



CHAPTER 1

ECONOMIC DEVELOPMENT AND SKILLS DEVELOPMENT

Arun K. Mishra

IMPROVING PRODUCTIVITY THROUGH SKILLS DEVELOPMENT

Even a cursory gloss over the great human civilisations, such as the Egyptian, Greek, Indian and Chinese societies of the past, reveals that they were characterised by high skills and superior technological knowledge. These developed civilisations ensured well-being to their people through knowledge and skills pertinent to their times. Though not industrial civilisations, they did have vocational education and training systems, depending on their requirements of food, habitation and shelter.

In our own times we are still awed by the technological knowledge of these civilisations: their designs of the structures and their habitations, their architecture and engineering, their sewage and drainage systems and their metallurgical and other skills. These civilisations not only left their marks but are still studied and marvelled at. Any country today, if it aspires for economic and social development, must similarly be built on the foundations of knowledge and skills through a system of delivery to reach the masses as appropriate to the present times.

The challenges of a complex society

Today, things are not so simple. Our civilisation has become extremely complex through a process of gradual evolution. Our present requirements are characterised by high technology on the one hand, and basic human survival on the other, depending on where we live. Accordingly, the needs for skills and knowledge as well as the modality of education and training may vary.

Yet society is moving in a direction that demands high levels of knowledge and skill in information and communication technology, biotechnology, global business and commercial practices, transport and conveyance, maintenance of law and order and various other aspects of day-to-day living. Our degrading environment, dwindling energy reserves, shortage of clean water and basic health needs are some of the other problems with tremendous implications on skills development. Further, rapidly growing

populations in many countries has increased not only the demand for resources but has caused other problems affecting quality of life such as finding germ-free water and food, adequate energy and power, clothing and shelter.

Setting priorities is not easy for many countries, but developing nations face a greater challenge. To them it is not a question of addressing one challenge over the other, but of tackling all problems at the same time. In other words, economic development is not only related to employment and training but also to development as a whole, inclusive of economic and social dimensions. Therefore, technical and vocational education and training (TVET) should include both social and productive skills. The list of different skills and knowledge areas needed is endless, but the point that highly skilled personnel are needed in the foundations of a developed society today cannot be missed. In our complex society the process of development involves all people, and all must be skilled and educated for this process.

The role of urbanisation

Urbanisation is largely a phenomenon of the 20th century. Large urban conglomerations have developed all over the world and their future exponential expansion threatens the quality of life on earth. The urban lifestyle is a matter of grave concern in terms of supplies, sewage and garbage disposal, energetics, transport and environmental quality. Cities have not only been drawing the human population by migration from rural areas, but have also been sucking the precious life-supporting resources of the earth disproportionately to the land area they occupy. For example, cities occupy 2% of the earth's surface but consume 75% of its resources. The 21st century, by extrapolation, will see total urban breakdown unless all cities are planned and managed with ecological sensitivities along underlying principles of sustainability.

TVET has contributed to the development of urban civilisation and must now reorient itself to make our cities better habitat. Providing a comfortable life of better quality in rural areas is one possible solution, but it demands developing appropriate skills in all people.

Urbanisation and humanity's desire to exploit nature for its needs and comforts is also the cause of high consumption of resources. We have not yet woken up to the problems arising out of excessive consumption of resources and to the need for reversing the past developmental paradigm for greater sustainability. Once a new developmental paradigm is defined, it would become imperative to review our priorities and to make skills development comprehensive as well as visible, through a pervasiveness in our education and training systems.

Skills for sustainable development in rural areas

Sustainable development essentially means establishing a pattern of development which conserves the natural resources of the earth for unlimited use by future generations, preventing environmental degradation and, to the extent possible, finding alternative sources of energy and materials.

Human activities today are consuming precious natural resources and degrading the environment on a scale never seen before. The very life support system on earth has been endangered. Rapidly increasing populations in many of the developing countries, and the western pattern of development they are emulating, have much to do with this

devastating trend. There are manifold manifestations of this problem, such as global climatic imbalances, depletion of biodiversity and forest cover, food and water shortages, and health-related problems to name a few.

It is not enough to understand the problem and apply long-term correctives. There are immediate implications on skills development, particularly in rural areas of developing countries. Training is needed now to address the issues of renewable energy generation, management of water both for healthful living and farming, sustainable agriculture, etc. For both economic and social development, immediate skills development is needed on a very large scale. What is required of the delivery method for such education and training is a vastly expanded system consisting of both formal and open learning, which would have to resort to distance learning modalities.

The age of information technology

We are living in the exciting age of information technology (IT) which marks the post-agrarian and industrial phase of our civilisation. Even in existing agrarian economies of today, IT is being used increasingly, and there is an overwhelming desire to “jump on the IT bandwagon” to compete with the developed world. This change-over marks the increasing use of information in the production of goods and services as well as in day-to-day living. Information and the ability to process and use it are the keys to global power balance, economic or political. The extending frontiers, expanding capabilities and innovations in the application of information, lead us to an unforeseeable future — friendly or frightening but something to co-exist with. The implications for TVET in this scenario are enormous.

The global marketplace

The growth of IT and related developments in the recent past have turned the world into a global marketplace. Gradually, national and regional economies are transforming into a single global economy. This economic interdependence means that in the future we will swim or sink together.

Globalisation has given birth to intense international competition to expand trade and commerce and a desire on the part of every country to capture as much of the global consumer market as possible. All this demands superior skills of production, distribution and communication as never seen before in the history of the human race. New skills are being demanded today, necessitated by competitive participation in the new economic world order.

Open and distance learning

There has been a concurrent development in the field of education. The contact mode of instruction in the closed education system is no more the sole modality of learning. Open and distance learning (ODL) is well in place throughout the world and is fast gaining social acceptability.

Within the overall educational framework, the acquisition of marketable skills and competence for employability have come to assume a critical role in the technologically changing world. It is no longer enough to have traditionally literate (or illiterate) people earning their living from subsistence farming. What is needed is a large base of skilled

people capable not only of performing at a given time, but also of continually upgrading their capabilities to meet the changing demands of future. In many developing countries the process of development in the last half century has left a majority of illiterate, unskilled and uneducated people outside its fold. Any future development in these countries must aim to build a solid foundation of a technically skilled workforce.

If the developing countries want to enhance their international competitiveness for the well-being of their people, they must address the concern for TVET. The path to economic development and prosperity is through skills training, and ODL as the modality for TVET allows vast numbers of people, hitherto unreached, to take advantage of education and training opportunities.

CONCEPTS OF ODL

According to a World Bank glossary of terms, distance education is defined as “teaching and learning in which learning normally occurs at a different place from teaching.” Further, distance education courses are “structured programmes of instruction for a learner in a different place from a teacher, having learning objectives, one or more teachers, a medium of communication and subject matter.” The distance education system has all the component processes that result in distance education, including learning, teaching, communication design and management.

But that definition leaves out open learning. With its roots in correspondence education, ODL is an evolving concept of recent origin. Its various ramifications and its true meaning should not be searched for in a dictionary. “Open” has to be understood against the backdrop of “closed” or “formal,” and “distance” against the ideas of “contact” or “face to face.” Essentially, ODL does not mean group learning that takes place under the supervision of a teacher in a formal classroom situation. In distance learning the learner and teacher are spatially and temporally separated, and the use of electronic media or educational technology is prevalent. Other characteristics are described in the following sections. (Note that while these are the commonly understood meanings and characteristics of ODL, the actual practice may follow quite diverse patterns depending on the institution. See chapters 6 and 7.)

Flexible place and timetable

Unlike the formal or closed system, which is characterised by a fixed place and timetable of instruction and testing as well as predetermined entry or exit points, ODL embraces self-paced learning and flexibility in entry and exit as well as instruction and testing.

Learner autonomy

ODL provides learner autonomy, which means flexibility in the time and place of learning, as well as in the speed or pacing of learning. Learners may be given a free option of courses within a given specialisation and also embrace choice in terms of technology. Learners may use print or electronic media that may include one or more of computer, TV, video, radio, telephone, e-mail and fax.

Educational technology

Educational technology, so commonly used in both conventional learning and ODL, is of greater interest. If the teacher is physically absent, a substitute must be found for the powerful mode of personal communication — the human words, gesture, eye contact or body language. The choice of media provides an alternative, for better or worse. Many regard today's state-of-the-art technology as very efficient, while others hold that there can be no better substitute for the teacher. (See chapter 9.)

ODL institutions

ODL may be available through an organisation exclusively created for the purpose, such as an open university or open school, or through a conventional organisation offering both ODL and formal courses. Within each type of organisation, ODL may be offered in a variety of patterns.

ODL FOR INCREASING ACCESS TO TVET

There are many ways in which ODL can impact TVET. While on the one hand it can enhance the participation of young and fresh learners, on the other it opens a totally new frontier for workers aspiring to improve their vertical mobility both academically and professionally. The learning groups that have been brought under sharper focus through ODL are diverse, and without ODL they would have been otherwise disadvantaged. (See chapter 3 for more on this topic.)

Early school leavers

There is an overwhelming number of children who, for a variety of reasons, never enter the school system or who drop out during the elementary cycle of education. To them the school curriculum is too theoretical or does not prepare them for life. These children generally enter the world of work ill-equipped and can earn only meagre wages. But if instead, along with theoretical instruction, practical marketable skills were taught to them, they might continue their studies in the hope of a better life.

Child labour

Child labour in non-hazardous work situations is legally permissible in many developing countries or exists as an illegal reality because of poverty or other social needs. The malaise is often so deeply rooted that teaching of skills becomes inevitable. If these skills were taught, certified and accredited properly through a well-designed ODL programme, it would prove greatly beneficial to these children.

Difficult and remote locations

Small or large clusters of habitations which formal schools often do not reach pose a challenge to the educational process. The facilities are poor, teachers absent and the skills of the modern world scarce. ODL techniques would be the most suited for learners in such places where TVET can reach most of these children who are socially and economically deprived. ODL would also benefit those children who find the school timing inconvenient and who would like to exercise some freedom and autonomy.

With ODL they can study at their own pace and complete a programme stretching the usual time boundary.

Girls and women

Girls and women are generally characterised by poor participation in TVET, and changing that often proves to be a challenge. Girls and women make up nearly half the population, and a majority of them stay home where there is enormous scope for their profound social roles and economic productivity. Such a vast human resource can more efficiently be tapped through ODL, with the result, in some countries, of girls and women being the prime movers of development by virtue of their improved insight into social and economic aspects. ODL-TVET has the greatest potential in this respect.

Employed workers

ODL is of much advantage to employed workers who wish to enhance their educational or professional equipment, but who are not in a position to attend school full-time within the given rigid framework. It suits such students because they can enrol part-time and complete the requirements in a more flexible situation. They can also work on part of a given programme on a course-to-course basis for which they may not attend classes. They can learn while working without any loss of time.

Other learners

Besides those learners described above, other groups can benefit from ODL. ODL can be a better modality of skills development for people with disabilities, migrants or anyone who needs to study at an individual pace.

NATIONAL POLICIES AND ODL

Almost all countries have laid down policy postulates concerning ODL articulated in one form or another. There are certain common features in all of them which relate to one or more of these issues:

- Financing
- Regional and socio-economic disparities
- Provision by private or public providers
- Separate institutional framework versus integrated educational system
- Certification and accreditation
- Promoting and providing technologies for ODL
- Co-ordination between media and educational sectors

The following sections provide a general presentation of some of these policy parameters which may have bearing on ODL.

Financing

The political commitment to and national policy on ODL must be reflected through liberal financing. The basic question in financing relates to the competition between

traditional learning and ODL on the one hand, and general education versus TVET on the other. ODL is still a new idea in the educational arena and many national governments would like to be convinced of the pay-off that might accrue in the long- and short-term.

The traditional school and university systems are much too well anchored with often strong lobbies that would resist any reduction in their share of available resources. The same thing is true for general education as opposed to TVET. These aspects impact the support behind TVET through ODL, particularly in developing countries. However, in view of the growing international significance of both ODL and TVET, and because internationalisation of ODL is an inevitable trend and almost all developing countries would like to achieve national development at a rapid pace, the scale tends to tilt towards ODL. The international donor agencies and promoters of educational development continue to enhance significantly the national policy support to ODL.

Private and public delivery

In most developing countries ODL is seen as being of special benefit to the “left out” and deprived learners. As these groups are unable to meet the high cost of private institutions, the national governments take upon themselves the role of TVET provider. Yet the demand in certain trades is so overwhelming that private providers readily jump into the fray with the desire to “make hay while the sun shines.” These providers are often regulated by the state and sometimes by international institutions, which gives their graduates an opening into the international job market.

Certification and accreditation

Very often the private TVET institutions delivering their programmes have their own system of student certification. At the same time the countries put in place their own public system of recognition and accreditation. However, the public system is characterised by some mode of centralised evaluation and certification. Their degrees are automatically accredited for jobs in both private and public sectors. From the point of view of quality, the private providers generally perform better and have a higher rating. The policy question, therefore, is how to maintain the comparability of quality and how to have a system of certification and accreditation that is internationally acceptable. (See chapter 10.)

ODL technologies and media

ODL cannot be provided without resorting to advanced and appropriate technologies. Co-ordination has to be established between more traditional media sectors like TV and radio on the one hand, and newer information and communication technologies (ICTs), such as e-mail, telephone and fax, on the other. Because ODL is inter-sectoral in nature, national policy support is inevitable and impacts teaching/learning through the ODL system.

Workplace collaboration

TVET through ODL requires more than instructors at a distance. For certain components of the programme, learner support has to be through physical contact, either in classrooms at a distance or on workplace sites of production of goods or services.

This requirement, also being inter-sectoral, has to be achieved through policy directives laid down either nationally or locally.

Legislative issues

National policies, being the statement of intent, often have to be enacted in the form of legislation. This is the exclusive domain of the government.

CONCLUSION

Over the past 25 years or so, ODL has been driven mostly by learners' needs and the diversification of media used in instruction. Many of the educational technologies, such as e-mail, fax, video and audio-video conferencing, have arrived on the scene during this period. The same period has also witnessed the phenomenon of mass participation of diverse groups in the educational process. The diversifying clientele has brought the educational planners to defining and formulating a variety of curricula to meet its needs. The accent on TVET delivered through ODL, as opposed to the conventional programmes in the formal education system, has emerged as a direct consequence.

A new paradigm of sustainable development where the natural resources are judiciously consumed; energy, water and productivity of the land conserved; and the overall ecology respected is seen to change the content of TVET in both developed and developing countries in the future. The other notable changes in the field of information technology as well as globalisation of economy have had a great impact on TVET. The international and national policy support for TVET through ODL has been forthcoming in ample measure, and the future expansion as well as qualitative changes in this area are going to be further demand-driven.