THE IMPACT OF TECHNOLOGY ON SOCIETY AND EDUCATION
LEARNING FOR LIVING IN A MULTICULTURAL AND
TECHNOLOGICAL SOCIETY

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The logic of learning for living in a multicultural and technological world assumes that individuals, society, technology and education are all in process of change at any given time. Moreover, the changes in these four terms are not necessarily taking place at the same rate nor in the same form. Thus, the circumstances attending the changes in individuals derive from the particular social, economic, political, cultural and educational patterns in any one society and within groups in that society.

By the same token the changes taking place in society derive in part from both internal and external forces, the combination of which determines the structure and function of that society. The national and international elements which enter into the shaping of a particular society are fluid and interdependent. The changes taking place in technology vary considerably from one social order to another and will also vary within any one society. Again, this technology may be rudimentary or sophisticated depending upon whether or not we are considering developed or developing societies. And as far as education is concerned the changes taking place in this domain must perforce, if they are to be effective, be in accordance with the changes in each of the three categories earlier defined, i.e., individual, society and technology.

Because change is the critical determinant in all realms of social, economic, political, cultural and educational institutions in any society, and because change is a constant in the growth and development of individuals and groups alike, and because the interactions which obtain between individuals and the aforementioned institutions are themselves subject to change it follows that the logic of learning for living in a multicultural and technological society must accept change as a constant in the social order, this constant being the social process which describes the ways in which interactions take place between individuals and institutions.

The social process at work in both developed and developing
societies takes as its basic premise that the social order in any society is a function of the relationships between individuals, that it is these relationships more than anything else that shapes the human environment. Thus, for example, while a developing society may still be depending upon oxen for cultivating its fields and a developed society may use a tractor, the difference in productivity will certainly be affected by the tools being used by these two societies, but though productivity will be affected by the difference in tools and consequent productivity, all else being equal, the human environment will also be affected by the extent of their involvement in their respective agricultural pursuits. Were there to be an exchange of tools, between these two societies, both human environments would be equally affected.

It may be assumed that in the aforementioned example the tools used were the most important factors shaping the person and his or her environment. However, when one takes in account the myriad other factors which go into shaping the environment, it is obvious that tools are but one of several elements in the equation. The quality of the soil, the seed, the work habits of the individuals, the use or misuse of fertilizers, the climate, all of these play their several roles in determining the success or failure of their respective agricultural endeavours. Included, too, must be the hold which tradition has upon the individuals involved and whether or not they are disposed to adopt different measures for different circumstances. International aid programmes have demonstrated in too many instances that the provision of sophisticated tools to developing countries has not succeeded because old attitudes coupled with a lack of information resulted in abysmal failures.

Tools are an artifact of culture and whether these tools be robots or laser, computers or calculators, they remain tools in the sense that a hammer is a tool, as is an automobile. All are instruments for the extension and direction of the human will. Some of these tools are, of course, much more powerful than others, and as a result make it possible for an individual to exercise his or her will more effectively and efficiently. What this means is that as tools have increased the power of individuals to control and direct nature and man, there has been a comparable increase in the interaction between man and man and man and nature over a wider territory.

The communication system suitable for a collection of villages is not adequate for a collection of countries and where pigeons could in a bygone age provide speedy service over a limited number of miles in a couple of hours, satellites can provide global and
interstellar services at the speed of light. Again, what we have here is a change in technology of communication which has impact on human beings. Critical to this situation however, is not the technology but its impact on people.

This impact is essentially a stimulant, a prod to human inertia, calling upon the person to forego established habits and handle much more information than before, be more selective as to the particular relevance of this information to the task in hand, and be better able to apply this information to whatever problem is in sight for examination. The impact of technology on individuals in different cultures will differ in respect of differences in custom conventions, laws, regulations, traditions, authority figures and in respect of the degree to which the progress from primitive to sophisticated tools has accommodated generational differences. The difference in the accommodation of changes by youth and adults is the difference which determines the direction of development in all societies, whether developed or developing. What this suggests is that the social process involved in accommodating an invention or innovation will be more a function of the individual and the group than it will be the particular tool that is being dealt with.

In the light of the foregoing it should be noted that learning for living in a multicultural and technological age is governed by the same social process that obtains in any age. What is different is the widening of the horizons of both the learning process and the parameters for living. The widening of the horizons of the village to encompass the globe at one and the same time widens the world within which the individual sees himself or herself living.

The basic principles shaping the social process are those of continuity, diversity, community, technicality, integrity, humanity, ingenuity, uncertainty and creativity. The learning process which determines the character of the individual in society is not only the acquisition of masses of information and the attendant skills necessary to use this information effectively, but it is the development of a disposition to see all of this in the larger context of the good of mankind, i.e. the context of the basic values which have moved mankind out of the caves of antiquity. Information, per se, and the accompanying skills may be used by individuals and for good or ill. The ultimate objective of learning for living in a multicultural and technological age is to learn to live in harmony with all of mankind.

The struggle between good and evil and between man and machine is an ongoing struggle which cannot be resolved unless the focus of attention is on man rather than the machine. Technology per
se may be of use to man; the change is that man may be
dehumanized by the machine in virtue of the power exercised by
those in authority. We have had a number of examples of the way
in which the thrust of science and technology have outpaced
man's capacity to accomodate the innovations and inventions that
have been developed. Automation and robotics have eliminated
both skilled and unskilled workers resulting in the wastage of our
human resources. The thirty-five million unemployed and in
addition of over-employeed in the western world as well as in the
countries in the developing countries indicates that the struggle between
man and machine is in full swing and unless our educational
systems develop programmes of study and strategies to prepare
graduates for this struggle they will stand to be defeated. What
we have here is essentially a classic case of the conflict and
accomodation which attends social process, signifying the fact that
any resolution must perform derive from an active rather than a
passive role on the part of all individuals and organizations party
to the process.

The impact of technology on society and education is such as to
recognize first that education is concerned with the question of
"why" and technology with the question of "how" or "how best". In
the light of these propositions the primary task of education is
to prepare the individual to analyse a particular problem and
conceptualize various solutions taking into account the relative
variables that impinge upon the problem. Having done this the
individual is in a position to use the appropriate technology to
explore the limits of applicability of the various alternatives and,
in the light of anticipated consequences, choose the most appro-
priate one consistent with the primary objective. In a world that
is rapidly undergoing change in all dimensions of human learning
and living, the ability and skill to solve social, economic, po-
litical, cultural and educational problems is paramount and hence
directs the direction for educational systems to take.

The growth in the population of the world is such that the
peoples of developing countries will before long outstrip those of
the developed countries. The science and technology which gave
and gives the developed countries the economical and political
leadership will in the long run be redressed by the developing
countries obtaining this same science and technology and help
them achieve the same social and educational benefits, with this
difference, that the thrust of the developing countries will be to
try to avoid the mistakes of the developed countries. Most of the
developed societies achieved their economic supremacy in part on
the basis of cheap resources obtained from developing countries.
Today, the large corporations of the developed societies are
transferring many of their factories to developing countries in order to exploit their human resources thereby creating unemployment in their home countries. It is this tendency for capital to exploit both natural and human resources that underpins their philosophy of the life of trade and commerce, a philosophy which is prepared to use anything and anybody for the sake of the continuity of their enterprise. So far as learning for living in a multicultural and technological world is concerned, the philosophy of capitalism is to place the human being at risk by giving the machine priority over man. This philosophy of capitalism is in reality a philosophy of power and to the extent that capitalism, communism or socialism or any other ism is concerned with power the same results will follow, i.e., the struggle between man and machine will be extended, differing only in degree.

In consequence, the role of education is to have as its goals the development of men and women who will be able to be masters of the machines which are invading the social domain, so as to make it possible to preserve the innate capacity of men to continue to be creative, constructive and capable of accommodating the changes which are inevitable in any growing organism.

Living organisms are the only entities in nature capable of independent growth. The sustenance necessary to promote this growth must be absorbed by the organism, though this absorption may be facilitated by way of various forms of intervention. Technology may be used to facilitate and enhance growth and to this degree is a valuable intervenor or asset for the learner. Nonetheless, the growth factor itself is stimulated in the learner by involvement in the experience of the race as expressed in courses of study and instruction and the associated literature. The learner's response to all of man's experience is conditioned by the particular culture into which he or she is born. Learning for living in a multicultural and technological society, therefore, calls for a much more broadly based and integrated educational system than has been the case before.

Learning for living in a multicultural and technological society calls for a system of education that is fully integrated, with the social order and functions as an integral part of it. The school can no longer be separated from the society that surrounds it, nor can those who serve as teachers within it, remain aloof from the day-to-day developments in that society. This means that educational systems must be organised so as to recognise that the educative process functions within social, economic, political, cultural and technological parameters that accommodate essential information and skills fundamental to determining the changes that
range between social disorder and order, between the individual and the group, between national and international perspectives, and between dependence and interdependence.

The impact of society on technology and education, therefore, needs to be considered in the context of multicultural societies affected by technologies of various kinds, each capable of altering the mode and manner of particular ways of learning and living. By virtue of the fact that changes are constantly taking place in the social, economic, political, cultural and technological spheres at a rate that can leave school and its teachings out of date, it is essential for school and society to seek closer relationships. The integration indicated should take the form of establishing connections between the school and the relevant institutions in society in which it finds itself. Thus, elementary, secondary, and tertiary schools would each establish programmes of study in association with the social, economic, political, cultural, industrial institutions in their community. The social process units so developed would tend to keep school and society cooperating rather than competing for political attention exclusively.

This social process learning approach would contribute significantly to bringing school and society closer together as far as having a common set of objectives is concerned and at the same time help reduce the gaps which presently obtain between school and society, and between the rate at which the school changes and the rate at which society as a whole moves on its various fronts. The overall impact of the social process learning approach, applicable in all curricular areas, would go far to removing education from the sphere of partisan politics and return it to its rightful place in the consensus of the aspirations of all people in and out of school.

A world in which almost half of the people live on less than $400 a year, and in which the population of the industrial countries is a minority, is a world that suggests that the developed countries must share their educational energies and expertise in helping reduce the gap between rich and poor, between man and machine, and between learning and living. The one-world concept implies that the social process learning approach to living and learning facilitates the process of socialization as it affects both individuals and institutions on a global plane. The common denominator of man is man’s involvement with his fellow men as they attempt to deal with their multicultural and technological worlds. And those worlds can only be mastered if schools work closely together with all of the community’s institutions, industrial and otherwise. Integrated societies produce integrated men and women; men and
women healthy in mind, body and spirit, capable of adapting to and accommodating change in all aspects of society.