

# Reader Comments

## Educational Technology: After Years of Stagnation Under Bush Administration, New Federal Role Is Needed

Charles Blaschke

During the late 1960s, when Education TURNKEY Systems was founded, Peter Drucker, the noted management consultant, reminded me of the wisdom of Joseph A. Schumpeter, the Austrian economist, who argued that “swarms of innovation” leading to “creative destruction” were a pillar of United States capitalism. These “swarms” would also impact the changing nature of educational technology, of which Peter was an advocate, as reflected in his involvement in some of the big mergers of that time, between defense contractors and publishers, including Raytheon/DC Heath and IBM/SRA.

Since the passage of No Child Left Behind (NCLB) in 2002, rather than fostering an atmosphere conducive to innovation, the Bush Administration has increasingly been releasing “albatrosses” which have targeted the necks of educational technology advocates. The Bush policies have not only stunted the growth of the educational technology movement, but, in some cases, have attempted to go back in time. This phenomenon has been reflected in:

- openly blatant violations of NCLB Law provisions, particularly those which Congress wanted and passed to increase the Federal role in educational technology use and literacy;
- cutting funds based on “findings” from a Federal experiment which was poorly designed and implemented;
- supporting vested interests who were threatened by innovative educational technology and related approaches; and
- prohibiting the use of technology in certain programs, or designing programs such that constraints would reduce the potential for benefits to be realized.

***Ideological bias in selecting and interpreting provisions in NCLB to implement or not.*** When NCLB was originally passed in 2002, bipartisan Congressional leadership placed a requirement on states to submit annual reports on the number of students who were technology-literate by the eighth grade, and the number of teachers who were prepared to use technology. However, in early guidance to states, when they applied for Enhancing Education Through Technology (E<sup>2</sup>T<sup>2</sup>) funds under Title II D, the U. S. Department of Education (USED) told states they did not have to submit reports as Congress mandated. As a result, by 2006–2007, while over 45 states had adopted the technology-literacy standards developed by the International Society for Technology in Education (ISTE), only four states had actually implemented state technology literacy assessments. As the CEO of ISTE, Don Knezek, has said on several occasions, “If states don’t have to

report the results, then state testing is not likely to occur.” Only within the last year has USED attempted to capture such data, but not in a uniform manner.

When the Reading First program was created, due to the perseverance of former Education Committee Chairman Bill Goodling, a Pennsylvania Republican, the Law and Conference Reports clearly stated that “family literacy” and “tutoring” programs were allowable uses of funds in the Reading First program, designed to ensure that all students become proficient readers by the end of third grade. However, the initial (April 2002) USED guidance to the states, which had to have their Reading First plans approved by USED in order to receive funding, did not allow Reading First funds to be used for these two activities. Several firms who were aware of provisions in the Law spent several hundred thousand dollars each developing and/or acquiring tutoring programs that were in the process of being migrated for Internet use. And, indeed, some of the early reviews of studies by USED’s What Works Clearinghouse found that certain types of tutoring—including cross-age tutoring—had been demonstrated to be effective.

As subsequent investigations by the USED Office of Inspector General (OIG) and the Government Accountability Office (GAO) found, three or four years later, most of the products which were on the USED’s “unofficial” approved lists during the early implementation of Reading First were basal texts and, as a result, few state-approved lists, at least initially, included any instructional software used as a “core” program, or even as a supplement to basal texts. Indeed, the OIG’s investigations confirmed the allegations by at least two groups who had alleged that USED policies resulted in state education agencies discouraging districts from using their programs, which included at that time tutoring and/or the use of instructional software or diagnostic/prescriptive systems.

As a result of Congressional leadership, there was a requirement that USED conduct an experiment on “software instructional interventions” and report to Congress on their relative effectiveness in increasing math and reading test scores. In the summer of 2003, USED announced the creation of the experiment, inviting companies with instructional interventions to participate in the \$15 million evaluation. We advised our clients not to participate, or to participate only if those designing and implementing experimental/randomized trials ensured that interventions were implemented in accordance with the publisher’s recommendations. Because of a short time fuse, inadequate time to engender teacher “buy-in,” and a host of other reasons, the results from Year One of the experiment, to the surprise of no one who has conducted such large-scale evaluations, reported the interventions produced no positive gains. Two years later, when asked during a telephone conference call (sponsored by the Software & Information Industry Association) with the Principal Investigator for the USED contractor whether data were collected on the “fidelity of implementation,” in accordance with the publisher’s recommendations, he indicted that the data had been captured, but had not been taken into account in the analysis of the first year’s results. To date, the results of the second-year implementation have not been released, as promised by USED three years ago, and the Year One findings continue to be cited as a basis for “zero funding” of the E<sup>2</sup>T<sup>2</sup> program. Even though the firms with the interventions were promised that the specific evaluation results of their products would be provided to them, this has occurred only in limited



cases and only after many requests and considerable paperwork.

Whether the lackluster findings were a result of flawed study design, anti-technology bias, or pure lack of attention by those implementing the evaluation is open to conjecture; however, the multi-million dollar project was largely a wasted opportunity that could have answered some questions, rather than raising more questions, and which resulted in annual Administration proposals said to justify reduced funding for educational technology.

And, last, the Administration “bastardized” conceptual approaches which had worked under certain conditions in the past by imposing the wrong types of constraints, which in many cases prevented the potential benefits of technology from being realized. One specific example is the provision requiring schools identified for “improvement” for two consecutive years to set aside at least 15 percent (up to 20 percent) for supplemental educational services (SES). The so-called “Sylvan Amendment” would allow districts to operate their own SES programs or contract with private providers to provide tutoring. However, if a *district* had been “identified for improvement,” then it could not provide its own tutoring, but had to contract with third-party providers. USED’s policy of giving preference to third-party providers continues, even though the policy is not explicit in the Law.

USED’s Inspector General, in a 2006 report, stated that the USED policy conflicted with the prerogative in the Law given to the SEA to approve what providers and approaches (such as online tutoring) could be approved. Apparently, the Administration placed a higher priority on parent choice and allowing third-party tutoring than on increasing the rates of participation of eligible students in SES and ensuring student gains in a cost-effective manner, which several studies (e.g., conducted by the Council of the Great City Schools and Chicago Public Schools) found supported district-operated programs.

Over time, there has been a slight increase in the use of technology to provide such SES, online or otherwise, either through private providers or firms “partnering” with districts that are allowed to operate their own programs. However, the prescriptive nature of the conditions under which SES fees are determined and paid have been, in many cases, a disincentive for firms to make serious investments in providing technology-based SES instructional services.

The missing ingredient in USED’s policy was that payment of fees was based on student attendance and “seat time,” not on student instructional performance. In fact, during a meeting several years ago of the Education Industries Association, whose membership includes many SES private providers, the president of one of the then largest SES vendors stated publicly, in a session attended by the senior USED official responsible for SES, that the firm’s job was not to increase student performance, but to ensure that students attend tutoring sessions, so the firm could get paid. That firm is no longer in business.

After four years of a failed policy for supplemental educational services where less than 20 percent of eligible students had participated, in March 2008 USED announced a new Pilot Program which would provide greater flexibilities for states to determine interventions to use with schools that are “most broken”; however, states would have to ensure safeguards protecting the SES and the parent-choice option by ensuring

that the minimum number of students participating in SES is maintained, which would almost guarantee a market demand for supplemental educational service providers.

***Breathe new life into an expanded Federal role supporting technology.*** So, what should be the Federal role during the next Administration and Congress? First, at a general level, policy should rely on the free-market mechanism to ensure that technology is used appropriately and effectively and, where there are Federal government-imposed impediments, these should be removed. Peter Drucker was fond of saying that Federal policies should ensure that the private-sector incentives for profit-making coincide with serving the public interest. This was the strength of the successful E-Rate program, created in 1998, that has contributed significantly to virtually all public school classrooms now having Internet access. Interestingly, the Bush Administration, in one of its earliest proposed Education budgets, attempted to kill E-Rate by allowing E-Rate refunds for non-allowable items—such as professional development and other instructional services—which would have resulted in a backlash from telecommunication companies that had supported E-Rate, and would likely have killed the program. Senator John McCain, during a meeting of moderate and liberal U. S. Senators, referred to as the Main Street Group, was alarmed when he learned about the Bush effort, and he became instrumental in stopping passage of that budget proposal.

Second, Federal programs should be designed to increase the *demand* for appropriate and efficient use of technology to meet program objectives. Federal policy should also provide incentives and *supply* funding to encourage technology development and use in “thin market” areas, where the market mechanism otherwise fails to incentivize private investment. One good example is the Small Business Innovation Research (SBIR) program that, over the last 30 years, has developed such technologies—especially in the area of special education—in spite of attempts by this Administration to eliminate or reduce SBIR funding significantly. Past SBIR-supported developments include the Kurzweil product line and, most recently, the development of Response to Intervention (RTI) approaches.

Third, because most Federal programs require Federal dollars to implement them, there should be accountability checks to ensure that such funds are used in the most cost-effective manner; and, where technology-based approaches are proven to be effective in meeting such roles, incentives should be provided to expand their use. Where technology approaches are not successful, “swarms of innovation” should be encouraged for “creative destruction” and replacement.

Fourth, Federal policy has a role in conducting research and evaluation of technology products and providing the most objective evidence of their effectiveness, if they were implemented with fidelity. The research question in evaluating technology-based instructional interventions should be: What approaches are the most effective with students with certain types of needs, under various conditions and contexts, in improving student performance? Moreover, the outcome measures should go further than mathematics and reading/language arts and should include measures beyond state or national standardized tests which are easy and relatively inexpensive to score. Many of the potential benefits of using technology to assess “qualitative” improvement in student performance have not been realized; rather, such technology use (e.g., adaptive testing) has been stifled by the expanded use of standardized



state assessments and USED past NCLB policies.

Fifth, randomized trial control (RTC) designs used in pharmaceutical or medical fields are neither practical nor, in many cases, legal in education. Moreover, while insurance companies have “copay” systems that subsidize costly studies conducted by drug firms, there are no insurance “copays” available to public schools. What are needed, depending on availability of scientific evidence, are different “standards of evidence” to be applied in the context of how the technology is to be used. This will likely be an underlying principle in the Senate’s proposed reauthorization of NCLB, along with another principle, of actively promoting innovation while removing impediments to “risk-taking” at the school district level. The policy should be to provide the best, most objective evidence on the use of technology to school district decision-makers, to use along with other criteria, in selecting and using technology-based approaches. This policy appears to be gaining support within the Institute of Education Sciences, a good sign for the future.

And, last, the focus of technology use should be broadened to include a variety of measures, ranging from increased productivity, improved teacher working conditions, developing better learning climates, and motivating students.

**Closing comments.** Through selective implementation of NCLB provisions and reduced funding for educational technology, the current Administration has not been, by any means, an advocate of using technology to individualize the learning process. On the other hand, it has advocated the use of technological data-driven decision-making tools and reporting systems, which, for the most part, have been used to compare districts and states to provide a basis for parent choices of states, districts, and schools for transferring their students.

While Congress and educators see a growing need for use of technology in formative assessments, which can help to individualize instruction, the Administration continues to support the goal that every student will be proficient by 2014, as measured by state standardized tests. While Secretary of Education Margaret Spellings is attempting to fix some of the NCLB provisions identified by some of us as being dysfunctional and overly punitive when the law was passed, the core principles need to be reconsidered under a new Administration. As Jack Jennings, Chief Executive Officer of the non-partisan Center on Education Policy, which has conducted the most intense study of the implementation of NCLB, recently stated: “We need to rethink the entire law with the initial focus on the teacher and student.” By doing so, one can justify myriad uses of technology to support that teaching-learning process. □

---

**Charles Blaschke**, a Contributing Editor, is the President of Education TURNKEY Systems, a market research firm which has provided information and consultation to several hundred technology firms targeting Federal niche markets such as Title I and special education. He received a Master of Public Administration degree from the J.F.K. School of Government at Harvard University in the mid-1960s and has authored numerous books and articles, some of which have been included in previous issues of **Educational Technology** on Federal policies and support for educational technology (e-mail: [cblaschke@edturnkey.com](mailto:cblaschke@edturnkey.com)).

## Point of View

---

### Distance Education 20/20: Vision Meets Reality, or Not

Barry Willis

Distance Education (DE) as we’ve known it is dead. That’s a good thing—we should let it go and move on.

When reviewing the evolution of distance education over the past 30 years, it’s evident how much has changed, so quickly. Then again, when looking ahead, it is hard to envision that such rapid change and evolution could continue, or even increase. Nevertheless, believing that the past is prologue to the future, I believe that major changes are indeed on the horizon and that the pace we’ll follow to reach them will quicken. The biggest changes, however, will likely be related to “process” (i.e., academic and student support services, delivery technology) as opposed to “product” (i.e., education).

To see how rapidly the technological world has changed over the past 30 years, let’s go back to the mid-1970s and the early work on “first generation videodisc development.” A less sophisticated version of today’s \$50 DVD player cost well over \$100,000 in the mid-70s (in the unlikely event you could get one on an experimental basis) and required quarterly tune-ups and upgrades in excess of \$15,000. About the same time, a futurist from a major high-tech company in California gave a talk describing a future device the size of a notebook that required no electrical/wired connection to a vast database of information that would be boundless in terms of the easily retrievable material that would be available.

I still recall sitting in an audience with other high-tech skeptics thinking that this guy was crazy. Now, 30 years later, that vision has been realized and even surpassed with today’s laptops and Internet search engines, at a cost of only a few hundred dollars. Amazing now—impossible for most of us to imagine back then. And this change is but one example of many; take online course delivery as another.

According to a 2007 Sloan-C Report, over 3.5 million students took at least one online course during the fall 2006 semester, a 9.7 percent increase over the preceding year, and significantly higher than the 1.5 percent growth of the overall higher education student population in the USA (Allen & Seaman, 2007). In fact, online course enrollments

---

**Barry Willis**, a Contributing Editor, is currently an engineering management professor, Associate Dean in the College of Engineering, and Associate Vice President for Educational Outreach at the University of Idaho (e-mail: [bwillis@uidaho.edu](mailto:bwillis@uidaho.edu)).