

# *Technology: an Opportunity not a Threat*

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*Technology In Education Will Dehumanise Learning*

*By*

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It is almost 40 years or so since radio waves hit the classrooms; in a recent presentation by Sir David Putnam, the celebrity British film producer had this to say about the advent of the radio into the classroom: "Some teachers, principally the older members of staff saw it at best as an irrelevant gimmick likely to undermine their authority or worse, a looming threat to their job security," but we know from that experience that radio did not "supplant the teacher - it enhanced the teachers ability to do his or her job." Ladies and gentlemen:

1. We still live in a world of great inequality. A good part of humanity is still denied access to an equal share of the planet's wealth, to justice, to a decent living; the disparity between those who have and those who do not in terms of food, health care and social security continues to be appalling. This disparity is not just between rich and poor nations but also within nations and communities. Globally, uncontrolled consumerism has led us down a path where the environment is largely endangered and our biodiversity is at risk of massive erosion. We have less than five years before we see the beginning of the next millennium - an era during which human development should be measured not by scientific and technological progress alone, not by colonising distant galaxies and certainly not by the number of bombs, people at arms, etc., but by the simple yardstick of the level of equal opportunities for all. That, more than anything else, will be the greatest humanising factor for humankind.

2. Throughout the ages, education has been the most powerful agent of change. Many of our leading thinkers, political leaders, development specialists have come to recognise that the empowerment of individuals through the provision of learning - a basic human right and social responsibility - must therefore be protected. It is this desire to empower individuals that led to those who met in Jomtein in 1990 to declare among other things that: every person - child, youth and adult should be able to benefit from education; opportunities designed to meet their basic learning needs.

3. That declaration will remain a rhetoric as long as those of us who are in the practice of delivering education remain passive about accepting the challenge to educate every child, youth and adult. This is a challenge to our intellect and pedagogical skills at a time when fiscal resources are diminishing and technological capabilities are increasing. Consider the tasks:

- . At the start of this last decade of the present millennium, there were more than 960 million adults who were illiterate; two-thirds of them are women and girls;

- . More than 100 million children, mostly girls, currently do not have access to primary schooling and this number is growing;

- . More than 100 million children and countless millions of adults fail to complete their basic education programmes, while millions more satisfy school attendance requirements but do not acquire essential knowledge and skills;

- . More than a third of the world's adult population (some 2 billion individuals) have no access to printed knowledge, new skills and technologies that could improve the quality of their lives and help them to shape social and cultural changes; and

- . On an annual basis, the world demand for higher education will increase at the rate of 8.3% and most of this increase will come from the lesser developed parts of the world which also have the least developed capacities to deliver the service.

4. The challenge is not limited to the volume of the need, it also extends to the variety of users and potential users of a nation's educational services. Besides the "normal" class of users, educational services will be needed by:

- . Those who are functionally illiterate: apart from the 900 million illiterates, there are almost half as many adults who cannot cope with the demands of daily life on the basis of their literacy levels;

- . The physically challenged: annually in Asia alone, 15 million people become disabled as a result of war, disease, accidents, malnutrition. Their major hope of self improvement will have to be an education that reaches them;

. The long-term unemployed: long-term chronic unemployment is a pathology; training people in such situations will pose special pedagogical challenges;

. Women and girls: the gender gap, despite our knowledge of the benefits of women's education, continues to be appalling. Given the nature of cultural and religious hurdles, ways may have to be found to circumvent these barriers to deliver education to an important half of humanity;

. Out of work youth, especially boys: require vocational training to be part of a productive economy; a combination of apprenticeship employment and self education can be of help in rehabilitation programmes; not having such provision for training and vocation is a catalyst for socially disruptive behaviours, social refusal and criminal activities by an undereducated and disgruntled population; and

. Refugees, recent immigrants and non-nationals: roughly, some 125 million people today live outside their country of origin. The flow or the movement of people, either for political or economic purpose, is not expected to slow down. To better enable the process of settling down educational programmes dealing with language, social and job skills are helpful and have to be designed.

5. The kind of education with a global reach and audience in mind presents opportunities for the design of curricula that are unique, embodies many universal values and teaches skills that are useful to function in a global economy and enables individuals to relate to each other and their communities in a more sensitive manner. A call for curricula reform in our institutions is not new but perhaps what is refreshing is the similarity of conclusions that those who are urging reform have come to; regardless of their locations. Such a reform package seems to urge a curriculum with four basic and almost universal values. These are:

. Communication: especially for working in a multicultural environment, given the mobility of today's population, for learners to appreciate the cultural differences of people outside their own communities and countries;

. Problem solving: which will require the ability to frame problems in the first place and then to apply information technologies to solve them;

. Working together: in teams made up of people with different backgrounds, culture and skills; and

. Self learning: to be a lifelong learner, possessing not only the skills of learning but also the skills to assess what knowledge and skills one need to acquire to be competitive in and relevant to one's living environment.

6. For the first time in the history of the human race, we have an opportunity, if we want, to reach almost every single community on the planet. The technology of our century has made it possible for us to reach millions in a single moment. Consider some examples of what has been possible in the last few years through the intervention of mass communication:

- . In Honduras, the use of a specific oral rehydration solution to treat diarrhoea reduced risks of dehydration from zero to 40% of all episodes, just one year after a systematic programme of public education was launched;

- . In South Africa, part of the transformation from the viciousness of apartheid to participatory democracy required educating people not only on what democracy is but also their role in it; a mass voter education campaign took the population from being passive victims to active citizens in six months;

- . In India, condom sales increased from fewer than 25 million in the late 1960's to more than 160 million in 1979, and 75% of the increase was accounted for by a new brand introduced through a marketing approach that relied heavily on consumer education;

- . In British Columbia, the Knowledge Network reaches almost the entire province with university level courses in science, arts, economics, mathematics and human behaviour.

7. A revolution is taking place out there in the world of programming technology that is showing the way to expand teaching, training and educating. Some interesting examples mentioned at Jomtein in 1990 include:

- . A rock video motivating young people in Mexico to delay sexual activities, thereby reducing health and psychological risks;

- . A radio-based lottery in the Gambia that teaches rural women about a new remedy for diarrhoea;

- . A mass campaign in Turkey to increase the catchment for child immunisation campaigns; and

- . An introductory course in computing via the Internet with pan-global outreach.

8. Fundamental shifts have to be made in the way we deliver education as we move away from elite to mass education for a largely mixed population in terms of its academic, cultural, gender and age traits. The assumptions of teachers and institutions as to where, when and how of teaching will have to undergo profound changes. The technologies we already have and those that are coming to use have yet an realised potential to apply to

educational delivery.

9. But technology does not teach; it helps in the creation, production and delivery of teaching. It transforms the relationship between teachers and learners. While multimedia and hypermedia can bring all of the essence of print, audio and video signals, computer aided instruction, group learning and conferencing under one umbrella, at the heart of this transaction there still will be the teachers and their institutions who have the power to humanise this relationship. The challenge for them will be to create the pedagogies of learning that will set the educational parameters within which the technologies will contribute to effective learning.

10. If we accept the premise that education, more than any other factor, can make the difference between wealth and poverty, health and misery, conservation and destruction, national unity and division, then the levelling of educational opportunities must be a priority for all of us who care about our fragile planet and its inhabitants. Not using the technology that is available and emerging for this purpose is not just Luddism but plain suicidal.