Computers as Tutors: Solving the Crisis in Education

Reviewer: Zygmunt Scheidlinger M.Sc.E.E
11, Epstein Street
Tel Aviv 62962 Israel
Tel: (972) 3 6050874
zscheidl@inter.net.il

Textbook details:
Computers as Tutors: Solving the Crisis in Education
Frederick Bennett
Faben, Inc., Box 3133, Sarasota, FL 34230 USA
ISBN: 0-9669583-6-5

Let us remind few interesting facts from the history of new ideas:
1. A request that before every car a runner with a red flag should warn the public about the nearing danger.
2. British Minister of Posts rejected the idea of telephone stating that "we have enough messenger boys, and no telephone is needed".
3. Printers all over the world rejected with all their forces the idea of using the computer in the printing process.
4. The monks-copyist illuminating the manuscripts pointed out that the beauty of the books will be lost with introduction of printing.

The list is endless. Producers of whips fought the automobiles. Producers of candles were against electrical illumination, and so on and so on.

Exactly the same is occurring in the field of education. The greatest invention of all times - the computer, with its enormous potential in the field of teaching and instructing, is strongly resisted by most of the teachers. This stubborn resistance stems from ignorance of its power as a teaching/instructing tool and, especially, from underestimation of its possibilities of accelerated further growth.

The main idea of Dr. Bennett's book is: let us separate education, character moulding, social interaction with surrounding world from teaching and instructing. Human teachers should continue as pedagogues, facilitators and models while computers should teach and instruct, without a human factor acting between the student and the machine.

From such a separation will benefit both students and the teachers. Free from traditional time and energy consuming duties, "Leader Teachers" will mentor and monitor children as they progress. Of all the changes that will flow from computerized education, the most visible will be the new relationships that will develop between pedagogues and students. No student will pass through the education process without individual attention, the pedagogue will know the child, and he will have a specific teacher as individual guide and helper. Their contact will be both virtual and physical.

Computerization of the learning process will have the following consequences:
1. The learning process will be much more effective, attractive and enjoying as compared with the sterile class instruction, based on blackboard, chalk and teacher fighting for the discipline.
2. Computerized learning may be adapted to the needs, habits and individual features of every child.
3. The most progressive teaching methods, based on the latest achievements of cognitive science will be employed.
4. Outstanding pedagogues that quitted from school because of different discipline and violence problems will return to the pedagogic activity - delivering outstanding lectures, taking part in preparation of excellent courseware, participating in development and appreciation of new teaching methods.
5. Outstanding lecturers will reach every village, education everywhere will be at the same level as at the affluent suburbs.

Radical, yet realistic in his approach, Dr. Bennett lays out the problems that are present in American education. Till now computers in schools, both in America and elsewhere have been completely ineffectual.
Computers if used properly can satisfy the inborn desire of child, and actually of human beings at any age, to learn, to acquire new knowledge and new experience. Individualized instruction is the key to success of every student. A private tutor - in the form of computer - will allow each pupil to learn at his/her comfortable pace.

While some may fear that computerized education would create unfeeling automatons, Dr. Bennett dismisses this fear. Pedagogues will remain and provide the human element to ensure that rich extracurricular activities develop the whole person, not just the intellectual side. The primary mission of pedagogues will remain unchallenged: they will continue as guides, facilitators and models.

Dr. Bennett’s book should be considered as pointing to the right and inevitable direction of human progress, which may, in a long run provide jobs and prosperity for mankind.

Rejection or delay in computerization of the whole educational process will not only increase the already large number of unemployed but will also lead to poverty and social unrest.

Educators at all levels should remember that their ultimate goal is to prepare people for productive jobs, that will enable them to live with dignity at a suitable level. In most Western countries 85 to 90 percent of new jobs are in the high- and highest-technology. Does the existing educational system prepares the young generation for these jobs? Fast progress of scientific-technological environment calls for frequent change of employment. Does the present educational system prepares people to switch over to new technologies, to new methods and to new machines, several times in their lifetime? For all these questions the answer is negative. If one asks any teacher what he has changed in his teaching methods in his curriculum during the last 25 years, he will get from most, if not all, the same answer - nothing!

Does the avalanche progress of science and technology allows such a mummification of the educational process?

One should stress that the fast improvement of scientific instruments, telecommunications between professionals on the globe and such, will hasten the scientific-technological progress, and those who would be unable to catch up with this accelerating progress have no chances on the work market.

The globalization process will smash the artificial borders and the widespread knowledge of English, thanks to computers, will destroy the language barrier. Educators at all levels have to remember continuously that they prepare the young generation for a competitive market, where the best prepared will get the best positions, while religion, skin color or origin will play a diminishing role.

Dr. Bennett is right in saying in his book that only computerized education with its flexibility, adaptation to individualized needs and other outstanding features can prepare for the world of the near future.