It has turned out that mass education is more difficult to achieve than we had anticipated. To close the gap between the rather dismal reality and earlier expectations, researchers and practitioners have placed their faith in teaching methods modeled on computers and other rational means for conveying information - which in turn were modeled on industrial production techniques and on military human systems design. The implicit hope has been that if we discover more and more rational ways of selecting, organizing, and distributing knowledge, children will learn more effectively.

Yet it seems increasingly clear that the chief impediments to learning are not cognitive in nature. It is not that students cannot learn, it is that they do not wish to. Computers do not suffer from motivational problems, whereas human beings do. We have not found ways to program children so that they will learn the information we present to them as computers do. Unfortunately, cognitive science has not taken adequate notice of this fact, and hence the current cognitive emphasis on teaching is missing out on an essential component of what learning is about.

Of the two main forms of motivation -- extrinsic and intrinsic -- I focus primarily on the second kind. Although both are needed to induce people to invest energy in learning, intrinsic motivation, which is operative when
we learn something primarily because we find the task enjoyable and not because it is useful, is a more effective and more satisfying way to learn.

The claim is that if educators invested a fraction of the energy on stimulating the students' enjoyment of learning that they now spend in trying to transmit information we could achieve much better results. Literacy, numeracy, or indeed any other subject matter will be mastered more readily and more thoroughly when the student becomes able to derive intrinsic rewards from learning. At present, however, lamentably few students would recognize the idea that learning can be enjoyable.

When people enjoy whatever they are doing, they report some characteristic experiential states that distinguish the enjoyable moment from the rest of life. The same dimensions are reported in the context of enjoying chess, climbing mountains, playing with babies, reading a book, or writing a poem. They are the same for young and old, male and female, American or Japanese, rich or poor. In other words, the phenomenology of enjoyment seems to be a panhuman constant. When all the characteristics are present, we call this state of consciousness a flow experience, because many of the respondents reported that when what they were doing was especially enjoyable it felt like being carried away by a current, like being in a flow.

A teacher who understands the conditions that make people want to learn -- want to read, to write, and do sums -- is in a position to turn these activities into flow experiences. When the experience becomes intrinsically rewarding, students' motivation is engaged, and they are on their way to a lifetime of self-propelled acquisition of knowledge.

Fortunately, many teachers intuitively know that the best way to achieve their goals is to enlist students' interest on their side. They do this by being sensitive to students' goals and desires, and they are thus able to articulate the pedagogical goals as meaningful challenges. They empower students to take control of their learning; they provide clear feedback to the students' efforts without threatening their egos and without making them self-conscious. They help students concentrate and get immersed in the symbolic world of the subject matter. As a result, good teachers still turn out children who enjoy learning, and who will continue to face the world with curiosity and interest.

It is to be hoped that with time the realization that children are not miniature computing machines will take root in educational circles, and more attention will be paid to motivational issues. Unless this comes to pass, the current problems we are having with education are not likely to go away.
There are two main ways that children's motivation to learn can be enhanced. The first is by a realistic reassessment of the extrinsic rewards attendant to education. This would involve a much clearer communication of the advantages and disadvantages one might expect as a result of being able to read, write, and do sums. Of course, these consequences must be real, and not just a matter of educational propaganda. Hypocrisy is easy to detect, and nothing turns motivation off more effectively than the realization that one has been had.

The second way to enhance motivation is to make children aware of how much fun learning can be. This strategy is preferable on many counts. In the first place, it is something teachers can do something about. Second, it should be easier to implement—it does not require expensive technology, although it does require sensitivity and intelligence, which might be harder to come by than the fruits of technology. Third, it is a more efficient and permanent way to empower children with the tools of knowledge. And finally, this strategy is preferable because it adds immensely to the enjoyment learners will take in the use of their abilities, and hence it improves the quality of their lives.

About: Mihaly Csikszentmihalyi

When the experience of learning becomes its own reward, that's being in the "flow!" Perhaps when students are challenged in ways that make it possible for them to learn -- taking into consideration their ability, learning style, kinds of intelligence -- and in ways that are strongly motivating, more students may reach that enviable state that Dr. Mihaly Csikszentmihalyi so eloquently describes. His work is devoted to examining the state of "flow," how it comes about, and how it can be facilitated.

Dr. Csikszentmihalyi is professor of Human Development and Education at the University of Chicago, where he was formerly chairman of the Department of Psychology and Chairman of Human Development. After graduating and receiving his Ph.D. from the University of Chicago, he began his career as associate professor and chairman of the Department of Sociology and Anthropology at Lake Forest College. He has been a visiting professor at the University of Maine, and also at universities in Finland, Brazil, Canada, and Italy.

He currently serves on the Child Labor Advisory Committee of the United States Department of Labor and the Center for Giftedness of the federal Department of Education.

Dr. Csikszentmihalyi has published over 120 articles or chapters, his books include Beyond Boredom and Anxiety, Flow: The psychology of optimal experience, Being Adolescent, The Evolving Self, and Creativity, Flow and the Psychology of Discovery and Invention. He has also written short stories for the New Yorker, essays for the Atlantic Monthly, book reviews for the New York Times, and has translated fiction and poetry into English from Italian, French, and Hungarian.