Reforming Educational Reform

Increasingly, nations are recognizing that improving education is the best way to increase wealth, enhance health, and maintain peace. But there is little consensus on how to achieve an educated population, or even on what it means to have an educated population. Can progress towards an educated population be measured by counting the number of people in school? By the number of years they spend in school? By assessing their grades on standardized tests?

Every country in the world, it seems, has a plan for educational reform. But in most cases, reform initiatives are superficial and incremental, and do not get at the heart of the problem. These initiatives often introduce new forms of testing and assessment, but leave in place (or make only incremental changes to) existing curricula and existing teaching strategies. We need to reform educational reform.

Rethink how people learn
We need to fundamentally reorganize school classrooms. Instead of a centralized-control model (with a teacher delivering information to a roomful of students), we should take a more entrepreneurial approach to learning. Students can become more active and independent learners, with the teacher serving as consultant, not chief executive.

Instead of dividing up the curriculum into separate disciplines (math, science, social students, language), we should focus on themes and projects that cut across the disciplines, taking advantage of the rich connections between different domains of knowledge.

Instead of dividing students according to age, we should encourage students of all ages to work together on projects, enabling them to learn from one another (and to learn by teaching one another).

Instead of dividing the school day into hour-long slices, we should let students work on projects for extended periods of time, enabling them to follow through more deeply and meaningfully on the ideas that arise in the course of their work.

Rethink what people learn
Much of what children learn in schools today was designed for the era of paper-and-pencil. We need to update curricula for the digital age.

One reason is obvious: Schools must prepare students with the new skills and ideas that are needed for living and working in a digital society. There is a second, subtler reason: New technologies are changing not only what students *should* learn, but also what they *can* learn. There are many ideas and topics that have always been important but were left out of traditional school curricula because they were too difficult to teach and learn with only paper, pencil, books, and blackboard. Some of these ideas are now accessible through creative use of new digital technologies.

For example, children can now use computer simulations to explore the workings of systems in the world (everything from ecosystems to economic systems to immune systems) in ways that were previously not possible. Some ideas that were previously introduced only at universities can and should be learned much earlier.

Finally, and perhaps most importantly, we need to transform curricula so that they focus less on "things to know" and more on "strategies for learning the things you don't know." As new technologies continue to quicken the pace of change in all parts of our lives, learning to become a better learner is far more important than learning to multiply fractions or memorizing capitals of countries.

Rethink where and when people learn
Most education-reform initiatives appear to assume that learning takes place only between the ages of 6 and 18, between 8:00 A.M. and 3:00 P.M.—that is, when children are in schools. But schools are just part of a broader learning ecosystem. In the digital age, learning can and must become a daylong and lifelong experience. National education initiatives should aim to improve learning opportunities not only in schools, but also in homes, community centers, museums, and workplaces. The Internet has opened up new learning opportunities, enabling new types of online learning communities in which children (and adults) around the globe collaborate on projects and learn from one another.

Towards the Creative Society
In the 1980s, there was much talk about the transition from the "Industrial Society" to the "Information Society." No longer would natural resources and manufacturing be the driving forces in our economies and societies. Information was the new king.

In the 1990s, people began to talk about the "Knowledge Society." They began to realize that information itself would not bring about important change. Rather, the key was how people transformed information into knowledge and managed that knowledge.

The shift in focus from "information" to "knowledge" is an improvement. But I prefer a different conception: the "Creative Society." As I see it, success in the future will be based not on how much we know, but on our ability to think and act creatively.

The proliferation of digital technologies has accentuated the need for creative thinking in all aspects of our lives, and has also provided tools that can help us improve and reinvent ourselves. Throughout the world, computing and communications technologies are sparking a new entrepreneurial spirit, the creation of innovative products and services, and increased productivity. The importance of a well-educated, creative citizenry is greater than ever before.

To achieve these goals will require new approaches to education and learning, and new types of technologies to support those new approaches. The ultimate goal is a society of creative individuals who are constantly inventing new possibilities for themselves and their communities.

(Excerpted from "Rethinking Learning in the Digital Age," by Mitchel Resnick)