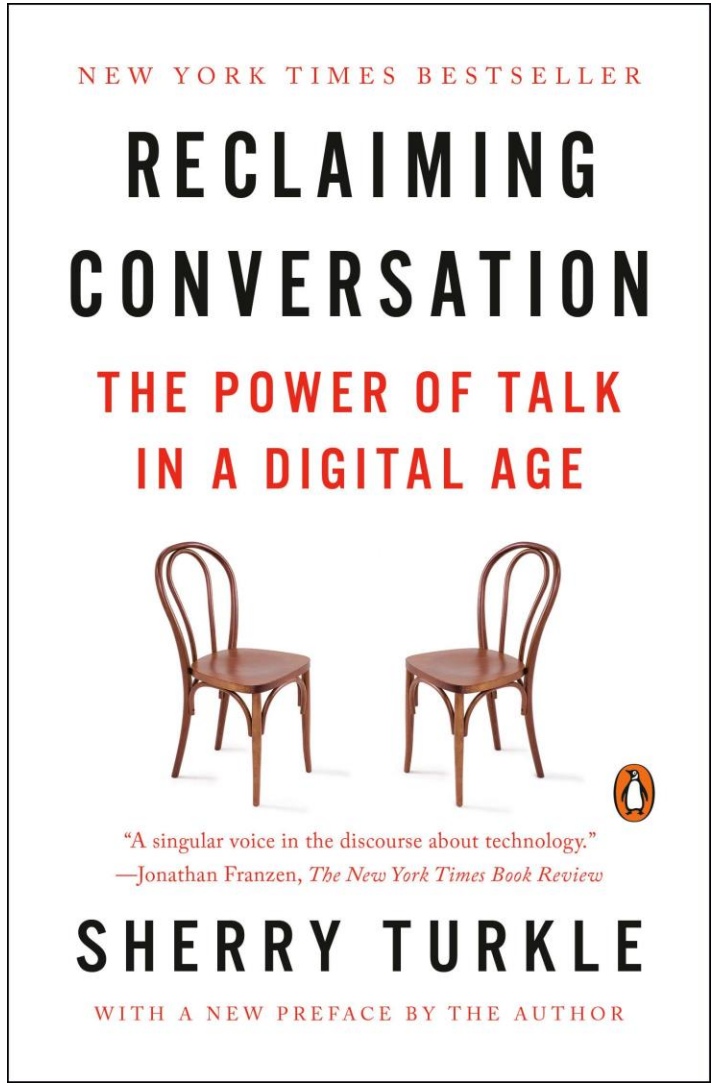
Title	Department	Centre	2017-18 Academic Year	2024-25 Academic Year
FUNCTIONAL ANATOMY	School of Dental Health	Community Services & Health Sc	In Person Only	In Person Only
RESIDENTIAL WOOD FRAME CONST.	Apprentice & Skilled Trades	Technology	In Person Only	In Person Only
WELDING TRADE SHOP	Apprentice & Skilled Trades	Technology	In Person Only	In Person Only
PLUMBING TRADE THEORY	Apprentice & Skilled Trades	Technology	In Person Only	In Person Only
CUTTING, SOLDER. BRAZING&WELD	Apprentice & Skilled Trades	Technology	In Person Only	In Person Only
ELECTRONICS I	Apprentice & Skilled Trades	Technology	In Person Only	In Person Only
BAKING & PASTRY FOR COOKS	George Brown Chef School	Hospitality & Tourism	In Person Only	In Person Only
ESSENT. FLAVOURS OF MOD KITCHEN	George Brown Chef School	Hospitality & Tourism	In Person Only	In Person Only
HEALTH ASSESS.IN CLIN. PRACT.	S. H. Eaton School of Nursing	Community Services & Health Sc	In Person Only	In Person Only
CROWN & BRIDGE I	School of Dental Health	Community Services & Health Sc	In Person Only	In Person Only
MOVEMENT I	Media and Performing Arts	Arts, Design & Info Tech'y	In Person Only	In Person Only
PROFESSIONAL COMMUNICATIONS I	Dept of English &Communication	Preparatory & Liberal Studies	In Person Only	Online
INT'L TOUR. CULT.AND BEHAVIOUR	Hospitality & Tourism Managem.	Hospitality & Tourism	In Person Only	Online
PRIN. OF HOSP & TOURISM MGMT	Hospitality & Tourism Managem.	Hospitality & Tourism	In Person Only	Online
POP CULTURE:POL OF MEDIA LITER	Liberal Arts & Sciences	Preparatory & Liberal Studies	In Person Only	Online
FORENSIC PSYCHOLOGY	Liberal Arts & Sciences	Preparatory & Liberal Studies	In Person Only	Online
INCOME TAX PLANNING	School of Accounting & Finance	Faculty of Business	In Person Only	Online
MATHEMATICAL ANALYSIS FOR MARK	School of Accounting & Finance	Faculty of Business	In Person Only	Online
INTERACTIVE PROTOTYPING 1	School of Design	Arts, Design & Info Tech'y	In Person Only	Online
COMPENSATION	School of Human Resources	Faculty of Business	In Person Only	Online
PROFESSIONAL SELLING	School of Marketing	Faculty of Business	In Person Only	Online
ACE BIOLOGY	Work & College Preparation	Preparatory & Liberal Studies	In Person Only	Online

Back

Hiding in Plain Sight

Anonymity in the classroom through the use of iClickers or Padlet- like technologies, even though it is argued that they invite participation and provide inclusion, undermine the primary function of the classroom, the bringing together of scattered individuals around a teaching opportunity. With these distancing devices and apps, students are no longer asked to own their opinions or contributions to the educational experience before them, as if asking, answering, commenting or interacting in the flesh is unsafe and potentially invasive. Concealing behind anonymity-technology allows for unfocussed and potentially disruptive responses from students and undercuts any personal connections between teacher and student and student and student thus nullifying any advantage the classroom itself may afford. As well, there seems to be an implicit and inescapable contradiction in meeting in an enclosed space with others and then expecting to remain concealed.

Sherry Turkle in *Reclaiming Conversation, The Power of Talk in a Digital Age (2015)* makes the case, *"... there is pressure to use technology in a classroom in ways that make conversation nearly impossible. Interestingly, this technology is often presented as supporting student "engagement"....Students...get anxious about speaking in class. Some supporters of online education see as one of its virtues that it gives "voice" to students who are shy and don't participate in discussions when it is held in physical classrooms. Shy students, they argue, gladly participate in online forums, particularly if they can be anonymous. And even in "live" classrooms, professors can use digital tools to get feedback from shy students, using clickers for example. Clickers attach to software that allows students to express an opinion without revealing a name.... Similarly, "comment" software for classroom discussion masks identity, another boon for the shy."* But *"...**I thought of old traditions: standing on Hyde Park's speaker's corner and being unafraid to say whatever you wished; the signed article in the newspaper that was protected speech. Where would students learn that they had the right to express their opinions if class opinions were registered through anonymous clicks?...In the best of cases, the college classroom has been a place where students stand up and defend their ideas in real time.** They learn from speaking and learn from listening to each other."*



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The LMS

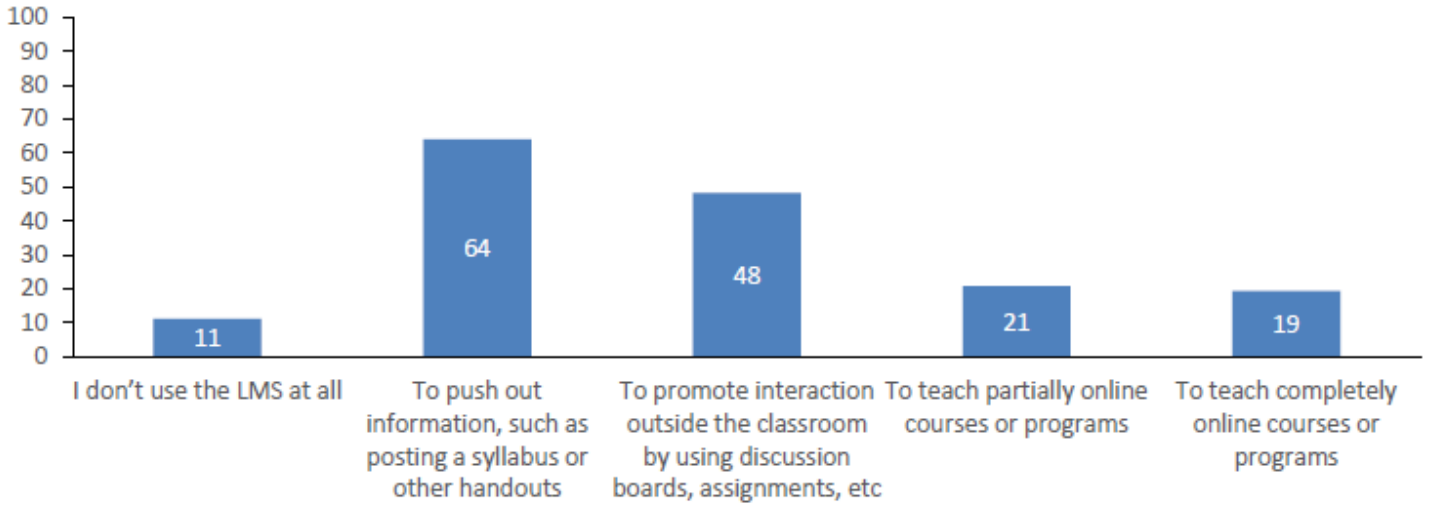
The Learning Management System WebCT (Web Course Tools) appeared at the College early in the new century (21st). It had been developed at the University of British Columbia and was designed to help teachers move their courses online.

According to the College's Academic Strategy 2008-2011, the College was to "create an improved and effective learning management system" by upgrading to Blackboard. There had been difficulties experienced with WebCT almost from its inauguration, a slowdown in its response time, suspension of its testing function. And the final nail in its coffin, a complete breakdown.

WebCT was acquired by Blackboard in 2006 and completely phased out by 2011. At that point almost two-thirds of George Brown teachers were using an LMS. Faculty concerns weren't so much that a future LMS would collapse but the technical problems demonstrated to what extent teaching had become dependent on it. What was also demonstrated was how reliant the teacher had become on a new level of expertise (IT).

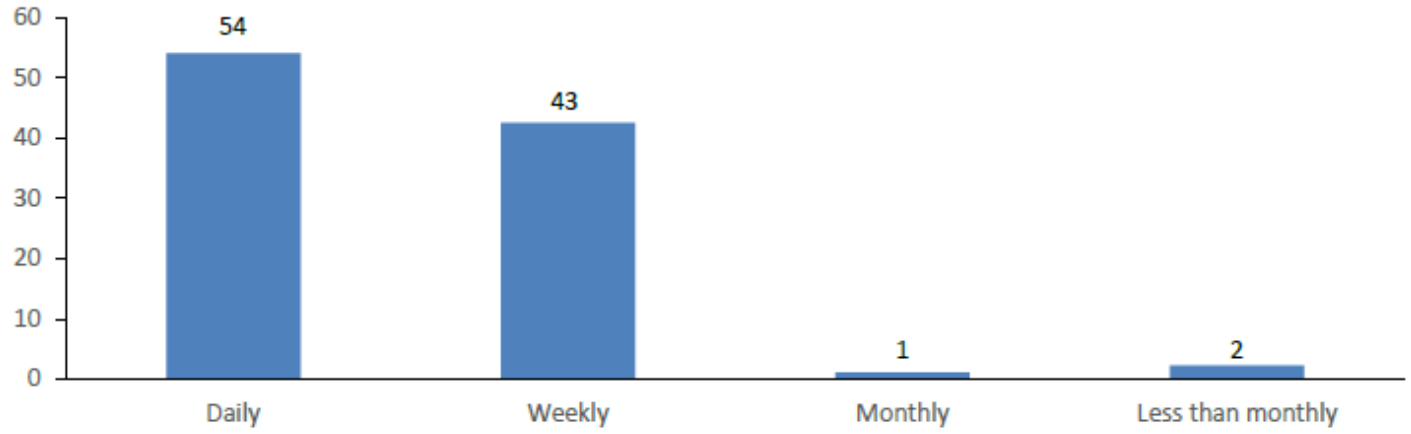
D2L, Brightspace was piloted in the Spring semester of 2015 when the College was reviewing its contract with Blackboard and at that point decided to stay with it. However, eventually a switch was made to D2L in the Fall of 2023.

Figure 28. Please indicate how you use the learning management system (LMS), e.g., Blackboard, Moodle, Sakai, D2L, Canvas, etc. Select all that apply (Percent of GBC faculty respondents)



- The majority of GBC faculty respondents (64%) use the LMS system to push out information to students, while 48% use it to promote interaction outside the classroom.

Figure 29. How often do you typically use the learning management system during a typical academic term? (Percent of GBC faculty respondents)



- Almost all GBC faculty respondents report using the LMS at least weekly (97%).

College-wide Survey of technology use

- To include only full time faculty and classroom teaching (no part-time, online courses)
- 132 respondents (good, representative cross section of all divisions, most respondents from Health Sciences 43)
  - Survey (SurveyMonkey) completed in Feb. 2011
  - Identified the demographic of respondents (How old, how long at college, department/division/school)
- For in classroom technologies used, not surprising number 1 software was PowerPoint---- number 2 was word processing software----number 3 was TEXTBOOKS
- For course management tools, email (79%) and WebCT (64.8%) were most used
- Voice mail on the way out? (22.1%)

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Table 18. To what extent do you agree with the following statements...(Percent of GBC student respondents)

	Strongly disagree (%)		Disagree (%)		Neutral (%)		Agree (%)		Strongly agree (%)	
	2012	2015	2012	2015	2012	2015	2012	2015	2012	2015
I get more actively involved in courses that use technology.	3	6	7	8	32	36	37	33	20	17
I am more likely to skip classes when materials are available online.	34	29	21	17	21	20	18	24	6	10

Over 1/3 of students agree that they are more likely to skip class because of online material

Back

Here is part of Hassoun's conclusions: “Ultimately, there will be no panacea for every challenge raised by classroom multi tasking. So long as personal media remain integral to our everyday lives, it will be impossible to eliminate the potential for students using them in distracting ways.” But according to this ECAR survey of GBC students in 2012 and 2015, students felt the disruption of those using devices around them and things have only gotten worse. Perhaps the problem is asking students to sit in a classroom and bring along their devices.

Table 18. To what extent do you agree with the following statements...(Percent of GBC student respondents)

EDUCause (ECAR): 2015 GBC Faculty-Student Technology Surveys Summary Report	Strongly disagree (%)		Disagree (%)		Neutral (%)		Agree (%)		Strongly agree (%)		%disagree	%agree
	2012	2015	2012	2015	2012	2015	2012	2015	2012	2015		
I get more actively involved in courses that use technology.	3	6	7	8	32	36	37	33	20	17		
I am more likely to skip classes when materials are available online.	34	29	21	17	21	20	18	24	6	10		
When I entered college, I was adequately prepared to use technology needed in my courses.	3	4	9	8	20	21	45	34	23	32		
Technology makes me feel more connected to the institution.	3	3	6	5	23	28	45	40	24	23		
Technology makes me feel connected to other students.	3	5	6	9	22	26	45	39	25	21		
Technology makes me feel connected to instructors.	4				26	32	42	36	20	16		
Technology interferes with my ability to concentrate and think deeply.	-	20	40	20	-	31	-	22	-	8	30	
I am concerned that technology advances may increasingly invade my privacy.	-	8	18	10	-	25	-	32	-	25	57	
In-class use of mobile devices is distracting for me.	-	15	30	15	-	28	-	27	-	16	43	
In-class use of mobile devices is distracting for other students.	-	9	22	13	-	28	-	32	-	18	50	
In-class use of mobile devices is distracting for instructors.	-	6	17	11	-	28	-	34	-	22	56	
Multitasking with my technology devices sometimes prevents me from concentrating.	-	10	24	14	-	24	-	35	-	16	51	
When it comes to social media, I like to keep my academic life and my social life separate.	5	2	18	6	23	21	30	25	24	45		
I wish I'd been better prepared to use institution-specific technology.	-	14	-	14	-	32	-	23	-	18		
I wish I'd been better prepared to use basic software and applications.	-	23	-	13	-	32	-	20	-	12		

Dashes indicate that these question were not asked in the 2012 student survey.

Back

Education’s Loss of Primacy

- Education no longer number 1 in what’s important in students’ lives
- May only be one of many competing demands on student time and attention
- Makes it much easier for student to put off going to class

Hybrid and HyFlex: Attempts at Compromise and Resurrection

- A Compromise: The HyFlex Classroom
- This approach to the classroom involves uniting different possible settings from which a student can access a course. While teaching in a traditional room, the teacher can also offer students the opportunity of accessing a lecture or demonstration at the same time via a video link. Students can engage interactively with teachers, fellow students and most classroom activities synchronously or asynchronously. Hybrid-Flexible or HyFlex courses were initially developed by Brian Beatty at San Francisco State University in 2005 but it was during the COVID crisis that it gained widespread popularity affording students flexibility as they adjusted their access to education to their other time constraints, familial and job pressures and transportation availability.

HyFlex: One teacher's experience

" Its flexibility in affording students choice of how and from where to access the course, online or onsite, allowed them greater ease in fitting the course into their often busy lives. This in turn encouraged them "to take greater ownership of their learning." And the fact that the course was now available by different means, also meant students could switch between them depending on immediate circumstances and learning preferences.

- On the downside, she found that adapting a course to suit several learning styles increased a teacher's workload. This frequently involved contending with recalcitrant pieces or whole systems of technology. This was disruptive and time wasting. As well, the teaching of some material did not cross over easily from one mode, the classroom for example, to another, say, online asynchronous.

HyFlex

- A room at 290 Adelaide St. was, at one point, outfitted as a HyFlex experiment but teachers using it found that students online reported the sound quality poor and exchanges within the classroom difficult to pick up for those interacting virtually, unless many microphones were placed strategically throughout. Some teachers also found it difficult to switch back and forth smoothly between comments from those present and those online.

Hybrid

- Blended course uses both in-class and online on a weekly schedule
- Sometimes alternate, one week face-to-race, one online
- Mixed success in getting students to come to class in person. Does it work against students attending class?
- Is the idea of a Hybrid course self-contradictory? “Come to class…no work from home…but come to class…unless you want to stay home.”
- Teacher can always build in assignments that can only be done in class

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What about labs, workshops, clinics

- Can these be replaced?
- How far can virtual reality or augmented reality take us

https://www.facebook.com/BlueRidgeCC/videos/blue-ridges-collision-and-repair-technology-program-is-making-hands-on-learning-/1439468701244737/

Virtual Reality (VR) replaces your physical environment with a fully immersive, computer-generated digital world. In contrast, Augmented Reality (AR) keeps you rooted in the real world but overlays digital objects, information, or graphics onto your surroundings. *AI definition*

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lumeto
Deliberate practice that is not constrained by space
Our VR software and tetherless headsets are easy to use for both educators and learners. It works in rooms with limited space and low-bandwidth internet.

Can this be done online?

lumeto

Realistic, flexible, and measurable learning powered by AI-assisted virtual reality.

Or…

- "I'm not crazy about reality, but it's still the only place to get a decent meal.“

Groucho Marx

An Alternative

Envision, instead, a large library or cafeteria setting with students scattered throughout, students on their laptops at long tables or in cubicles, some sitting and applying themselves. Others are standing and stretching their legs, some conferring with other students, some joking, making plans, flirting, perhaps even approaching the teacher, who is likewise on a laptop, to ask for clarification of that day's assignment. Conversation with others is tangential. Problem solving and lesson learning are done on the laptop with the help of AI, the LMS material previously provided and any direction the teacher can offer. The regimented interactions that once took place in a classroom are gone.

New TLs's: cafeterias, libraries, cafes, patios, foyers
Loosening time
Loosening space
The problem becomes the focus of learning
The technology allows for individualization of the learning, "Use what best helps you understand"
But there is still social, face-to-face interaction

Problem Based Learning

- Problem-based learning (PBL) is a student-centered approach in which students learn about a subject by working to solve an open-ended problem. This problem is what drives the motivation and the learning. The problem presented may spill over into other courses
- Nilson (2010) lists the following learning outcomes that are associated with PBL. A well-designed PBL project provides students with the opportunity to develop skills related to:
- Working with others
- Managing projects and holding leadership roles.
- Oral and written communication.
- Self-awareness and evaluation of group processes.
- Working independently.
- Critical thinking and analysis.
- Explaining concepts.
- Self-directed learning.
- Researching and information literacy.
- Problem solving across disciplines.


flirting
Buying food
Working on the assignment
Daydreaming
My station

Speaker's Dais

Upon arrival make yourself known to the Speaker of the House and then join your caucus.

You represent the British government during the Industrial Revolution. You want to encourage the growth of industry. Make decisions on the following policies the way they were made between 1750 and 1820, in order to launch the Industrial Revolution. Submit your caucus's detailed decisions to the Speaker before you leave. Decide on the following.

Do you vote to:

1. prohibit religious refugees (Huguenots) & immigrants (Irish navvies) from entering Britain in order to ensure employment for English workers?

2. impose tariffs on many incoming goods to reduce international competition?

3. enforce patent laws protecting inventors and inventions?

4. make machine breaking a capital offence punishable by death?

5. nationalize the factories?

6. allow the formation of trade unions to avoid labour difficulties and unrest?

7. On humanitarian grounds, prohibit importing slave-picked cotton from the southern U.S. and get it from India instead?

8. allow independent entrepreneurs to build and run the factories?

9. stop patents of inventions because new inventions are a gift from God and should be free to all?

10. negotiate with the Luddites and try to address their grievances?

11. because we must protect the next generation of consumers and workers, prohibit child labour?

Saying good-bye to the outdated and outmoded classroom can produce many new opportunities. Resistance is fertile.