THE GREATEST EVASION:

WHY TECHNOLOGY WON'T SAVE EDUCATION

Kevin Mattson

Americans place an enormous amount of faith in education=s power to solve social problems. Today, liberals tend to believe that education can improve our attitudes, making us less racist by broadening our perspective and knowledge of different people and cultures. Conservatives often argue that education can solve our economic problems by training citizens for jobs and increasing their capacity for upward social mobility. Indeed, President Clinton, who may be viewed as bridging liberal and conservative ideals, posed education as a solution to economic dislocation. His solution is to provide unemployed citizens with the necessary skills to find new forms of employment. Education, it would seem, stands as a primary pillar of American democracy.

The ideal that education is a cornerstone of American democracy is indeed a core part of our nation's identity since the American Revolution. Thomas Jefferson first linked education and democracy in his rethinking of republican political theory. Since then, Americans often treat education as a source of amelioration for numerous difficult problems. As the educational historian, Henry Perkinson, showed in his appropriately titled book, *The Imperfect Panacea: American Faith in Education, 1865-1965*, Americans believed that freed slaves during the Reconstruction period, recently arrived immigrants at the turn of the century, and disadvantaged urban residents throughout the twentieth century could improve their social, economic, and political status through education.[96] By placing education at the center of our efforts to improve the moral, political, and social roots of our republic, we have put a great burden on our schools. In addition to the teaching the scholastic basics of math, science, and english, educational institutions at all levels are also expected to level the playing field between the economically advantaged and disadvantaged, discipline and civilize the young, provide job training, improve our knowledge of the world, and decrease prejudice. American society expects our educational institutions to solve national problems that they have had little role in creating.

America's faith in education runs parallel to our faith in technological progress which is often viewed as another central linchpin in the national

---

[96] HENRY PERKINSON, THE IMPERFECT PANACEA: AMERICAN FAITH IN EDUCATION 1865–1965 (1968).

identity. Since the industrial revolution, most Americans believe that new technological developments assure a higher standard of living. American society often places great hope in new technological developments as they emerge. Society celebrated industrial machines for their capacity to produce larger amounts of goods at a faster pace. Society also praised the telephone and car for bringing us in contact with one another more rapidly (Ironically, society ignored the fact that cars also drew us away from our families more easily than before). Today, as expected, society praises the Internet, believing that it will foster greater democratic discussion between citizens and create community by bringing society together.[97]

Recently, two of America's great faiths, education and technology, have joined together. Theoretically, America is on the verge of producing more knowledgeable citizens because computers -- and especially the information superhighway (the Internet) -- are entering our classrooms. Technology, it would seem, has come to the rescue of education. This hope traverses different levels of education, starting at the high school level. For instance, at the New Technology High School in Napa Valley, California, computers sit on every student's desk. Elsewhere, students rally outside their schools on National Netday pleading that the great telecommunications giants like MCI, Compaq, and JDL Technologies bring their schools onto the information superhighway. President Clinton and Vice President Gore have made the Internet a central component of their educational program. In his latest call to educational reform, Clinton demanded Internet access for every school-age child in America.[98]

It is the same with higher education. Increasingly, colleges and universities teach courses through what is known as distance learning. Students learn on-line, never meeting their professors or seeing them in person. Companies like Real Education Inc. provide universities with the capacity to outsource the teaching of courses to the online services they provide. By placing courses on the Internet and acquiring the appropriate hardware, software, and general technical support, universities are displacing professors. Recently, Peter Drucker imagined a virtual university with no buildings -- where courses were taught in cyberspace, unmediated by real human beings. The University of Phoenix, a school devoid of the sort of buildings which typically constitute a traditional campus, indicates that Drucker's virtual university is not far from becoming a reality.[99]

---

[97] See The State of Electronically Enhanced Democracy: A Survey on the Internet, Walt Whitman Ctr. Rep. (Markle Foundation), 1997.
[98] See Todd Oppenheimer, The Computer Delusion, ATLANTIC MONTHLY, July 1997, at 55; Gordon Flagg, President's Address Cites Net Day, AMERICAN LIBRARIES, June 1997, at 15; Paige Albiniak, Gore Enrolls in Cable Education Push, BROADCASTING & CABLE, Oct. 6, 1997; Brian Hecht, Net Loss, NEW REPUBLIC, Feb. 17, 1997.
[99] See Nancy S. Dye, Late Night Reflections of a College President, LXIII Vital Speeches of the Day 761, 761 (1997).

This new found faith that technology will save education should be approached with skepticism. After all, the great hopes placed in new technologies in the past rarely took into account the detrimental impacts new technologies can carry with them. The writer who believed television would create world peace never imagined that it might also create passivity or become a conduit solely of commercial advertising (as it seems to have in America). Technologies create new possibilities to be sure, but they also bring with them certain dynamics which carry social impacts that are not necessarily beneficial.[100] Some theorists believe that arguments against technology will directly lead to a form of Ludditism. In a contemporary society, Ludditism translates into conspiratorial and paranoid suspicion of any technology (even though the original Luddites were not against technology per se but opposed to its displacement of their labor).[101] If society is concerned with the recent educational problems, it is important to scrutinize technology's role in schooling and not blindly approve technology's place in the educational system.[102]

The most prominent arguments for technology's role in American education focus on the use of the Internet in American universities and high schools. Although there may be benefits associated with the Internet, there are also features which may in fact harm the educational process. Technologies create what can are often called cultures which is defined as the norms and values that often structure patterns of behavior. Technologies, like computer access to the Internet, do not *determine* human behavior but do affect it in serious ways. It is naive to believe that technologies can simply be imported into the world of education without changing the dynamics of learning. By studying certain features of the Internet and how it relates to educational processes, it is clear that society should be more circumspect about the new found faith that technology will save American education.

One of the central premises for increasing the Internet's role in education is its abundance of information and the ability to access information quickly and efficiently. The Internet serves as a veritable encyclopedia. Society often associates knowledge with the acquisition of information. However, this is a limited conception of education. Undoubtedly, information and the ability to access information plays a role in the educational process. For instance, one cannot discuss American history intelligently if one does not know certain facts, dates, and names. But information does not play as central a role as many believe. The real

---

[100] *See generally* NEIL POSTMAN, TECHNOPOLY: THE SURRENDER OF CULTURE TO TECHNOLOGY 16–17 (1992) (noting that this is a relatively balanced though critical account of technology's more detrimental impact on our culture).
[101] *Id.* at 43.
[102] *But see* EDWARD SCLOVES, DEMOCRACY & TECHNOLOGY (1995).

art of wisdom is derived by processing and placing information within a wider, more meaningful context. This art is also used when creating a persuasive argument, be it in a classroom, a courtroom or even in a political speech. A well constructed persuasive argument is not facts simply thrown at the listener but rather, the manner in which these facts are explained and elucidated in connection with the critical framework that the speaker provides. Generally, one does not understand an issue better by solely knowing the bits of information surrounding a problem. Instead, a greater understanding of a topic is generated by building these bits of information into a framework that holds together in a coherent and convincing presentation.

Indeed, sometimes too much information can become detrimental to our understanding. An endless data stream can paralyze a person's process of learning by simply overwhelming and confusing the issue. This is referred to by communications theorists as information overload. It is a symptom growing within Internet culture. For example, anyone who has recently performed an Internet search for a particular item and has generated thousands of web page suggestions has probably experienced information overload.[103] Worse yet, much of the information available through the Internet is not even verifiable. Because of the lack of accountability, the Internet has become conducive to paranoid explanations of recent events and what can be called fake information. For example, witness the spread of conspiracy theories regarding the tragic downing of T.W.A. Flight 800 in 1995 and the rumor mills created in the Monica Lewinsky matter. Not only can information become so plentiful as to be overwhelming, but much of the information on the Internet has become distrustful and misleading. With this threat of misinformation being clearly evident, it is hard to understand why any educator or political leader would think that open access to the Internet will necessarily enhance a student's learning.

In general, the connection between education and information -- especially if one takes seriously the ideal of a liberal arts education -- is tenuous. Students will not improve their critical thinking skills by having access to more information.[104] Students very often lack knowledge of basic facts. However, it is even more detrimental to their scholastic ability if they lack a critical framework by which to analyze facts once they are learned. It seems that students often substitute an array of information for

---

[103] *See* KENNETH GERGEN, THE SATURATED SELF (New York, Basic Books 1991); Hal Berghel, *Cyberspace 2000: Dealing with Information Overload,* 40 COMM. OF THE ACM 2, 19–24 (1997); T. Forester, *Megatrends or Megamistakes?: What Ever Happened to the Information Society?,* INFO. SOC'Y 8, 133–46 (1992).
[104] On a personal note, I have seen this while teaching American politics and history to undergraduates.

an organized and well-argued thesis.[105] At times, reading undergraduate papers -- and it is probably true that this generalization can be extended to high school student writing -- is like listening to fact after fact with little organizing principles guiding the writing. This prevalent organizational problem drives many teachers to insist that their students generate a thesis statement before beginning their writing assignment.[106] Hence, students often have a difficult time performing two of the central acts of a liberal arts education: analyzing and arguing -- the core elements of critical thinking.

This tendency will only be exacerbated by the Internet. Students go to the Internet, searching for information to put into their papers (Ironically, while surfing the net, students are increasingly likely to discover a service which will actually sell them term papers -- thereby potentially circumventing the whole process of writing the paper in the first place). While downloading facts off the Internet, a typical student can easily become lost in a morass of information. Sometimes students have simply transferred information off the Internet into their papers. By simply transferring information off the Internet to their papers, a student bypasses the process of analyzing the newly obtained information in a critical manner. As such, information *substitutes* for thought. By stressing the role that the Internet can play in students' education, society only increases the likelihood that information will become a replacement for the hard work of analyzing information and building logical arguments.

The emphasis often placed solely on the acquisition of information has further ramifications on education. One of the major features of the Internet is that a user chooses where to go by clicking on certain choices (With most software, the omnipresent and symbolic pointing finger will always show an Internet user the way). The Internet is often celebrated for offering the user an active process which is distinctly different than the passivity induced by radio and television. However, what at first appears to encourage a necessary component of education -- the active engagement of students in the process itself -- actually results in another conundrum. Many critics of the Internet noticed that the increase in choice and selection on the Internet encourages an increasing segmentation of society. People consciously make a choice to visit sites that they want. Hence, the Internet is a good resource for people looking for like-minded individuals or people tracking down information regarding a hobby in which they are interested. Internet users simply click, visit, and leave a site, making the Internet a nice place for the furthering of already established interests and

---

[105] This observation is drawn from the Author's personal experiences and those experiences of his colleagues.

[106] The author noted, As I explained it to my students, figure out why you are writing the paper beyond submitting it for a grade. What is your argument, I would ask them. Very often students could not explain what they believed or why they believed it.

hobbies. This process is described by the critic Stephen Doheny-Farina (borrowing a term from Robert Bellah) as lifestyle enclaves.[107]

Ironically, it is precisely this nice feature which lowers the potential of the Internet from enhancing educational processes. Education requires that students challenge themselves by confronting viewpoints that are counter to theirs. Without this, students stagnate and become comfortable with their established opinions. Since the culture of the Internet encourages people to choose sites where others think as they do, it is not conducive to challenging students' viewpoints. Finding like-minded people might be good for leisure time, but it is not good for students who need to be challenged in order to confront and analyze difficult questions. A learning medium which encourages people to click here and there and to simply turn it off whenever one pleases is not the best place to facilitate education.

If the stress on the acquisition of information is problematic to some, so should the rapidity encouraged by new computer technologies in disseminating information. If computers do anything well, it is the function of transferring information at faster speeds. More specifically, the Internet places users in contact with information and other people much more quickly and efficiently. Speed can be helpful, but when taken as a good in and of itself, it can become pernicious. This is especially the case with education. It is often believed that learning is a slow process; it requires patience and long-term devotion. By bringing the Internet into the world of education, the ethic of speed might come to overwhelm the necessary cultural prerequisites of learning. A glorification of speed could doom the more deliberative elements of learning.

The benefits of slow and deliberative processes are hard to appreciate when American culture prizes rapidity and speed. A job well-done is one done swiftly. Technological progress and speed go hand in hand; after all, the highest expression of the twentieth century industrial revolution was the rapidly moving assembly line pioneered by Henry Ford. But the task of obtaining an education runs counter to a culture which demands an immediate pay-off. Thinking, reflection, deliberation, and rumination do not happen quickly. As such, educators should be wary of bringing a tool which encourages speed and the rapid processing of information into the world of education. Professors complain about the over-use of electronic mail (e-mail) which is one component of the Internet. Students email professors requests, and the professors are expected to answer the questions immediately. This is problematic in that many students want to know answers to difficult questions on the spot and without delay. The medium and culture of the Internet as well as the values and behaviors it encourages, produces such expectations. Unfortunately, these expectations are false. Learning will not happen overnight or with the click of a mouse.

---

[107] STEPHEN DOHENY-FARINA, THE WIRED NEIGHBORHOOD 50 (1996).

By moving the Internet into the classroom, teachers encourage these false and doomed expectations.

The Internet culture also prizes a new style of communication -- one which does away with face-to-face contact. In fact, this is a recent development that has occurred not only in the world of education but throughout American culture. With the proliferation of the telephone, the growth of talk radio, and the more recent ascendancy of the chat room in cyberspace, Americans have created a whole new means of communicating which lack the sort of norms and expectations that arise from face-to-face meetings. As it is evident that talking with someone else sitting in a room, is quite different from communicating on the Internet. In the presence of someone else, one can read that person's understanding of what was said through facial expressions and bodily gestures. It is clear when it is necessary to stop talking and start listening. But when communication takes place without this sort of face-to-face facilitation, it markedly differs. As a culture, Americans have not yet discovered a new set of ethics or norms for this sort of anonymous, interpersonal communication. Trust is harder to build in the world of cyber-networks. flaming). However, this is not to say that trust cannot be created, but rather that the Internet's newness should warn people from using it indiscriminately.[108]

This is especially applicable to education. Human contact is a prerequisite of learning. Dialogue and recognition in face-to-face settings are crucial to classroom meetings. Teachers sense when students really understand something. In interacting with teachers, students can elaborate on questions and build the sort of trust that is so necessary for the on-going process of education. Just as important are one-on-one meetings between students and teachers. Here special attention can be paid to particular needs, and trust can be further cemented. An ideal educational setting is one in which interpersonal relations grow alongside classroom meetings and as such a civic culture of constant interaction blossoms between students and teachers. Face-to-face contact is a key component -- unduly overlooked -- for the process of education. Just as democracy requires citizens to meet one another in public spaces where they can discuss contemporary concerns, students and teachers need to meet spontaneously outside of the classroom. And unfortunately, this form of communication becomes harder with the rise of distance learning.

---

[108] This is precisely why the talk of community on the Internet seems so weak. For instance, Nancy Baym argues that people who discuss their favorite soap opera on the Internet create a community based on trust. This thin definition of community illustrates the weakness of contemporary ideas of trust on the Internet. *See* Nancy Baym, *The Emergence of Community in Computer-Mediated Communication, in* CYBERSOCIETY: COMPUTER-MEDIATED COMMUNICATION AND COMMUNITY (Steven Jones, ed., Thousand Oaks: Sage 1995).

In fact, it is hard not to see the recent introduction of the Internet as a means to displace the human element from education. Unfortunately, the key element to be displaced by the Internet is the *labor* of teaching which facilitates the growth of knowledge. By putting courses on-line, universities greatly reduce the role of the teacher. By stressing the Internet as a resource of information, schools reduce the role of the librarian. It might sound extremist, but perhaps some time in the future the teacher and librarian will go the way of the telephone operator and bank teller as their key tasks are outsourced to computers. Instead of meeting with human teachers (just as much as we used to talk with human operators when we called a business), some day in the future, students might simply log in to learn. What they will miss, in doing so, is the whole essence of liberal arts education -- a meaningful engagement with other human beings, ripe with conflict over ideas and a gradual growth in wisdom.

Even if American society never gets to this futuristic -- and what one may call dystopian -- scenario of computerized learning, society should still be wary of those who promise that education will be saved by technology. Quite simply, the major demands of education -- reading, talking, listening, and deliberating -- can be performed without computers. Indeed, they have been performed for quite some time without fancy technological assistance, because they are indeed *human* processes. But because Americans tend to believe that technology assures progress, society has started moving computers into the realm of education. And since it is hard to challenge technology in a day and age when it is so omnipresent, one must allow for this invasion to take place.

Society sits on the brink of another great evasion in American history -- the belief that one can improve the educational processes via computers. Like previous evasions, this one will lead society to ignore the view that the needs of education are much more simple than one may think. In order to have a good educational system, institutions need qualified teachers who spend time teaching students and helping them acquire wisdom. And to ensure this, sufficient funding is a must. These are not things that computers can deliver. But the great evasion is on, and if society is serious about believing in education, Americans need to continually ask what is expected from education and whether or not technology can help society arrive at that educational destination.