# EDUCATION NETWORKS

## Power, Wealth, Cyberspace, and the Digital Mind

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Deloitte Center for the Edge, which according to its website "helps senior executives make sense of and profit from emerging opportunities on the edge of business and *technology* [author's emphasis]."[61]

Not surprisingly I could not find one critic of the application of ICT to education in the group that prepared the National Education Technology Plan. The group was composed of those who advocate and/or profit from educational technology. Given the background in ICT and education businesses, the two government officials involved in the Plan might logically favor members of their network. Also, it would be logical that they would draw on academics noted for their contributions to educational technology to help develop the Plan. It could be that all participants were so myopic that they never thought of searching for a critic of educational technology; they seem to have unquestioningly assumed that ICT is the panacea for American education.

## Foundation for Excellence in Education: *Digital Learning Now!*

The Foundation for Excellence in Education is campaigning for more extensive use of online education by advocating for changes in state laws that would make it possible for students to take online courses from public and private sources anywhere at any time. Jeb Bush, former governor of Florida and brother of ex-President George W. Bush, is Chairman of the Foundation for Excellence, which serves as an advisor on education policy to a number of mainly Republican governors. In 2011, Bush hit the road carrying the message of the Foundation's *Digital Learning Now!* to state governments. The message was simple—the economic crises provided an opportunity to reduce school budgets by replacing teachers with online courses.[62]

Who funds the Foundation's message? Not surprisingly major funding comes from the Bill and Melinda Gates Foundation along with the Walton Family Foundation and The Broad Foundation. The Walton Family Foundation was established by Sam Walton, the founder of the global retail chain Wal-Mart. One area of funding of the Walton Family Foundation is education with a primary concern of promoting school choice. The Walton Family Foundation website states, "The Walton Family Foundation invests in programs that empower parents to choose the best education for their children ... We are interested in helping children to receive high-quality educations in public, charter and private school."[63] One choice option is of course online learning.

Exemplifying the web of networks between Foundations, the other major funder of the Foundation for Excellence is The Broad Foundation which also receives money from the Bill and Melinda Gates Foundation. The Broad Foundation was established by Eli and Edythe Broad who made their money in real estate and financial services through creation of two Fortune 500 companies—KB Home and SunAmerica.[64] *Forbes* lists Eli Broad as 132nd among the world's billionaires.[65] Part of the work of The Broad Foundation is devoted to education, including support for school choice options that are the same as Jeb Bush's Foundation: "We are

interested in helping children to receive high-quality educations in public, charter and private schools."[66]

Training shadow elites in education is a conscious goal of The Broad Foundation. Funding from the Bill and Melinda Gates Foundation supports the Broad Residency Program in Urban Education. As a trainer of the shadow elite, the residency program trains executives from business and civic organizations to assume leadership roles in education at every level of government:

> The Broad Residency is a management development program that places talented executives with private and civic sector experience and advanced degrees from top business, public policy and law schools into two-year, full-time, paid positions at the top levels of urban school districts, state and federal departments of education and leading charter management organizations.[67]

Highlighting the goal of creating shadow elite is the title of a Broad Foundation news release, "Record Number of Broad Residents Take on Local, State, and Federal Roles Managing Education Reform."[68] This news release reports the extent of Gates Foundation involvement in training these shadow elite: "The Broad Center has received a $3.6 million grant from the Bill & Melinda Gates Foundation to recruit and train as many as 18 Broad Residents over the next four years to provide management support to school districts and charter management organizations addressing the issue of teacher effectiveness."[69]

A 2011 *Education Week* article raised issues regarding The Broad Foundation's general goal of training leaders to occupy the superintendencies of a third of the largest schools districts in the U.S. According to *Education Week* reporter Christina Samuels, by 2011 there were:

> Broad-trained executives in top leadership positions: Shael Polakow-Suransky, the chief academic officer in New York City; John E. Deasy, the superintendent of Los Angeles Unified; and Jean-Claude Brizard, who became the chief executive officer of the Chicago schools last month. In all, 21 of the nation's 75 largest districts now have superintendents or other highly placed central-office executives who have undergone Broad training.[70]

Conspiracy theorists might see a well-planned agenda in The Broad Foundation's support of Bush's online education initiative and its training of school district leaders to carry this agenda into leadership roles in local schools. Critics claim that The Broad Academy trains administrators on how to consolidate their power, weaken teachers' unions and other means of protecting teachers, and reduce parental participation in decision-making. One critic suggests the goal is to align the functioning of school systems to the needs of the business community.[71]

Another supporter of Jeb Bush's agenda is IQity, a provider of online learning platforms, which is a sustaining contributor to the Foundation for Excellence in

Education (Gates, Walton, and Broad are founding contributors). IQity website describes the company's work:

> The IQity e-Learning Platform is the most complete solution available for the electronic search and delivery of curriculum, courses, and other learning objects. Delivering over one million courses each year, the IQity Platform is a proven success for students, teachers, school administrators, and district offices; as well as state, regional, and national education officials across the country.[72]

Other supporters are the publishing house giants Houghton Mifflin Harcourt and McGraw-Hill. Listed as Friends of the Foundation for Excellence in Education are ICT companies involved in education, namely Apex Learning, Cisco, Learning.com, Pearson Foundation, and SMART.[73] Pearson Foundation, as I will describe later, also receives funds from the Gates Foundation to write online courses based on Common Core Standards which in turn helps its parent company Pearson publishing to create and sell online courses based on the same standards.

## Changing Laws to Expand Online Learning: *Digital Learning Now!*

With these wealthy and economically interested supporters, Jeb Bush's Foundation for Excellence in Education is urging legal changes that will expand opportunities for online education offered by both public and for-profit organizations. The Foundation's action report *Digital Learning Now!* lists in its "10 Elements of High Quality Digital Learning" actions that should be taken by lawmakers and policy-makers. These actions include states passing laws providing online courses to students in K–12 and providing access to online courses from public schools, charter schools, not-for-profit organizations, and for-profit companies. These laws will require that online courses be aligned with the common core curriculum and that all providers are treated equally, meaning that for-profit companies will be treated the same as public schools.[74] The Foundation's action plan calls for states to not place limits on the number of credits earned online, to allow students to take all or some of their courses online, and to make online instruction all year and at any time.

The above legal changes would open the floodgates to online K–12 instruction in the United States. An important part of this plan is the elimination of any laws that put a cap on the size of class enrollments. This opens the door to replacing teachers with online instruction since the elimination of class size requirements would allow schools to put all their students, if they make the choice, online for their education. *Digital Learning Now!* states, "Actions for lawmakers and policymakers: State does not restrict access to high quality digital content and online courses with policies such as *class size ratios and caps on enrollment or budget* [author's emphasis]."[75]

Proposals to expand online instruction and, as a result, reduce the cost of teachers' salaries are presented as answers to declining state education budgets. *Digital Learning Now!* states that budget crises open the door to educational changes like the

expansion of online learning: "Growing budget deficits and shrinking tax revenue present a tremendous challenge for the nation's Governors and lawmakers, especially when education sometimes consumes up to half of a state's budget. However, what might appear to be an obstacle to reform can also present a great opportunity for innovation."[76] Another cost cutter in *Digital Learning Now!* is the proposal that textbooks be replaced with digital content.

The reader might think that publishers would not support replacing textbooks with digital content. However, publishers are rapidly creating and marketing of online courses. In the next section I will describe this development in the context of the Bill and Melinda Gates Foundation's financial support of the Pearson Foundation's creation of online courses aligned with the Common Core Standards. This is another example of the interconnections between foundations.

## A Marriage of Common Interests: Gates and Pearson

The relationship between the Pearson and Gates Foundations highlights how these two organizations mutually reinforce each other's policy objectives and promote a common economic interest in online instruction. On April 27, 2011, the Pearson Foundation announced that it had received a grant from the Bill and Melinda Gates Foundation to aid in the creation of 24 online courses in math and reading/English arts that would be aligned with the Common Core Standards. The courses are to be implemented in 2013.

The economics of the relationship between the two foundations demonstrates how opportunities are created by nonprofits to help for-profits increase their earnings. The Pearson Foundation was established by the global publishing and ICT company Pearson. The Pearson Foundation explains this relationship as: "The Pearson Foundation is the philanthropic arm of Pearson plc one of the world's leading media and education companies. Pearson Foundation extends Pearson's commitment to education by partnering with leading nonprofit, civic, and business organizations to provide financial, organizational, and publishing assistance across the globe."[77]

The money given by the Gates Foundation to the Pearson Foundation will allow for the free distribution of four of the planned 24 online courses. Pearson, the company, will be able to sell the other 20 online courses. In their announcement of the award to the Pearson Foundation, the Bill and Melinda Gates Foundation stated, "Funding from the Bill & Melinda Gates Foundation will support the development of this robust system of courses, including four—two in math and two in English language arts—to be available at no cost on an open platform for schools."[78]

Pearson, the company, describes itself as the world's leading for-profit education company: "Pearson is the world's leading education company. From pre-school to high school, early learning to professional certification, our curriculum materials,

*multimedia learning tools and testing programs help to educate more than 100 million people worldwide – more than any other private enterprise* [author's emphasis]."[79] Pearson reports that 60% of its sales are in North America though it sells books and tests in 60 countries. Its publishing subsidiaries are Scott Foresman, Prentice Hall, Addison–Wesley, Allyn and Bacon, Benjamin Cummings, and Longman.

Pearson, the company, does have an economic stake in the relationship between its Pearson Foundation and the Bill and Melinda Gates Foundation in the creation of online courses to meet Common Core Standards. A huge market for online courses aligned to the Common Core Standards is being created by the U.S. Department of Education's implementation of the National Technology Education Plan and Jeb Bush's lobbying of state governments to implement the recommendations in *Digital Learning Now!* Pearson wants to sell products in this burgeoning market. The company has a past history of marketing online courses with claims that they are one of the world's largest providers. The company boasts on its website that: "We are also a leading provider of electronic learning programs and of test development, processing and scoring services to educational institutions, corporations and professional bodies around the world."[80]

The Pearson Foundation is candid that Pearson, the company, will use the Foundation's work to market products to local school districts. The Foundation and company are not embarrassed at what on the surface appears illegal, with a tax-exempt foundation creating materials that will eventually be sold by a for-profit company. This intention is clearly stated in Pearson Foundation's announcement of the money it is receiving from the Gates Foundation:

> Pearson, the nation's leading education technology company, will offer these courses to school districts, complete with new services for in-person professional development for teacher transition to the Common Core and next-generation assessment. The Pearson Foundation will also work with other partners to explore opportunities for additional commercial development and distribution.[81]

Pearson will also earn money from assessments aligned with the Common Core Standards. These aligned assessments promise to be another major source of revenue. Pearson already claims:

> We are also the largest provider of educational assessment services and solutions in the US (Pearson Educational Measurement), developing, scoring and processing tens of millions of student tests every year. We mark school examinations for the US federal government, 20 American states, and score more than 100 million multiple-choice tests and 30 million essays every year. Pearson also scores the National Assessment of Educational Progress (the only federal nationwide test), and college entrance exams.[82]

## Gates Foundation: Online Courses and the Common Core Standards

As I stated in the opening of this chapter, the Gates Foundation acts like a shadow government in promoting government policies related to online education and Common Core Standards. The money given to the Pearson Foundation is only part of what the Gates Foundation refers to as a "suite of investments." This suite of investments focuses on using ICT to implement the Common Core Standards. In the announcement of this suite of investments, including the money going to the Pearson Foundation, the Gates Foundation states it will support the following activities to be aligned with the Common Core Standards: "game-based learning applications; math, English language arts and science curricula built in to digital formats; learning through social networking platforms; and embedded assessments through a real-time and engaging environment of experiences and journeys."[83]

Besides funding the Pearson Foundation, the Gates Foundation's suite of investments also includes indirect support for state laws that are similar to those advocated by Jeb Bush's Foundation for Excellence in Education. Gates Foundation money goes to Florida's Virtual School which was founded in 1997 as the first state-wide system of K–12 online instruction. The courses are offered globally, with Florida residents taking the courses for free while non-Florida residents pay tuition.[84] The legal parallels between Florida's Virtual School laws and those advocated by the Foundation for Excellence in Education are highlighted in a memorandum issued by Florida's Commissioner of Education, Eric Smith, on January 8, 2009. The memorandum explains Florida's legal requirements, including "that school districts may not limit student access to FLVS courses" and that there are "no limits on the number of credits a student may earn at FLVS during a single school year or multiple school years."[85] While Jeb Bush's Foundation touts online courses as solutions to school budget problems, Florida law allows for the use of the Florida Virtual Schools by local school districts "to help ease overcrowding."[86]

A joint Russian and United States nonprofit effort in online math instruction, Reasoning Mind, also benefited from funding from the Gates Foundation's suite of investments. With offices in Moscow and Houston, Reasoning Mind cites the mantra that: "First-rate math and science skills are essential for success in the 21st century workforce. Unless we can come together to take our nation's math education to the next level, the United States will quickly lose its leading role in industry and innovation."[87] Reasoning Mind is supported by a host of foundations besides the Bill and Melinda Gates Foundation. While it is a nonprofit organization, Reasoning Mind receives sponsorship from global for-profit technology firms having an interest in online instruction including Cisco, Google, Oracle, FairIsaac, Sungard, and Atlassian.[88] Reasoning Mind has linkages to global firms including Russia's oil and gas industry. The founder and CEO of Reasoning Mind is Alexander Khachatryan who in 1992 founded and became President of Russian Petroleum Consultants Corporation and in 1999 became Vice President of Operations of the

ICT company Logexoft, Inc. Khachatryan's career stretches back to the Soviet period when he earned degrees from the Moscow Oil and Gas Institute. Consequently, it is not surprising that the American branch of Reasoning Mind is located in the oil and gas center of Houston, Texas.

The Gates Foundation suite of investments also funds 20 literacy based programs developed by the Digital Youth Network which is dedicated to literacy instruction online or place based.[89] Also funded is the Institute of Play to apply game design to instructional methods and curriculum. The Institute of Play is a nonprofit corporation founded in 2007 "by a group of game designers looking to apply game design principles to challenges outside the field of commercial game development. Within six months funding was secured to start up an innovative new public school in New York City, called Quest to Learn."[90] I will discuss game design and the Quest to Learn School in the next chapter. The application of game design to education was also the purpose of the Gates Foundation grant to Quest Atlantis to create video games for math, science, and literacy. Quest Atlantis serves 50,000 children in 22 states and 18 countries. As described on its website it "is an international learning and teaching project that uses a 3D multi-user environment to immerse children, ages 9–16, in educational tasks."[91] It was created by the Center for Research on Learning and Technology at the School of Education, Indiana University.

Regarding this suite of investments, the Bill and Melinda Gates Foundation emphatically states: "All these applications will support the Common Core Standards."[92] In addition, the Gates Foundation is funding Educurious Partners to develop high school courses based on Common Core Standards using a social network Internet application and Next Generation Learning Challenges to develop embedded assessments aligned with the Common Core Standards.

In summary, as a shadow education government the Bill and Melinda Gates Foundation is funding a wide variety of organizations to ensure that the Common Core Standards and aligned assessments are provided as online courses using a variety of methods including game design and social platforms. It is indirectly funding through some of these organizations efforts to have states enact laws similar to those in Florida and create schools similar to the Florida Virtual Academy. As exemplified by the Gates funding of the Pearson Foundation, this funding supports the involvement of ICT for-profit companies in public education.

## Internet and Social Control: Analytics and China's State Internet Information Office

The World Economic Forum's "Transformations 2.0" promises a new era of online teaching with the application of analytic software to student data. However, there is a possible downside to this development. Using software to manage the future creates the possibility of introducing errors that could have lasting effects on the student. What happens if software designed to adapt curricular materials to student abilities based on collected data is wrong? Students might receive instructional

material based on analysis of their data that is below their ability level and, consequently, dooms them to an inferior education, or the software might predict that the student is at risk of dropping out of school and therefore should receive remedial counseling which might result in them being identified as a poor student. This creates a level of expectation about dropping out that might lead to a self-fulfilling prophecy.

It is rare to read about the possible negative effects of ICT amidst a chorus of true believers in its beneficial effects. The best evidence of the potential downside of ICT can be found in government uses of ICT to control the ideas disseminated over the Internet. Investigation of this issue raises the specter of controlling the ideas of students through either the content of online instruction or the information students try to access on the Web. As an example of these possibilities consider the actions of the Chinese government in establishing the State Internet Information Office on May 4, 2011. *The New York Times* reported the announcement with the comment: "a move that appeared to complement a continuing crackdown on political dissidents and other social critics."[93] I discuss China's Internet censorship in more detail in Chapter 6.

In contrast to *The New York Times*, the Chinese *People's Daily*, the official publication of the Central Committee of the Communist Party of China, reported that the State Information Internet Office was for "healthy Web development" to counter "problems such as online porn, gambling and fraud, as well as illegal marketing tricks, [which] have hampered its sound development."[94] The *People's Daily* claimed that the regulation would be in "accordance with common international practice ... [and that] governments of most countries monitor and regulate Internet content and deal with relevant violations of the law."[95] The *People's Daily* did not name the countries or governments whose practices on Internet regulations they were following. But officials did claim in the announcement that: "These facts indicated that the strategies and policies on Internet development by the Communist Party of China Central Committee and the Chinese government are proved to be right and effective."[96]

Methods used by Chinese authorities to manage the information disseminated over the Internet could be used to censor ideas reaching students in any country. Evgeny Morozov in previously cited *The Net Delusion* details the censorship methods used by Chinese authorities. One example is the software GreenDam which was originally to be installed on all computers sold in China. After installing millions of copies of GreenDam the government cancelled the program because of poor planning. GreenDam software reflects the sophisticated methods that can be used to control the flow of what authorities might classify as forbidden information.[97]

What GreenDam software does is to study users' Internet behavior including their browsing of websites, text files, and examination of online pictures. The software relays to authorities the behavior of the user, which can result in blocking the user's access to certain websites. The software is self-learning so that if a person tries to avoid detection by typing "demokracy" rather than "democracy" the software

learns this attempt to avoid detection and adds "demokracy" to its list of words that it tries to find in users' browsing history or text files.[98] Morozov comments, "Think of this as the Global Brain of Censorship. Every second it can imbibe the insights that come from millions of users who are trying to subvert the system and put them to work almost immediately to make such subversion technically impossible."[99]

Hyperlinks add another dimension to the "Global Brain of Censorship." Imagine that people identified by government authorities as possible subversives send messages to others with hyperlinks to particular PDF files. Internet police can block access to these PDF files based on the profiles of the senders without ever actually reading the PDF files to see if they are in fact subversive. This can be done automatically by the software.

Imagine a government-concerned-about-uprisings among youth. With online instruction, data collected on students, and access to students' browsing behavior, the government can easily create an Internet profile of each student. These profiles can be used to identify potential malcontents. Internet security could evaluate the Internet behavior of those labeled as potential rebels against the system. If these potential rebels show a pattern of visiting certain websites then access to those websites could be blocked. If rebels send Internet messages to others with hyperlinks to websites and/or PDF files then these could be blocked. If potential rebels try to avoid the long arm of Internet Security then they could be identified as potential leaders of rebellions and put on a watch list to be rounded up at the first glimmerings of public discontent with the government.

It is not beyond the realm of possibilities that governments might worry not only about potential dissenters to government policies but also about students that might be identified through analytic software as potential criminals or the most likely to be unemployed and a drain on the government's resources. Might governments act on this potential to seek to restrain these students?

What are the consequences of the combination of the use of this type of analytic software along with controls over the information disseminated through online instruction? Online instruction promises greater control over the ideas disseminated to students. Teachers in classrooms might go undetected in making references to material considered subversive by their government. In contrast, online instruction guarantees that the student will only be exposed to content approved by the government.

In other words, might online instruction result in greater control and censorship of ideas disseminated to students and in attempts to control students' potential rebellion against government authority?

## Conclusion: Panacea or a New Form of Authoritarian Control?

ICT in the global and national plans discussed in this chapter promises to solve a range of problems including those facing education and global poverty. Education is targeted by ICT companies because of the size of the market—all the world's

children. Undoubtedly ICT provides many educational advantages in its ability to access global knowledge and link students around the world. It also can enhance classroom lessons with the use of YouTube videos, online maps, virtual science demonstrations, and a whole host of other applications.

The downside of this utopian ICT vision is the use of online instruction to replace teachers, reduce educational expenses, and maintain control over what students learn. Ideological management could be a key factor in developing online instruction. Certainly it is easier for authorities to censor the content of online instruction than the speech of classroom teachers. Software can be applied to student data and Internet habits to identify potential rebels against authority. Similar software can be used to predict student success or failure. Online instruction could be the key for authoritarian governments' attempts to use education as a means of ideological control over their populations.