

REFRAMING TECHNOLOGY

The Computer Can Be Used to Teach Life-Long Learning and Critical Thinking Skills

By Andrew Kerr

John Dewey's 1896 speech "The School and Society," published by Southern Illinois University Press in 1980, still applies today.

If we put before the mind's eye the ordinary schoolroom, with its rows of ugly desks placed in geometrical order . . . add a table, some chairs, the bare walls, and possibly a few pictures, we can reconstruct the only educational activity that can possibly go on in such a place. It is all made for listening—because simply studying lessons out of a book is only another kind of listening; it marks the dependency of one mind upon another. The attitude of listening means, comparatively speaking, passivity, absorption; that there are certain ready-made materials which are there, which have been prepared by the school superintendent, the board, the teacher, and of which the child is to take in as much as possible in the least possible time.

There is very little place in the traditional schoolroom for the child to work. The workshop, the laboratory, the materials, the tools with which the child may construct, create, and actively inquire, and even the requisite space, have been for the most part lacking. The things that have to do with these processes have not even a definitely recognized place in education.

Since John Dewey gave that speech at the University of Chicago Laboratory School in 1896, not much has changed in many classrooms across the world in 2005. Many students are still expected to file into class, sit quietly at their desks, and, most importantly, listen. Most computers in our schools have taken on that same function. According to Dewey's way of thinking, sitting at a computer and watching a "ready-made" computer program at the appropriate time, and interacting with the screen via some mouse clicks, is also listening. Teachers may use electronic presentations like PowerPoint with a LCD projector, but how is that different than a blackboard and chalk? The difference is that chalk is cheap and the blackboard allows for more interactivity! If administrators truly want to reframe how technology is used in the classroom, they first must reframe how they view education. The power of educational technology lies not with the technology itself, but in the transformation of the way we think about teaching and learning.

How, then, do we reframe our view of education after a tradition of listening for hundreds of years? It's simple. We just have to examine good teaching practices over thousands of years. People learn by doing, questioning, experimenting, and interacting (and all without computers!). Good teachers facilitate these things everyday. However, many schools insist—and some demand—that the listening approach be adhered to, not only with student lessons, but with technology as well. The



Photo: Kim Gault

▷ Students can actively engage with one another while using computers in the learning process.

fact remains that computers are an underutilized classroom resource and are often misused. The computer is not a magical problem solver that will automatically make students self-aware learners. On the contrary, it is another tool teachers can use to teach life-long learning and critical thinking skills as opposed to a weapon of mass instruction. Rather than viewing computers as an automated drill-and-practice machine for students and a presentation device for teachers, computers can be the glue that brings the skills Dewey talks about to fruition: constructing, creating, and inquiring. Rather than an extension of the traditional classroom, where students file into the computer lab and interact silently—usually with headphones—on a prefabricated computer program, students can be actively engaged with each other and producing their own materials. In the process, they learn how to learn and become critical thinkers, skills that will last a lifetime.

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