

Electronic Media in a Global Education Context: Practices and Issues from a Toronto, Canada Perspective

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Introduction

This paper will outline the means by which electronic media is organized and utilized in educational practice in the context of the secondary school system within the greater Toronto area in Ontario, Canada. Current models include computer mediated learning as an extension, resource and support for traditional classroom teaching and learning, the delivery of credit courses on-line which includes distance education, and co-operative education programs whereby students learn by working in areas outside their home region while being supervised and monitored by their home-based teacher. In addition to disclosing how these practices work, I will analyze some advantages as well as challenges arising from their deployment that derive from my research and discussion with teachers directly involved in such programs¹.

The lenses of analysis, which provide the basis for my recommendations and cautions for the inclusion of electronic media in education, are situated within a global educational context, defined by O'Sullivan (1999) as "transformative ecozoic² education...[that weds] holistic education to a planetary consciousness while maintaining a critical perspective" (p. 64). Global education, thus defined, goes well beyond the focus on globalization and its accompanying notion that education should prepare students for competing in the global marketplace. Global education, in fact, opposes what O'Sullivan (1995) calls the mantras of modernism and capitalism: progress, growth, development and competition.

The orientation towards curriculum that focuses this paper is progressive, in line with Dewey's (1916,1938) two streamed approach of education being rooted in 1) the nature of human experience and the development of intelligence, and, 2) social reform, where schools have the responsibility to commit to social problem solving. "No longer was it appropriate to regard the child as a passive receptacle to be filled with curriculum content".... School has "as its main function the revelation of the tacit values that underlie the enterprise" (Eisner, in Jackson:1992, p.311, 314).

Try as we may, we cannot fully predict or determine what the world, replete with uncertainty and fast change, will indeed be like in the future for young people. Education, for an unforeseeable future, needs to be about empowerment, not dictate, and hence, this paper looks in that direction and to learning theory, particularly experiential learning

¹ Information was accessed by studying literature and talking to teachers-designers and implementers of such programs in the Toronto District, Toronto Catholic District, York Region District and York Catholic District School Boards as well as in several private schools in the greater Toronto area.

² O'Sullivan's (1999) ecozoic vision "can also be called a transformtative perspective because it posits a radical restructuring of all current educational directions. To move towards a planetary education it will be necessary to have a functional cosmology that is in line with the vision of where this education will be leading us" (p. 2).

(Kolb:1984) and the theory of multiple intelligences (Gardner:1993; Lazear:1991), as well as to other visionaries for support and inspiration on how electronic media can best be implemented in schools.

Computer Mediated Support for Teaching and Learning

Where computers and the electronic media make the greatest impact in education, and carry with them the potential to render education unrecognizable for the future, is in the context of the regular classroom. While teachers have slowly incorporated the use of computers in the classroom as an add-on and enhancement to planning and teaching, the technology available, further encouraged by the public's perception of its merit, now threatens to put many teachers out of business unless they can rise to function at least at the level of a serious computer hobbyist.

The greatest impact to date on education of computer use is not socially progressive as the global educational framework would advocate, but rather, has resulted in frustration on the part of many teachers about their inadequate computer skills and has opened the educational arena of competition to software and hardware producers. On the other hand, content packed new curricula, currently downloaded onto teachers because of recent changes in the province of Ontario's educational reform, make demands on teachers whereby the speed and efficiency of computer use could be a great asset if not for the in-service training and the modicum of aptitude required for its implementation.

Many school boards are strongly encouraging teachers to develop, and have indeed created, programs that efficiently transmit content thus freeing the teacher to assist students individually and draw upon the higher level skills associated with teaching. Private schools, with additional funds and incentive, are, in many cases, even further advanced in this process with programs in place and more on the way. One private school in Toronto, representative of many others, has the goal that one-third of academic courses will be delivered via electronic media in the next school year, while the teacher monitors students at work, trouble-shoots, assists with questions, engages students in higher thinking skills, and otherwise is freed up for more challenging and potentially transformative tasks.

Again, there is the time consuming and skill demanding component of teacher training to consider, so that teachers can, in effect, translate their curriculum effectively on-line, fully access internet resources and successfully communicate with students via this mode. Imminently this will have a considerable impact on teacher education, on ongoing teacher training (its availability, cost and access) and affect who will be attracted to and be able to remain in the teaching profession. My research disclosed that approximately ten percent of teachers are not computer literate. Many of them are unlikely to change. However, is this the criteria by which teachers should be judged?

Another issue to ponder is the fast growing market for educational materials that have the very real potential of dwarfing the lucrative profits garnered in the era of textbooks. With market demand comes questions around intellectual property rights and ownership of curriculum materials. Profiteering in the educational products market must

operate with serious checks and balances otherwise corporations, selling educational programs at high prices, can make accessibility to education even more elitist and capture far more power than is healthy over what is taught in schools. As it is now, big business has a new schoolyard for power playing as school budgets pay for bigger ticket items. At a time when charter schools and voucher systems are debated, private schools proliferate, and more families discover how technology can make homeschooling a personal reality, the wedge of disparity, already firmly in place, has extra strength behind it to separate the “haves” from “have nots”. From another viewpoint, availability of curricular materials potentially has the power to democratize education, depending on how openly it is accessed and how conscientiously it is created.

These critiques are not meant to discourage the use of effective technological tools, but simply to caution us about their management. Technology is a boon for dealing with content overload. It ultimately can free teachers to do the more high-end tasks of educating as it assists in communication to parents and students, providing homework reminders, simplifying evaluation and assessment and organizing around independent study projects. Teachers have been astounded to witness classes of students immersed and focused in their work, like never before, and loving it, because of the one-on-one correspondence a computer affords. A caution to raise is that, while technology focuses students, they can become extremely isolated in their work. Technology, a tool for detriment or benefit, will have its value determined by how it is managed for the common good. Otherwise it can potentially mechanize and depersonalize education to the extent that it merely supplies automatons for a workplace that will, in short order, find them to be obsolete. In this technological environment, we must be reminded of the people-making vocation of education - which is fostered best by generous displays of human contact.

On-line and Distance Education

Probably the most commonly understood application of computers in education is on-line or distance education. While universities have been offering distance education for many years, the introduction of this mode of credit delivery is rather new to the high school system, at least in greater Toronto, which is the focus area of my study. While my stated aim is to analyze the inclusion of electronic media in education within a critical perspective, I will begin by looking at the techniques used from the perspective of curriculum content and method of delivery and will later comment on transforming these techniques to the service of global education.

At the high school level, on-line education benefits students who are in need of additional credits to graduate and it is fast becoming the alternative to correspondence, night school or summer school courses. It also serves to provide adult, alternative education students, or those experiencing health problems, a means of earning a high school diploma if they are not available for, or best suited to attend, regular day school.

The main advantage of distance education is its flexibility: Students complete readings and assignments according to their own schedules without struggling over the constraints imposed by timetables and due dates of a traditional school schedule. Students

can proceed through units, more or less, at their own speed, provided that they meet the wider time frame allotted and/or the deadlines for assignments or final exams. Teachers maintain contact with their students primarily via email, internet access, and, in most cases, telephone supplemental help which includes academic as well as computer technical support.

If exams are scheduled, attendance in-person is required at a designated time and place. In some cases, seminar groups are established that meet periodically, to provide students with a more personal dimension to their learning. Here face-to-face discussion with other students and the teacher can augment the discussion forums happening on-line.

While the flexibility of this programming is advantageous, it can also be a stumbling block, particularly for the students that are lacking in personal management and organizational skills. Without the regular guidance and contact that a live teacher can provide, many students do not complete their programs, or struggle with their deadlines more than usual. This is a recognized drawback for this mode of learning. In addition, this mode, could become an “easy out” for students who are avoiding the regular classroom experience.

A further enhancement to distance education, is the proliferation of learning centres that are able to accommodate students with access to computers as well as technical and some academic support. For students who do not have a computer or prefer to be in a location other than home, centres are being established that are completely dedicated to this alternative, computer-based mode of curriculum delivery. One such school is already established in the heart of Toronto. Traditional in appearance from the outside, it functions without bells, timetables, schedules, or large-scale student activities that would otherwise be commonplace. Provision for such venues are driven by the reality that not all students have access to computers or a suitable environment for schoolwork.

One final application of on-line learning to be discussed, which broaches upon the next heading, Computer Mediated Support for Teaching and Learning, is the opportunity for students registered in regular school programs to take specialty courses. This is exemplified in a French school in York Region - a school within a school - in an otherwise Anglophone area. This small school, separate from its English counterpart in terms of students, staffing and programming, is limited in its ability to offer an extensive array of courses for its diminutive student body. The school's solution is to offer additional courses, such as psychology, that are exotic to a high school setting, via on-line education.

In true high-tech fashion, students take a course in a classroom that is not only computer mediated but augmented with features such as power-point presentations and on-screen “virtual” lectures. The teacher, for the most part, remains behind the scene marking assignments and communicating with students via email. This teacher's involvement and responsibility would constitute one section of his or her normal teaching load and the programmed component of the course can be replicated for future use.

All school boards in the greater Toronto area are coming on board to include distance or on-line education as a part of their program availability and delivery. Teams of teachers create the programs and teachers individually are responsible for the monitoring and marking. Computer support, for teachers and students, obviously is a mandatory complement to such educational programming.

International Co-operative Education

International co-operative education has maintained its status quo over the past decade within the greater Toronto area. An exciting program, it suffers slow growth by the fact that it remains quite elitist. Substantial funds, fundraising, and high commitment and motivation are required of student participants. In this program, students learn as they work and earn credits in the various work placements that are located far from their home locale. There are two strands to international co-op programs. One focuses on community development and service - that connects to the previously expressed notion of global education, while the second draws participants (both student and corporate) from those who are advancing the notion of globalization and its inherent competitive-mindedness. In the former strand, students are teamed up to work with social service organizations, schools, and on development projects while in the latter strand, student placements are predominantly in multi-national companies who start students off near their home base then move them afield to work in their corporate offices abroad. The difference between global education inspired exchanges and global business inspired exchanges are the nub of the struggle between the transformatory global education perspective and the business as usual agenda.

The advancement and availability of technology has certainly not only made placing students more possible, but has assisted in on-going curriculum development that starts before, but continues to evolve after the students are at work. Immediate and ongoing communication is facilitated via email and the Internet and the caliber of student learning plans are outstanding as they are fully individualized to suit the student's and employer's needs, desires and capabilities. Organic, ongoing learning plan development, that is practically connected to the in-school subject corresponding to the co-op experience, is unsurpassed in its scope and depth compared to mass produced, "one size fits all" prescribed courses of study.

While electronic communication does not replace teacher to student face-to-face monitoring, it allows for international experiences such as these to be more readily available. In the programs researched, teachers still make at least one visit to the host country in order to communicate with students more personally and directly. This visit usually occurs at the mid-point of the placement experience. Shortcomings, arising from over-dependence upon electronic communication, will be mentioned under subsequent headings.

I will conclude discussion on international co-op by commenting on the value of international experience for students, and how it needs to be strongly encouraged. Technology has certainly played an important role here. These opportunities, in the

various forms they take, allow students to learn experientially on a multitude of levels - about culture, politics, social and economic realities, community life, independence, interdependence, and most of all in the best cases, students learn about themselves through the maturation process that comes naturally from leaving home, taking on responsibility and having new opportunities challenge “old” assumptions and world views.

These programs, while facilitated on a large scale by electronic communication, can be fostered on a smaller scale via the same means. Schools have made intercultural communication a feature of regular programming by pairing up students, across the miles, in upscale versions of pen pal communication as well as setting up international forums for work on joint curricular projects. Of course, school to school linkages between rich countries and third world countries link up a range of Canadian students, as defined by social class, with rich students of poor countries, because in the third world only the schools of the rich would have computers and Internet access. A consideration to ameliorate such disparity may be that the Canadian school pays for the Internet access, which would allow contact with students more typical of the third world country. These initiatives, that create bridges for students, are made possible only by establishing intercultural dialogue at the level of teachers, committed members of communities, and supportive administrators. We are presently at a venue where this can take place - this conference, attended by those who have the facilities to make it happen, is the fertile ground to launch such initiatives.

Education for the Bigger Picture

In response to the reality of what is “out there”, I would like to look at electronic mediated learning from the perspective of a larger context – what must education do to meet planetary challenges - by examining the pertinent and pressing questions that face our world today that automatically and rightfully look toward educational systems to address and, in fact, remedy. I will begin by citing some of the most pressing dilemmas that currently face humanity and the planet, and conclude by commenting on how electronic mediated education and similar technology can serve this expansive vision of education and how their inherent limitations need to be acknowledged.

Global Consciousness: Concern for the Welfare of the Planet

Concerns for the welfare of our planet dominate in the area of pressing issues for our times. Environmental problems, so massive that they threaten the planet’s viability, as we now know it, are portrayed in a familiar litany that includes global warming, ozone depletion, scarcity of arable land and water supply, over-population and pollution of land, water and air. Only recently it was reported, in the Toronto area, that a thousand people die prematurely per year due to the excessive air pollution and its resulting damage to the respiratory system³.

This planetary crisis, given voice in the global education movement, begs for a global consciousness that moves citizens to genuinely care and re-appraise the pivotal

³ Health Canada estimate states that 5,000 people die prematurely each year in major Canadian cities because of air pollution. Cited in The Toronto Star and Globe and Mail, June 7, 2000.

role they play in planetary viability that ought to surpass the minimal contribution of participating in recycling programs. Policy makers need to be radically influenced by a mass of badgering citizenry who back up their beliefs with life-style changes and enlightened spending habits in order to make transformation happen on a large enough scale that goes beyond superficial “drop in the bucket” solutions. How else can this happen without a consciousness that is advocated and supported by education systems focused on promoting global awareness? As a force that would contradict the dominant corporate society and transcend the quest for profits, expediency and the “quarterly report” frame of mind, education would face the challenge and consequence of contravening against the adaptation mandate it is also expected to fulfill. This rather counter-cultural model of education - one that surpasses any notion of education for job training - necessitates a multi-faceted approach to pedagogy and curriculum.

The consensus over the necessity to “green” our consciousness and behaviour, and the requirement that education be congruent with this aim, is shared by scientists, thinkers, environmentalists, religious, as well a growing body of earth-conscious citizenry. Environmentally focussed courses of study (Pike&Selby:1988,1999), while incorporating essential content delivery, also recognize that the values component is the prime agency for motivation and future action, and is best generated through activity-based, experiential learning. Tom Lyons (1993), environmental educator, includes the following powerful ingredients to inspire long term commitment in students: interactive exploration of real-world issues, time and place for social contributions, focus on interpersonal relationships and community building, all in a dynamic empowering curriculum that is co-creative, interpersonal, collaborative, interactive and includes both intuitive and physical ways of knowing. These features best characterize global education and, while the electronic media can function near miraculously in being able to assist in the organization of distance communication and the logistics of programming, to assume that it can adequately replace a highly interactive human process is to be largely unaware of how students learn.

Kolb (1984), through his work on experiential learning, underscores that the learning journey includes experience (concrete experience) as well as the abstract (abstract conceptualization), and integrates the outer (active experimentation) as well as the inner (reflective observation) worlds. All these aspects, evolving from the centrality of experience, need to converge because learning is, according to Kolb, “the process whereby knowledge is created through the transformation of experience” (p. 38,41). Likewise, Doll (1993) urges that education shift from the discrete to the relational, from the didactic to the dialogic, based on an understanding of curriculum as a “process - of development, dialogue, inquiry, transformation” (p. 13). Only a curriculum with these constituents can offer the much-needed open system of education needed in a post-modern age.

While computer enhanced communication has certainly made humans more prolific, it cannot go the distance in facilitating deep and probing interaction or maintaining its participants’ desire to remain connected to one another or to a process over time. This is especially true during occasions of conflict or disequilibrium. While

they are uncomfortable, they are nevertheless the essential gateways that require perseverance in order to reap growth and development. For example, many participants of “chat lines” and on-line discussion forums admit to experiencing an initial burst of enthusiasm that eventually wanes or becomes superficial in substance and quality over time. Perhaps the relative anonymity of electronic communication makes it a bit too easy to hide aspects of oneself, pay lip service to a process, take a back seat, or simply vanish from the discussion table. The ease of receiving and sending messages can evoke the human tendency to take things for granted. Quantity does eventually lessen quality - even regarding the best things in life. It is doubtful that the electronic media can engage people as fully as person to person contact that allows for the additional experience of human energy, body language, nuance, intuition and innate ways of knowing.

Another example of educative programs that recognize planetary concerns are the previously mentioned co-operative education programs that place and monitor students worldwide. These programs afford students the opportunity to more fully enmesh themselves in the milieu of less familiar areas, and are more easily organized by the speed and efficiency of email and internet access that help find placements, aid in curriculum development and maintain quick and direct communication among those involved.

Surprisingly, shifts are happening in the use of electronic media, particularly when applied to communication between parents and students. While electronic communication was previously championed as being supremely efficient, over time and experience it is being regarded as having its limitations and there is an unexpected return to using regular, albeit slow, postal systems. This results from unnecessary bouts of panic provoked in family members back home as a direct result of the too fast and too frequent email communication that dispenses blow by blow accounts of student distresses and homesickness. While the vast majority of these issues are easily remedied on location, without the aid of family, somehow the news of solutions never travel with quite the same speed and urgency, if in fact, at all. Under such circumstances, the family at home continues to panic or is moved to inappropriately get involved.

In the case of teachers monitoring students, regular communication with program leaders and students via email never fully replaces the need for on site visits where the teacher can best determine the quality of program delivery and look out for problems. Successful teacher monitoring, in all co-op programs, involves a relationship between teacher and student, a context of trust, and the opportunity for the teacher to discern and probe with the student to jointly ascertain the next threshold of learning that may not be readily apparent but come in ways least expected. Subtle yet profound learning is best discovered via the human instrument, utilizing the full gamut of human resources, and it is best nurtured within the context of relationship where discernment and intuition is applied. With this in mind, the teacher can best support and assist students to open up to serendipitous yet unparalleled learning. Dewey (1938) underscores how learning, like most valued life experiences, often occurs outside of what is planned. “Perhaps the greatest of all pedagogical fallacies is the notion that a person learns only the particular thing he is studying at the time” (p. 48).

Society needs to reconsider that the school's fertile social environment is the heart of its most essential functioning. With technology taking over the function of information transmission, now schools can and must be redefined around the significant role they play in providing opportunities for socialization and human interaction. This means that, along with information acquisition, schools engage students in community building, dialogic interchange, teamwork and co-operation. Especially when students will be "on-line" for large parts of their classroom experience, the social interaction and "living in the world" aspects of school communities cannot be underestimated. To create a caring citizenry with a sense of social responsibility, a sense of belonging to the world and to fellow human beings is indispensable. "Love" itself, according to Steindl-Rast (1991, p. 57) "is saying yes to belonging". Without a sense of belonging or connection there is little incentive for anyone to contribute or care. Disconnection from the natural world leads to the abuse of it and disconnection from fellow humans leads to dehumanization, apathy and ruthless competitiveness.

As mechanistic learning options move to the forefront of educational practice, vibrant community life needs to be encouraged by augmenting the social aspects, pedagogy and focus of school experience. Community building also needs to incorporate the larger community that surrounds the school, which may be facilitated by an electronic connection but needs to be matched by human connection as well. Co-operative education programs have lead in this area by boosting the sense that a learning community extends beyond the confines of the four walls of a traditional classroom.

Electronic mediated learning can be instrumental in liberating schools from bells, schedules and timetables, as well as liberating teachers from content transmission to becoming educators that stimulate, challenge, push boundaries of knowledge, urge critical thinking, mentor creativity, foster egalitarian relationships and seek the "daimon, calling, angel, heart, acorn, soul" (Hillman:1996, p. 207) within each individual. Using technology, as the wonderful tool it potentially can be, will open doors for education if we do not become dazzled or confounded by its speed, enormity and allure. Instead we must hold steadfast to the fuller gamut of what education can be. If technology is allowed to dehumanize education - not only chain students to desks, but hold fixed their gaze to computer screens and shackle their bodies to keyboards, and so be misused, we will have failed, even though test scores skyrocket. Jeremy Rifkin (2000) advises for both proper management and visionary zeal that are necessary to bring technology to its coming of age where education, in its new mission, can truly be liberated from information transmission to providing students with opportunities for "direct and intimate participation with others in real time and space" (p. 254).

Disparity between Rich and Poor and the Quest for Economic Prosperity

The second world issue that belongs on the discussion table of education is the increasing disparity between the rich and the poor nations which, while catastrophic for developing countries, is evident in the shadow of well-off nations as well. In the latter case, poverty is juxtaposed against the flagrant consumption of consumer goods and services and, on a macro scale, the pursuit of greater economic power and superiority.

Economic anxiety has hooked educational policy making to an economic agenda that has translated into cutbacks for education, restrictions on educational programming and education as job training which uses relevancy for its justification. This in turn limits programming, that most critically wounds the disadvantaged, narrows learning to job training, which in its specificity tends to narrow more than it widens options, and makes private schools more attractive (than public, state run schools) which leads to greater elitism.

While an expedient definition of relevancy is questionable, or ambiguous at best, it's powerful voice demands for the greater use of technology in schools and the subsequent training for students and teachers in computer skills in order to meet this need. In recent years, the suggestion has been made that a computer be on every Ontario student's desk. The Quebec government has, in fact, offered lower income parents a \$500 subsidy for the purchase of a home computer in the hopes of getting all Quebec students "on-line" – an expensive offer for the government to make, yet it makes only a dent in the family costs of purchasing technology with built-in obsolescence. At the private school level, a personal lap top computer is becoming the necessary additional item to a child's list of necessary school supplies. Relevancy, often too narrowly defined, is also the rallying cry behind school-to-work transition programs, work experience, service learning and co-operative education programs.

Relevancy is a valid goal, and with students demanding it in the form of computer and technological education as well as additional experiential learning opportunities, it should be provided if only because learning is contingent upon motivation and the motivation is in this area. Nevertheless, excessively focusing on computer and technology driven education, to the detriment of other modes, may lead students to a new brick wall - to a promise that cannot be delivered and to more disparity between the privileged and disadvantaged. Co-op teachers are inundated with students requesting computer placements who are assured that the jobs will be there. But will this industry hire relatively few highly paid professionals at the top with vast numbers of low paid semi-skilled workers at the bottom? Whatever the top ten jobs are today, they may be gone tomorrow. Education must prepare students for this eventuality and technology needs assist and not replace the primary focus.

To avoid the growing gap between rich and poor, whether on a national or local scale, education needs to be all things for all people. Factors that mechanize, systematize, make uniform or otherwise homogenize need to be replaced by education that diversifies, individualizes and deals well with cultural and individual pluralism. Technological imperialism and superiority needs to be weeded out and replaced with critical scrutiny of what information really is important. Power is authentic and life giving only if it is used responsibly and oriented for the common good.

Spiritual Crisis - Quest for Meaning, Purpose and Belonging

In my final analysis I see that which pits humans against one another and against their world to be largely derivative of a contemporary spiritual crisis. It is the spiritual dilemma of besieged purpose and thwarted meaning that, in turn, sustains, if not

contributes to, global and human catastrophe. A spiritual vacuum also relegates individuals to settling for scraps of happiness where they are placated by affluence, status or the complaisant life instead of enlivened by the deep joy of working and struggling for the soul.

This loss of soul, manifesting at the individual and collective levels, can be addressed by education that dons a human face and heart - what Nel Noddings (1995) calls taking up the challenge to care in schools. For deep learning to occur, learning that can prepare students not only for the job market of today, but helps prepare them to face and function in an unforeseeable future, education needs to incorporate what Frans Meijers (2000) calls a complex psycho-social learning process. In this approach, education guides students in the formation of identity by helping them situate what is learned within biography and life narrative, then, this assists in determining direction and finding out what work or action in the world means for and in their lives as well as in the lives of others. This two pronged approach to learning, that incorporates the inner life as well as outer world, imbues a relevance of great magnitude as well as keeps the course of one's life within shooting distance of the soul line.

Melding the affective and cognitive faculties in the educative process acknowledges a fuller dimension of humanness and it necessarily complexifies learning. Schools need to incorporate all the faculties of a learner, speak all the languages that address their needs, and work to develop in students the skills that optimize human functioning. Gardner (1993) and Lazear (1991) have delineated multiple intelligences, that were previously minimized, and have forged new approaches to pedagogy that speak to a far greater number of students than were previously reached by traditional learning methods. Goleman (1995) expands upon the adaptive function of emotional intelligence, bringing emotional literacy to the curriculum to advance the critical competencies needed for satisfying personal and social life. These competencies are not content driven, but process oriented and time consuming, requiring teacher engagement and the creative chaos of reflection, interaction, exploration and expression.

While I do not want to negate the value of skills and content acquisition, the best of what I see happening with students in schools includes students finding their voice, discovering their passion, following their hearts and beginning to find their place in the world - in work, among friends, and within themselves. This does not preclude technology's role, but insists that it does not eclipse, but instead enhance, the larger vision and purpose of education - one that is contextualized in a humanity and planet where the comfort of soul is allowed to unfold and enfold.

In the best case scenario, electronic learning can free up time for team, project-based and real-situational learning. It can liberate teachers, from the roles they already play that resemble machines, to become more human, more humane, and more creative in their classroom. Technology can pass on knowledge far more quickly, so that students have more time to develop competence, reflect, share, analyze and apply their learning closer to home and farther afield. Ultimately, if technology is used properly, education

can be freed from information transmission to becoming the transformative force that is the fulfillment of its visionary potential.

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