EDUCATION, SUSTAINABLE DEVELOPMENT AND THE HUMAN RIGHTS APPROACH

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INTRODUCTION

I am privileged to be invited to deliver a lecture on this important theme as a part of the ‘NAAC Decennial Year Lecture Series’, which aims at generating public awareness to initiate new thinking on various dimensions of quality higher education. The theme is well chosen. It is of prime importance in this century, which is to be the century of knowledge. The first half of the last century witnessed two world wars and the end of the second the holocaust at Hiroshima and Nagasaki fuelled by misuse of the advanced knowledge of nuclear fission. Later half of the last century witnessed a change in the nature of armed conflict, but with tremendous increase in the casualty of non-combatants over those of the combatants. At the same time, the efforts of the United Nations and its agencies coupled with the general aim of achieving world peace and respect for human dignity for all set the trend for a more civilized behaviour of the international community. The realization of the urgent need to save the planet from further indiscriminate pilferage of the

depleting natural resources brought in the effort commencing with the Stockholm Conference in 1972 for sustainable development. The interface between quality higher education and its profitable use to achieve the target of sustainable development requires to be appreciated and emphasized. It is necessary to develop partnerships between the institutions concerned involving participation of the community. I do hope this lecture series would help spread that awareness.

The width and amplitude of the theme of this lecture is not easy to comprehend. It is, therefore, my effort to cover the broad contours of the theme within the time and space available for the lecture. The first task is to spell out the meaning of the expressions ‘Higher Education’ and ‘Sustainable Development’; and then I shall try to indicate the connection between them and the modality of governance needed to achieve the goal.

**HIGHER EDUCATION——MEANING AND PURPOSE**

It is important to remember that ‘education’ includes ‘literacy’, but it is not confined to literacy alone. It comprehends much more: It is the acquiring of knowledge or learning, together with the equipment, which provides the skill and the inclination for making profitable use of that knowledge. Since the acquiring of knowledge and improvement of the skill for its application are parts of a dynamic process, education is a lifelong exercise. Higher education is, therefore, never complete in a continuously evolving dynamic personality. If the process becomes static, it leads to stagnation, which must be avoided.

Sir Asutosh Mookerjee had aptly described the meaning and purpose of higher education in his Convocation Address (1922) at the Calcutta University. He said:

“To my mind the University is a great store house of learning, a great bureau of standards, a great workshop of knowledge, a great laboratory for the training as well of men of thought as of men of action. The University is thus the instrument of the
State for the conservation of knowledge, for the
discovery of knowledge, for the distribution of
knowledge, and above all, for the creation of
knowledge-makers.”

Sir Asutosh was far ahead of his time and his vision is, indeed, striking when compared with the modern thought and perception of higher education.

Speaking of the purpose of higher education recently, a learned author said:

“As society becomes more and more complex, the institutions are pressed to assume social obligations - to train for employment, to solve social problems, to help set ethical directions for society. The purposes of higher education are several fold. They are concerned with student growth and development, the discovery and refinement of knowledge, and social impacts on the community. But all the programmes should be oriented to a central purpose.”

[Aglo D. Henderson & Jean Glidden Henderson in ‘Higher Education in America’]

The report of the International Symposium and Round Table, UNESCO, 1990 on ‘Learning to care: Education for the Twenty-first Century’ emphasized some aspects for a desirable education system and stated the problem as one of participation in creating a more equitable, fairer and liveable world in the twenty-first century. This will be addressed only when we become more caring. The report stressed upon the need to pay attention to many aspects of caring:

“Caring for oneself, including one’s health; Caring for one’s family, friends and peers; Caring for other people; Caring for the social, economic and ecological
welfare of one’s society and nation; Caring for human rights; Caring for other species; Caring for the livability of the earth; Caring for truth, knowledge and learning.”

The linkage between quality higher education and sustainable development is spelt out clearly in this statement.

The purpose of higher education is to achieve this result. With the evolution of society, some of the earlier concepts as to the purpose of education have also changed. Pristine theoretical knowledge, when applied to practical problems of existence, becomes technology. As technology, it inevitably enters the area of economics. When knowledge is subjected to economic forces, it necessarily becomes subject to political forces. Today, education must fulfil the realization of the needs and ideals of the society. Government must transform itself into an agency of society from its role as an instrument of power. These ideals, thus, become the aims of higher education.

SUSTAINABLE DEVELOPMENT—MEANING

The meaning and purpose of ‘sustainable development’ also require some elaboration. The Stockholm Conference in 1972 had the effect of initiating worldwide participation and partnership in creating the needed awareness to preserve the environment from further damage. The Declaration stated:

“To defend and improve the human environment for present and future generations has become an imperative goal for mankind, a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of worldwide economic and social development”

India, by amendment of its Constitution, soon thereafter inserted the directive principle of state policy in article 48A requiring the State to protect and to improve the environment and to safeguard the forests and
wildlife of the country. Simultaneously, article 51A was inserted to enumerate the fundamental duties of every citizen, in which clause (g) imposed a corresponding duty on the citizen.

The Rio Earth Summit in 1992 carried forward the programme and emphasized the need for sustainable development to ensure human life with dignity in harmony with the nature. The need of a joint venture transcending national borders was realized. The Vienna Declaration in 1993 reaffirmed this faith. The post 1992 linkage of faith traditions and human rights to the issue of environment is an extension of the Indian culture reflected in the cult of Bishnois of Rajasthan and the Chipko movement in Uttaranchal. Agenda 21 and the WSSD (2002) at Johannesburg were in continuation.

Agenda 21 was a blueprint for sustainable development, which focused on a long-term common vision for growth, equity, and conservation.

In his address to the WSSD, Kofi Annan said:

“But we also need to know better how and where to act—meaning that research and development are especially important, particularly studies that focus more on the diseases of the poor, which have historically been neglected.

Water, energy, health, agriculture, and biodiversity—five areas that make up an ambitious but achievable agenda.....Five areas that can be remembered by a simple acronym: WEHAB. You might think of it like this: we inhabit the earth. And we must rehabilitate our one and only planet......The issue is not environment versus development, or ecology versus economy. Contrary to popular belief, we can integrate the two. Nor is the issue one of rich versus poor. Both have a clear interest in protecting the
environment and promoting sustainable development. But the most creative agents of change may well be partnerships—among governments, private businesses, nonprofit organizations, scholars, and concerned citizens. Together, we will have to find our way toward a greater sense of mutual responsibility.’

The link between quality higher education and sustainable development is self-evident, as also the urgency of forging partnerships between the agencies dealing with them.

In the Fifth Greenlaw Lecture on ‘Clean Environment: A Human Rights Imperative’ (2002), I had described the dangerous trend of indiscriminate human assault on ecology and environment as ‘eco-terrorism’, and said:

“...the dangerous potential of eco-terrorism, which is a silent killer not only of the living but also of the unborn and poses grave danger to the health and well being of generations to come, is not yet fully realized by the world community. Humanity has been facing the danger of eco-terrorism for long but its destructive potential accentuated by the population explosion is not yet fully appreciated. Degradation of environment and degeneration of eco-system under the garb of economic development benumbs the sensitivity towards the imminent danger”,

and,

“The term eco-terrorism used by me is, therefore, to describe the phenomenon of violence to the ecology and environment, which disturbs the harmony and balance between the two worlds of man, namely, the nature’s gift and the manmade, and endangers life. Any action which does not conform to the principle
of sustainable development and which does not respect the inter-generational equity and betrays the trust of preservation of the natural resources permitting only its judicious use, is eco-terrorism”.

Sustainable development requires a holistic view being taken of all interests.

The basic tenet of sustainable development is the need to integrate social, environmental, and economic concerns so as to arrive at development paths which meet the needs of present generations, without compromising the ability of future generations to meet their own needs. This is known as the doctrine of inter-generational equity.

At the Millennium Summit of World Leaders, 2000 of 189 countries, they made the declaration of “their collective responsibility to uphold the principles of human dignity, equality and equity at the global level”, and held out the promise to achieve by 2015 A.D.: eradication of poverty and hunger; universal primary education; gender equality and empowerment of women; reduction of child mortality; improvement of maternal health; combating of HIV/AIDS, malaria and other critical diseases; environmental sustainability; and forging of global partnerships for development.

The World Summit on Sustainable Development (WSSD), 2002 has shown that the international scene is difficult. Sustainable Development also brings in the component of environmental protection. There is a genuine feeling that beyond the rhetoric of poverty alleviation, few governments and business seem willing to commit to social and environmental goals. The need for national effort is, therefore, greater. The role of partnerships envisaged in WSSD increases. The absence of participation of USA and of India at the highest level in the WSSD has increased the doubt in its efficacy. As a step following the Millennium Declaration of world leaders, the expectation from the WSSD was far greater.
The only significant international experience in recent years has been in the area of production and pricing of drugs to treat HIV/AIDS. The mounting world opinion of the urgent need to provide drugs at affordable prices to combat the spread of HIV/AIDS in and from developing countries, forced the international pharmaceutical industry to commit to concessions on supplying its drugs at lower prices and allowing local production of similar drugs. A lot remains to be achieved even in that direction.

It was reasonable to expect that the result achieved at the WSSD after the Declaration made by the World Leaders of their Millennium Development Goals (MDG), would be impressive. The disappointment of many after the WSSD is for this reason. The UN Secretary General, Kofi Annan has rightly asserted that the Declaration would remain a mere rhetoric unless translated into action.

INTERFACE OF EDUCATION WITH SUSTAINABLE DEVELOPMENT

Education being a basic component of human development, its interface with sustainable development is well established. Education is perhaps the single most important means for empowerment and for a sustained improvement in well-being. Improvements in educational attainments are accompanied by improvement in health and longevity of the population and the country’s economic growth. Education reinforces the socio-economic dynamics of society towards equality and promotes a social order conducive to an egalitarian ethos. The principle of equality or non-discrimination is the foundation of international human rights law. Discrimination results from deep-rooted attitudes of population and it is for governments and it is for governments to take the lead to induce the change in attitudes through education. In short, education is the best social investment. This is the significance of quality higher education.

India’s record in education development is a mixed bag of success and failures. Despite the directive principle of state policy for free and compulsory education to every child up to the age of 14 years in article
45 (now a fundamental right in article 21A), nearly one-third of the population remains illiterate, most of whom are young. There remain critical gaps in the availability of infrastructural facilities and qualitative equipment and personnel in the education system. On the other hand, the national literacy percentage has increased from 18.3 in 1951 to 65.2 as per Census 2001. The regional imbalance is evident from the fact that literacy is nearly cent per cent in Kerala, but only half or 50 per cent in Bihar. The literacy rate for scheduled castes and scheduled tribes is much lower, and that for women even lower.

How can there be full development, much less sustainable development if more than half the population comprising women, children and the other marginalized sections remain illiterate and thus unempowered? The Constitutional provisions guaranteeing equality of status and opportunity together with those for affirmative action furnish the tool to correct the imbalance, provided they are used effectively. Mere reservation quotas have failed to provide the solution. This is the experience of over fifty years. This relates to the sphere of good governance.

The twenty-first century is the century of knowledge. It is the task of the knowledge makers to evolve new technologies and to make them work for human development. New technologies backed by proper public policies will lead to healthier lives, greater social freedoms, increased knowledge and greater productivity. Distributive justice would become an achievable goal. Technology networks are expanding people’s horizons and creating potential to achieve quicker progress. The MDG are attainable because of the progress made so far.

Scientific or technological innovation has relevance and value to our people if it provides effective, affordable and sustainable solutions to the problems of underdevelopment, poverty, illiteracy, hunger and safe drinking water. Amartya Sen describes them as the great ‘unfreedoms’; and his thesis on ‘Development as Freedom’ is based on that premise. Even though every year three lac professionals, four lac post-graduates, and more than one thousand doctorates are added to the country’s reservoir
of human resources, yet the ‘unfreedoms’, which are vestiges of poverty continue to hold us in bondage.

Sustainable development is a basic human right. Unless this target is reached with the potent tool of education, the purpose of higher education would remain unfulfilled. The link between the two must be forged into an inseparable bond to empower the people.

In his recent Convocation address at the Sambalpur University, the President of India, APJ Abdul Kalam stressed the need for wealth generation through biodiversity as India ranked among the top few nations having a rich biodiversity. He said that there was potential for developing multiple herbal products for nutrition, prevention and cure of diseases. India has rich heritage of Ayurvedic knowledge. Similarly, the country has the potential for promoting floriculture and aquaculture. However, the commercial activity of shrimp cultivation in the coastal region, carried on in spite of Supreme Court’s intervention, is posing a grave hazard to aquaculture and marine life.

The Internet is reducing physical distances, increasing opportunities and enlarging participation worldwide. Information technology has vastly improved the knowledge bank with greater opportunity for sharing knowledge for larger common good. However, the attendant risks of technology must be guarded. The Bhopal gas disaster is one example of such risk, along with the Chernobyl nuclear disaster and the depleting Ozone layer. These dangers result from poor policies, inadequate regulation and mismanagement. Technology without the input of humanism has a dehumanizing effect.

When the students are at the undergraduate level, they have strong idealistic impulses and the urge to improve the world with the energy to take action. Hence, this is an appropriate stage to utilize channellize youthful energies in the right direction. At the higher education level, practical experience needs to be combined with academic inputs. The University Grants Commission (UGC) has made several recommendations
for the Universities to act upon. The UGC in the Ninth Plan (1996), had emphasized:

“Value education should be given emphasis… Transformation in human behaviour is required which can be achieved if value education increases sensitivity to society through foundation courses to create the right set of values for human and environmental interaction. To raise the student’s level of consciousness, it is necessary to develop basic multi-disciplinary courses… which, within the overall framework of sustainable development and the societal indicators for raising the quality of life and human development, discuss the issues of human rights, and the rights of the vulnerable gender and age groups (women and children). These should be linked to our Constitutional goals of distributive justice and equity in a pluralistic, secular society. The progress of science should be seen in the context of issues as also the contributions of the humanities and social sciences in promoting human development and social change for striving towards social goals”

The Recommendations made in 1999 by the committee, which I headed to operationalise the suggestions to teach the Fundamental Duties in article 51A of the Constitution of India, have been acted upon by the UGC to recommend incorporation of fundamental duties in the higher and professional education. The National Commission To Review The Working of The Constitution has also made such a recommendation. In this context, particular emphasis is needed on clauses (e),(g),(h) and (j) of article 51A to interlink education with sustainable development. Significantly, clause (h) eschews one of the seven sins identified by Mahatma Gandhi, namely, ‘Science without humanity’.
The relevant part of article 51A is, as under:

51A. Fundamental Duties.—It shall be the duty of every citizen of India—
(a) to abide by the Constitution......
(b) .......
(c) .......
(d) .......
(e) to promote harmony and common brotherhood......; to renounce practices derogatory to the dignity of women;
(f) .........
(g) to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures;
(h) to develop the scientific temper, humanism and the spirit of inquiry and reform;
(i) .........
(j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement.

The lesson that rights and duties are correlative should form a part of education. Science without spirituality has a dehumanizing effect, which needs to be prevented by providing education also in the duties. Such was the belief of Swami Vivekananda, who said in the year 1893 at Chicago that:

“With the development of science and Technology, if the humanity is to survive, humanity has to get the benefit of science and technology, and there should be a synthesis of science and spirituality”.
LINKAGE BETWEEN HUMAN RIGHTS, DEVELOPMENT AND GOVERNANCE

The recent Human Development Reports contain significant studies.

The UNDP Report, 2000 emphasized the linkage between human rights, human development and inclusive democracy. Inclusive democracy means that in which every section of the community participates in governance. Human rights are indispensable to achieve human development since both share a common vision and serve a common purpose. The emphasis is, therefore, on a human rights-based approach to development and poverty eradication on the global agenda. The Seven Freedoms to be achieved for full development are: freedom from discrimination; freedom from want; freedom to develop the full potential; freedom from fear; freedom from injustice; freedom of thought and speech, and to participate in decision-making, and to form associations; and freedom for decent work without exploitation.

The 2001 Report aims at making new technologies work for human development. It contains a manifesto for forging a new partnership between technology and development referring to the internet and biotechnology advances with new generation of pharmaceuticals. These are the challenges of the new millennium. The Report of the World Commission on Dams (WCD) recommends rights-based approach for development and mega projects, instead of the earlier ‘cost-benefit’ approach. It also emphasizes that those affected by the development project must also share in the benefit derived therefrom. This is the requirement of sustainable development.

The 2002 Report deals with the role of Democracy in Human Development, and is titled ‘Deepening democracy in a fragmented World’. Empowerment of the poor people through Humane Governance is the main theme of this and the other human development reports, which followed.
It has been shown that politics is as important to successful development as economics; sustained poverty reduction requires equitable growth i.e. empowerment of people by democratic governance at all levels. This requires strengthening of institutions and developing complementarities between them to serve the common purpose. An example of the efficacy of this method is found in the greater degree of protection of human rights achieved in our country by the complementarity between the Supreme Court of India and the National Human Rights Commission. I can vouch for the correctness of this impression from personal experience having initiated the process in the Supreme Court and then having followed it in the NHRC. I hope it is still continuing for national good.

The empowerment of the people will enable them to effectively discharge their participatory role in governance, which is a *sine qua non* of a representative form of government in a republican democracy. Right to information is necessary for openness and transparency. A distinguished American Judge, Louis Brandies said: ‘Sunlight is the best disinfectant and electricity the best policeman’. In the Constitution of India, the ‘right to information’ or the ‘right to know’ is implicit in the guarantee of freedom of speech in article 19(1)(a). It can merely be regulated by legislation enacted under article 19(2). It is, therefore, erroneous to assume that a parliamentary legislation is needed to confer that right. Any legislation to cover this field must be interpreted in its correct perspective.

Democracies are better in meeting the social needs of the people. Amartya Sen has shown in his studies that famines are unknown in democracies because the political forces are more effective. The difference between India and China is cited as an example. If there are starvation deaths in India, it is not because of deficit in food, but because of misgovernance and misadministration. Crisis in governance is attributed to several causes, of which corruption is the major factor. Democratic participation is a critical end of human development and not just a means of achieving it. Current trends show that large parts of the world are unable to achieve the target of halving poverty by the year 2015 because of absence of the needed inclusive democracy.
It is clear that there is no automatic link between economic growth and human development, but when links are forged with policy and determination, they can be mutually reinforcing. The need is to utilize the power of globalization to bring economic and social benefits to societies and to reduce global inequities. For full augmentation of human resources, it is necessary that empowerment of women and the marginalized sections be kept in focus. They constitute the major component of human resources. Mahbub ul Haq wrote gender into the human development indicator, and warned that ‘human development unless engendered is fatally endangered’. The concept of humane governance, which is critical to Sustainable Development, is the core issue.

A serious problem for India to address is the Brain Drain. The causes are many. A large number of highly educated persons migrate abroad to greener pastures even though the home country has invested heavily on them. The causes include lack of adequate opportunities to them at home due to nepotism, favouritism, and corruption. The avoidable causes must be eradicated. The success achieved by NRIs abroad should influence the policy makers and administrators to fashion domestic policies suitably and to implement them fairly to avoid frustration to the youth. Domestic policies that encourage innovation, and provide adequate opportunities to the skilled for development are necessary.

Public spending on education by governments in India amounts to about 3.6% of the GDP of which that on higher education is 0.6%, that is, approximately USD 2.7 billion in one year. Nearly 100,000 professionals leave India each year, which brings the resource loss to approx. USD 2 billion a year. This is a serious matter requiring urgent curative measures.

During his recent visit to India, the US Secretary of State, Colin Powell sharing his perceptions about the growing US-India relations, spoke about ‘outsourcing’, which is a natural corollary of globalization and the rise of internet communications. He said that ‘outsourcing’ cannot be eliminated in the present world; and it becomes a political issue because unemployment is a political issue. He added that an open market is a
related issue and not a *quid pro quo* to ‘outsourcing’, so that anyone who can do a better job should have the job outsourced to his country. It is a two way street and the greater benefit accrues to the better equipped.

It is the quality of the policy and its faithful implementation, which will ultimately determine whether or not new technologies become a tool for human development.

Economic growth, unless backed by proper policies, does not necessarily lead to development. Human development is about creating an environment conducive to development of the full potential of every individual, and about expanding the choices people have to lead their lives. Empowerment augments human resources. A paradigm shift in the attitude to ‘count on them’ instead of only ‘counting them’ is necessary. The basics of human development are to lead long and healthy lives, to be knowledgeable, to have access to resources needed for a life with dignity. In India, the guarantee of a life with dignity is in article 21, the rhetoric of which must be translated into reality. This is the higher purpose of higher education in India.

Thus, effective governance is central to sustainable development. Institutions and power should be structured to give voice and space to the poor and to make the power centres accountable: at the national level, by strengthening the democratic institutions; and at the global level, by giving developing nations a voice in decision making. To achieve this result through empowerment of people, education is the most potent tool.

**CONCLUSION**

Effective governance calls for proper policies and their faithful implementation. The directive principles of state policy in Part IV of the Constitution of India are principles fundamental to governance. We do not need to look elsewhere for our objective. The guarantee of fundamental rights, the philosophy of principles fundamental in governance, and the emphasis on observance of fundamental duties by every citizen, if realized,
are the assurance for sustainable development serving the purpose of quality higher education. All the policies need to be so oriented, and all institutions need to convert themselves from instruments of power to agencies of the society.

The professed aim of all our national governments has been substantially the same as envisaged in the Constitution. However, a lot remains to be achieved in practice. The success so far has been sporadic depending on the degree of commitment to the professed aim at the given time. The six basic principles of governance announced by the latest incumbent national government on assumption of office are laudable, but the result will depend on the faithful implementation of the agenda and commitment to the cause. It is worth recalling these six basic principles, which are: to preserve, protect and promote social harmony and to enforce the law without fear or favour; to ensure that the economy grows at least 7-8% per year in a sustained manner; to enhance the welfare and well-being of farmers, farm labour and workers; to fully empower women politically, educationally, economically and legally; to provide full equality of opportunity to the weaker sections; and to unleash the creative energies of our entrepreneurs, businessmen, scientists, engineers and all other professionals and productive forces of society. There is also a solemn pledge to provide a government that is corruption-free, transparent and accountable. If only this promise is kept, we would achieve the Utopia.

How far the target is reached, time alone will show. Eternal vigilance of the people by the discharge of their participatory role in governance in a republican democracy to complete performance is the solution. This is the predominant fundamental duty of every citizen. The real purpose of education is to empower every citizen for the performance of this role, and to educate him in the spirit of the Constitution. The conscience of the Constitution can be preserved only by the empowered—We the People of India. That is the vital component of higher education linked to the crying need of sustainable development.
The agenda of the United Nations Environment Programme (UNEP) is to give a human face to environmental issues; to empower people to become active agents of sustainable and equitable development; to promote an understanding that communities are pivotal in changing attitudes towards environmental issues; and to advocate partnerships which will ensure that all nations and peoples enjoy a safer and prosperous future.

Let me end with the fervent hope that all institutions involved in this process are fully committed to the cause, and would work zealously in the direction of realizing our Vision 2020 of making India a fully developed nation.
1.0 INTRODUCTION

1.1 TOWARDS A COMPREHENSIVE DEFINITION OF HIGHER EDUCATION

Education is not a mere process to comprehend the highest levels of knowledge attained by humanity at a given point of time but a continuous activity that creates new knowledge to sustain life across temporal and spatial barriers. Therefore, from having been a static inquiry into the high points of classical civilizations and their concepts it has become a dynamic movement in shaping life in the present for the future on this planet. It has not, however, ceased to be a process: it is an ever refined and progressively sharpened tool of academic inquiry tempered by the rigour and objectivity of science. It is this twin-role of education as processor of knowledge
and _programmer_ of life that has widened its functions. We speak of education for utility (hence a wide range of applications of knowledge); education for living (hence employability and global employment); education for social change (hence global and national equity issues); education for economic sustainability in the future through controlled growth in the present (hence promotion of sustainable development); and education for playing a more responsible role as global citizens (hence awareness creation and propagation of ‘green economy’). This does not mean that education is milieu-free. It nurtures regional, cultural and ethnic identities in order to make their contribution to corporate living creative and integrative. If such an understanding of higher education is valid today, as there seems to be every reason to believe so, then it rests upon the tripartite foundation of quality (a referable standard of excellence), an ethic that is global minded; and a cultural identity that is not closed.

1.2 **EVOLUTION OF HIGHER EDUCATION**

Such an understanding of the nature, role and function of higher education underlies its evolution through time. The earliest known systems of education in Asia and Europe were esoteric and exclusive. Access was restricted to the privileged few. They were continued through the renaissance between the fourteenth and sixteenth centuries. Renaissance education was unifocussed (knowledge was pursued for its own sake) and process-driven. It was offered under the rubric ‘liberal education’ which was averse to utility. Knowledge for a job was anathema. The oxbridge systems favoured such a system.

There was a shift towards utility during the Industrial Revolution of Europe and America in the eighteenth and nineteenth centuries. Invention of new technology resulted in new methods of education through artisan-centred schools of technical training and expansion of technical knowledge for newer innovations. The birth of classical economics followed soon. Colonialism favoured industrialisation and promotion of technical education.
Seeds were sown by thinkers and writers to humanize thinking, and consequently, education. The French Revolution was instrumental in the inculcation of the values of human dignity, freedom, equity and justice in the minds of youth. The Reformation further enhanced these values and generated modern systems of education based on free inquiry into knowledge and truth. Morality and discipline were considered desirable for holistic development. More liberal civilisations sought to achieve it by other means. Thus massification and humanisation of education became both desirable and inevitable.

Science and technology has shrunk the world and brought its inhabitants closer by networking their universal concerns. Social and political homogeneities (the UN playing a vital role in the latter) have emerged amidst cultural diversity. From its classical truncatedness education has emerged to embrace the ever expanding common global concerns by necessity rather than by choice though. Population education, environmental economics and sustained development, war and peace education, studies in international relations, the science of management in the global context and global quality concerns are just a few examples of such a transformation of education.

1.3 EVOLUTION OF INDIAN HIGHER EDUCATION

Indian higher education evolved along similar lines. The ancient education offered through gurukulas (mentor-centred schools) was religious and esoteric and it was exclusively offered to the privileged classes of society. With the expansion and institutionalisation of higher education in universities such as Nalanda and Taxila, specialised knowledge, primarily religious knowledge, was pursued by Buddhist monks. Similar sanskrit schools, and later madrasas, muslim schools, were devoted to vedic and muslim religious education respectively. Later oriental education in language, astronomy, performing arts and mathematics was imparted. As during the time of the renaissance, pursuit of knowledge was academic.
Western education was introduced with Macaulay’s minute with the adverted purpose of developing an educated class of people to interpret Indian thought to the West. In reality, however, they served the East India Company through its civil services. English education, however, had the salient impact on Indian society of evoking sensitivity to self-dignity, selfhood as a nation, renewal of Hindu concepts and practices (otherwise termed by historians as ‘the Hindu Renaissance’) and peaceful evolution of modern India with the help of informed leadership.

During the post-Independence period the Western curricula could not remain isolated from the challenge of nation building. While technical and professional institutions were being developed, the curricula in colleges of arts and science responded to the varying emphases made by the Five Year Plans. First, physical sciences were introduced into the hitherto humanities curriculum, with economics and other social sciences following soon. The nation’s involvement in global communities for trade and commerce led to the inclusion of commerce and management. With the development of computer science and information technology globalisation of education has reached a new height. The time is not far off to find our nation speedily becoming the computer workshop of the world, in the sense UK was the ‘shop-keeper of the world’ during colonial times.

1.4 CHALLENGES UNDERLYING GLOBAL EDUCATION

Paradoxes underlying the development of global education may be seen as challenges, the successful meeting of which can make the outcome fruitful. Some of these are: (a) knowledge versus utility, the prolonged academic debate lined up on an either / or choice rather than on optimal balance that does not sacrifice quality; (b) elitism versus equity, which raises the issue of accessibility and merit; (c) knowledge issuing in progress and development versus ethics, which lies at the root of sustainable development; (d) formal systems versus curricular flexibility; and others. There are no ready made answers to these challenges but answers must be obtained with hard
thinking. By privileging one arm of each of these dichotomies, and
deprivileging the other, we fall back on models of education with
which developed nations may be comfortable but less developed or
developing nations are not. By privileging knowledge, elitism and
formal systems and deprivilging their counterparts, for instance,
developing nations will be forced to keep a considerable majority of
youth out of educational opportunity. To that extent education will
be unsustainable, i.e., even first generation learners will be non-
starters. Freer and more flexible models may be devised which
satisfy equity - demands while, at the same time, do not compromise
merit, chiefly in the interest of global parity in quality.

1.5 QUALITY IN HIGHER EDUCATION

Quality is often considered to be a standard or norm with which to
compare two similar things in order to assess the worth of the thing
compared. It is a ‘bench-mark’ arrived at after reckoning the best
features of the things compared. If an undergraduate, for instance,
has the abilities to self-manage the advancement of his learning, to
remain at the frontiers of knowledge in his discipline and to present
and defend his ideas before general and specialist audiences, he
bench-marks the standard of undergraduate education which alone
is acceptable for employment anywhere in the world\(^1\). Similar bench-
marks exist for different qualifications.

Quality is context and need-specific. Rural institutions may require
a set of skills which may not be indispensable for urban institutions.
Similarly teaching may be considered more important in an
undergraduate college and research may take precedence over
teaching in a university. Identical bench-marks may not be
compatible for rating performers in context diversity. This does not
mean that the degree of excellence in performance in different
contexts can be different. For instance, a student of agriculture
interested in researching into maize cropping needs a set of skills
and competencies which are not the same in the case of a researcher
in paddy cropping. Nevertheless the degree of efficiency they
manifest in sustaining and improving the quality of the yield as well as the impact of the outcome cannot differ for purposes of standardising performance for judgement. We often tend to associate quality with Western models and to replicate them in other contexts without critically assessing their suitability to diverse contexts. In the name of quality, for instance, we shut out many—perhaps, equally competent, and even better men and women than those who make it to professional and other courses of study—by applying the invariant norm of scores obtained at one final terminal examination. It is not the fault of the bulk of students who are denied admission that they failed to score against odds—absence of infrastructure, competent learning assistance and counselling—it is only the fault of the system which cannot be justifiably held against them. Such odds do not prevail in developed economies where quality may be judged in the way it is done without possibility of error. The point made here is that bench-marking for quality assessment should take into account context-specific handicaps in developing economies. The handicaps themselves must be removed before universalising standards of quality. However, quality shall never be compromised.

Quality in higher education is a holistic concept. Thanks to NAAC for the awakening it has brought about among more than a thousand higher institutions of learning in our country which have reset their goals, diversified curricula and improved methods of teaching and learning after the first round of institutional assessments made. Never perhaps in the history of higher education in the country was there such an extensive revision of curricula, in the best among them, which has resulted in a wide range of core, elective and vocational options now made available to learners. Institutional assessment has worked.

It responds to the need for quality assurance while maintaining values of self-assessment and self-governance in higher education. It is increasingly used by many countries for assessing the
performance of educational agencies. One of the writers of the U.S. testifies to its effectiveness:

Assessment and evaluation are intended as means to demonstrate institutional effectiveness, foster institutional improvement, and demonstrate accountability.

Nevertheless, as said earlier, quality is holistic. While institutional performance, as an aggregate, points to the effectiveness of overall arrangements and preconditions necessary to promote quality - ‘indicators of quality’ — and does, to some extent, assess performance in order to project an institutional profile, the quality of the performance of components is not generally assessed in depth. Of course, it is desirable, however, to assess performance in depth. Programme evaluation by learners and peers, assessment of pedagogy by students and experts and evaluation of programmes by employers and academics for the impact it has made on society are some strategies which can reinforce institutional assessment and make quality assessment multidimensional and holistic. Organisational constraints notwithstanding, these are desirable.

1.6 AIM OF THE PAPER

An attempt is made in this paper to develop a model of sustainable higher education for developing economies within the framework of the definition of higher education given above and on the basis of the quality concerns shared in the previous section, and elsewhere. The current economic model of sustainable economic development (called Sustainable Development - SD) will be taken as the basis of inquiry although the concept itself will be understood as more than economic: it will include social and cultural sustainability as well. The proposition sought to be explored is this: Education, in a developing economy, can contribute to sustainable development, in a global and uniquely national context, only when it has successfully addressed issues of poverty and equity, preparatory to achieving
excellence in the acquisition of knowledge and skills. With this purpose in mind, we may now turn to look at the economic model of sustainable development.

2.0 SUSTAINABLE ECONOMIC DEVELOPMENT

Advancement of knowledge of earth’s atmosphere and space - generally called environment - has questioned the basic foundations of the science of economics in the same way the early development of astronomy rocked the foundations of religion. Consequently, disinterested amoral pursuit of economic development gave way to forced ethical monitoring. Assumptions underlying classical, neoclassical and environmental economics confirm this economic evolution.

2.1 EVOLUTION OF THE CONCEPT OF SUSTAINABLE DEVELOPMENT

Classical economists advocated a ‘stationary state’ economy meaning thereby the sustaining of a minimum level of existence, with population increases and ‘diminishing returns’ automatically neutralising each other. Neoclassical economists, however, extended the meaning of ‘land’ by including productivity inputs (such as labour, capital and technology) and advanced the Growth Theory which paved the way for an exploitation of the non-renewable resources of the earth. In the nineties of the last century environmental scientists disclosed alarming environmental truths which are detrimental to life on earth. The depletion of non-renewable resources (consequent on the operation of the Laws of Thermodynamics), the discharge of industrial waste into the environment causing acid rain, ozone depletion, atmospheric pollution, global warming and a chain of other reactions are some disturbing consequences of rapacious economic activity. Environmental economists called for its moderation and control. The U.N. “Earth Summit”, the Conference on Environment and Development (UNCED), held in June 1992 at Rio de Janeiro came out
with its manifesto called “Agenda 21” or “Rio Declaration” in which the concept of sustainable development was first spelt out. The twenty-seven principles set forth cover economic, social, political, environmental and pacific concerns of human existence as a whole. Some of them are quoted here:

**Environmental Concern:**

**Principle No.1**

“Human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature”.

**Principle No.4**

“In order to achieve sustainable development, environmental protection shall constitute an integral part of the developmental process and cannot be considered in isolation from it”.

**Economic Concern:**

**Principle No. 3**

“The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations”.

**Principle No.6**

“The special situation and needs of developing countries, particularly the least developed and the most environmentally vulnerable, shall be given special priority”.

The social concern underlies the effort to protect and develop women, youth and regional and minority cultures. The pacific concern emphasises absence of war and promotion of peace and development.
2.2 DEFINITION AND MEANINGS OF SUSTAINABILITY

The meaning of sustainability sharply varies according to two sets of economists, the anthropomcentrists (who are concerned with economic development for the human) and the ecocentrist (who are concerned, primarily, with the preservation of the ecosystem). The definitions and classification of sustainability vary accordingly.

2.2.1 Definitions and Meanings

A. Anthropomcentric Definitions:

I. A sustainable state is one in which economic development is sustained through time. This can be done by sustaining utilities (through restraint) and maintaining consumption levels to match them.

II. A sustainable state is one in which resources are so managed now as to maintain production opportunities for the future. Solow advocates maintenance of productive potential over time by building up what he calls the ‘composite capital stock’ which includes labour power; natural capital (non-renewable resources); physical capital (plant, equipment, roads infrastructure, etc.); human capital (learned skills embodied in individuals besides labour power); and intellectual capital (disembodied skills of knowledge and technology). By doing so we shall be bequeathing to our successors, he says, ‘the potential to do as well as we have done’.

B. Ecocentric Definitions:

III. A sustainable state is one in which natural capital stock, such as forests, seas and rivers, is non declining, or is being replenished, to make up for the depletion, through ‘resilience’.
IV. A sustainable state is one in which the yield of resource services (ex. timber and fish) is maintained.

V. A sustainable state is one which satisfies minimum conditions of ecosystem stability and resilience through time. Advocates of this definition, known as ‘Green Economists’ put interests of the ecosystem above human economic development and they extend moral rights to non-human species. They warn that global warming through emissions, reduction in the number of native species, reduction of standing vegetation bio-mass, depletion of micronutrient stocks and disturbance of vital mechanisms such as aquifers for controlling damping oscillations may offset gains of resilience and disturb the self-organisation of natural systems thus jeopardizing human life on earth although the earth cannot be destroyed.

2.3 TYPES OF SUSTAINABILITY

Four types or models of sustainability are offered by Kerry Turner, David Pears and Ian Bateman (1994) (see Appendix I). They are the models of: (1) Very Weak Sustainability (resource-exploitative growth-oriented, anti-green, maximised GNP and yielding unfettered free market rights to contemporary generation); (2) Weak Sustainability (characterised by resource conservation, green economy, modified economic growth and inter-generational equity; (3) Strong Sustainability (which emphasises resource preservation, deep green economy, macroenvironmental integrity and the primary value of ecosystems); and (4) Very Strong Sustainability (which includes preservationist very deep green economy, reduced scale of economy and population and moral rights conferred on all non-human species). It may be noted that the first two are anthropocentric and the last three ecocentric.
2.4 **SUSTAINABILITY OUTSIDE ENVIRONMENTAL ECONOMICS**

The concept of sustainability, and consequently, sustainable development belongs to the social and cultural avenues of life too, not just to economic development alone. In fact, economic development itself is tangentially related to them. We shall consider implications of sustainability in the social and cultural spheres so far as education is concerned.

Sustainability in the social sphere would mean the establishment of an egalitarian community that ensures equal sharing of resources and opportunities for sustained human welfare over a period of time, may be through generations. In fact, such egalitarianism underpins assumptions of environmental economics by raising intergenerational equity issues. Forces that work against social sustainability are social discrimination on the bases of colour, ethnicity, gender, caste and economic disabilities, poverty, and religious fundamentalism. The strongest single weapon which can help the victim defend himself or herself is education. Social discrimination militates against intergenerational equity in the social sphere through deprival of education to a majority of people especially in developing economies. Generations of them were kept under poverty and illiteracy by unjust social systems for long periods of time and they are still without hope. Over one third of the Indian population are under the poverty line. Only 6% of the youth in the age group between 17 and 24 enjoy the benefits of college education and it is one of the lowest figures among countries today. Where there is a hiatus between those who enjoy because of discriminatory social privileges and others who have them not, social sustainability does not exist. Sustainable quality higher education can exist only where learners competitively and equally participate as peers in their academic activity. Many disparities which exist among them in the form of mixed abilities and degrees of disabilities, which are not genetic but social and economic, and several
incompatibilities and imbalances between educational institutions (such as rural and urban; and high quality and mediocre) are attributable to the absence of social egalitarianism which is often ignored as sensitive by the politician and the decision maker. The present system of education, largely modelled on those of the West which are formal and largely inflexible (although they provide for academic flexibility), shuts out a majority of the disadvantaged sections of society by its rigidly time bound schedules, invariant and uncritical assessment instruments, absence of supplementary or complementary alternative arrangements to level competency inequalities. Many such handicaps deter self-management of knowledge acquisition by many. The first generation learner, the drop out, the poor finisher and the unemployable among our graduates exist not because of their deficiencies but because of opportunities denied and absence of alternative arrangements to raise their education to levels of sustainability.

Those who make it still, in spite of these odds, do so by paying heavily for buying costly education in institutions which can provide it not often for altruistic reasons. Or, alternatively, they pay to overseas providers who are not exempt from exploiting the Indian education market. In either case education in our country does not serve equity. Money goes before merit, economics before academics.

The cultural potential to contribute to sustainable development in developing economies is yet to be explored fully. Traditional values and practices have contributed to sustained development over centuries in our own country and elsewhere: eco-friendly bio-farming which has left the non-renewable resources in tact, pollution free water-power mills, indigenous transport that does not emit destructive substance, systems of native medicine, folk-lore and value-based literature, performing arts and fine-arts are a few examples of the sustained development achieved in the past. While it will be both naive and impossible to return to these archetypes of sustained development, it is quite desirable to re-discover the
principles of sustainable development underlying them, for the purpose of incorporating them into existing systems of education. Eco-friendliness, values (both social and cultural), simplicity and community virtues are some of them. Underlying them all runs a strong sense of intergenerational equity and altruism that has sustained life and culture on our land over infinite time.

### 3.0 A MODEL OF SUSTAINABLE HIGHER EDUCATION

The foregoing discussion may be found to lead to the following inferences:

1. Higher education is more than a process as it is the substance of shaping life.
2. Hence education cannot be divorced from the concerns of the milieu.
3. Education should subserve sustainable development in the totality of life in economic, social and cultural spheres.
4. Sustainable development rests upon generational and intergenerational equity and it comprises an altruistic concern for contemporary human resource and natural environment.
5. Sustainable development is context specific and hence it should respond to contemporary global standards in education (in being quality oriented) and to economic, social and cultural needs of developing countries.
### 3.1 AN EDUCATIONAL MODEL FOR SUSTAINABLE DEVELOPMENT

<table>
<thead>
<tr>
<th>Entry</th>
<th>Process/Content</th>
<th>Performance</th>
<th>Funding</th>
<th>Exit &amp; Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egalitarian educational policy: merit not compromised but entry not denied subject to min. level of attainment</td>
<td>Curriculum: based on a paradigm of goals-triangular. Learning: Learner-centred self-management of knowledge acquisition - credit earned (tutorial system)</td>
<td>Institutional: Self/peer assessment. Programme: assessment by stake holders &amp; experts</td>
<td>Student fees self funded additional prog. full subsidy for the economically &amp; soc. backward state/management funding for research, learning resources Global funding unit cost analysis</td>
<td>Impact analysis alumni journal vertical mobility / employment (Feedback to modify entry, process and performance according to changed needs)</td>
</tr>
<tr>
<td>Quality: challenge to the advanced learner—modular choices &amp; additional credits</td>
<td>Faculty: Performance appraisal by experts, students, management</td>
<td>Research: focussed/curriculum reinforcing Technology: teaching, learning &amp; research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entry enablement: preparatory support &amp; subsidy to slow learners</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.2 ENTRY

Education should be sustainable: it should be universal (available to all), continuous (accessible across temporal barriers - the idea of the first generation learner is a signal of discontinuity), quality oriented (otherwise it cannot be universal and continuous) and learner facilitating (i.e. none shall be denied quality education on account of artificially made handicaps).

The egalitarian admission policy envisaged in the model presupposes no denial of admission to anyone who has attained the minimum level of proficiency in the subject on the condition that merit is not compromised. This may be achieved by entry enablement strategies such as preparatory courses and training or orientation at least two months before the commencement of the regular programme and post-admission week-end/evening programmes to sustain competence development. The advanced achiever may not need this support. Such preparatory support should be free to the economically and socially handicapped.

Entry can be facilitative if it has temporal and pace flexibilities. The duration of course completion may be less time-bound and accommodate learner pace. Entry of the advanced learner may be based on capacity in terms of the availability of opportunities to earn additional credits through both formal and non-formal arrangements such as take-home courses monitored through periodical contact programmes and seminars.

3.3 PROCESS/CONTENT

Process and content together work for the optimisation of human and intellectual capital in this model. This is indispensable for sustainability of education through generations without discontinuity. As observed earlier human capital comprises learner skills, which, in turn constitute competencies for self-management of one’s own learning through independent inquiry and confident
defence of original ideas. Human capital alone can create intellectual capital, the stock of permanently usable knowledge, insights and technology which can be passed on to the next generation as part of the realisation of intergenerational equity.

The curricular process that can achieve these goals should be comprehensive enough to create content (programme and courses) that matches them. While the institutional goal may define the emphases and principles of educational policy, the curricular content itself should be determined by needs of sustainable development; courses may be built around the basic need of global and local employment, the academic need of being in the frontline of knowledge in the chosen discipline, ethical needs that underlie development and cultural needs that reaffirm one’s identity and heritage. Environmental awareness and concerns are among indispensable goals. Goals, therefore, are multiple and they constitute a paradigm. The curricular structure will reflect the goals.

The traditional structure of core and ancillary subjects is inadequate for these purposes. The improved structure that includes foundation and vocational courses is better than the traditional structure. The effectiveness of the latter is not evident at least in the Indian curricular system because of lack of integration through a sustainable model. The traditional model, which may be called the ‘bar model’ lacks integration. It may be represented by the following diagram:
It is obvious that what is learnt under Part I (English) and Part II (a second language, usually a regional language) — the order is reversed in many undergraduate curricula — has no connection whatsoever with either the content or mastery of the core chosen. It hardly empowers one to either communicate or professionalize one’s knowledge acquisition. One may consider an alternative model which is more integrative and holistic:

Figure - 2
TRIANGULAR MODEL

FOUNDATION COURSES
ethics, communication, global-
national sustainability,
environmental awareness, etc.)

Foundation courses are, by definition, effective curricular tools to create the sustaining base of learner personalities in terms of their ethical, national (cultural) and global outlook which has a direct bearing on the careers the core subjects prepare them for. They may include equity, environmental and heritage concerns. They must include highly professionalised courses in the building of communicative competence of high quality for self-management and self-expression of the knowledge acquired. While the supportive angle of the pyramid can be interdisciplinary in order to widen the base of primary knowledge (core) the other angle could represent the vocational aspirations (courses that help acquire skills of employability). The triangle depicts the unity of convergence of courses that peaks towards the output of integrated holistic personalities. The model suits all levels of education: at the P.G.level the foundation could still be the same; and at the research level the obligatory course work may reflect the ethical as well as the social dimensions of the project.
Thus oriented by a judiciously constructed curriculum the learner is set on the course of self-learning through such enabling strategies as credit earning under tutor-monitoring. Credits are a notional measure of learner output, and not teacher input alone. It is the self-organisation of one’s own studies under teacher guidance that can lead to self-mastery and effective dissemination and scholarly writing. This procedure is applicable to all levels of learning; otherwise the knowledge acquired is not sustainable as it cannot contribute to either human or intellectual capital.

Processes of learning and teaching cannot dispense with the advantages of modern technology the use of which has become obligatory in almost every pursuit of knowledge. Convergence of disciplines, global cooperation for knowledge development, trans-national and trans-atmospheric themes and concerns and explosion of information — all these and more require the use of modern technology.

3.4 PERFORMANCE

Performance tests whether a system’s delivery channels are effective enough to make a positive impact on stakeholders. Their feedback on performance is indispensable for effective management of education. That institutional assessment may be supplemented by programme assessment and teacher-performance appraisal by students, peers and experts has already been highlighted in the foregoing discussion. The reliability of the multiple assessment profile—involving students, external experts and internal peers — is authenticated by the unanimity of the three groups of evaluators in their scores the variation of which is negligible — statistically it is less than 1 (see Appendix II). Where these were done, several institutions successfully enhanced quality in more than one direction. It is with regard to student performance that evaluative strategies need improvement. Terminal and summative assessment, the only tool of assessment used at present, needs to be replaced by other tools which progressively and continuously assess the developing skills of the learner. Skills progressively range from motor skills of memory and recall, at the lowest level, through skills of application of the mind, to cognitive skills of perception, conceptualization and creation of knowledge or those of
problem solving, at the highest academic level. Appropriate instruments of assessment may help to evaluate this progression in each discipline. Unless this is done, the education that is acquired cannot be sustainable across spatial and temporal barriers. It must, however, be borne in mind that performance assessment cannot be judgmental so long as it is a facilitating exercise that enables internal corporate activity. At best it is a critical but positive feedback for perpetuating and propagating the strengths and curbing the weaknesses in the interest of mutual accountability.

The Teacher Performance Appraisal (TPA) is often wrongly understood as a means of eliminating a teacher (as performance appraisals are used to eliminate workers in industry) or forcing him or her to conform through external pressure. Either of the two cannot, and should not, be done as it would denigrate the image of a mentor whose moral stature is far greater than that of the worker in the public eye. TPA however, holds infinitely greater advantages. It is the most effective means of appraising the teacher of the strengths and weaknesses of which the stake holders are more aware than he or she. It thus provides the invaluable feedback from those whom he or she serves. It gives the stake holders an opportunity to assess the value of what they have received from an institution while, at the same time, help improve educational services for the benefit of their successors. (Please see Appendix III for a model Teacher Feedback Sheet).

3.5 FUNDING

Sustainable education has become an ethical imperative and it benefits humanity as a whole. Whether it is sustainable economic development which seeks to ensure human development along with environmental preservation or equitable social development that can accelerate global economy, or creation of global human and intellectual capital, the beneficiaries are the entire human race existing at a given point of time. As education is the tool that makes these benefits available, funding of education may well be said to be a global responsibility. The individual, the institution, the national government and the international community consisting of the tax-payers of the world are all the providers of such
education. They will of course be unwilling to participate in this noble cause so long as they discount ethical imperatives in the interest of other compulsions which are outside them. Nevertheless debates as to whether higher education is a merit or non-merit good or whether sustainability is or is not a national responsibility are quite anachronistic in light of the advancement of the concept of sustainable development by the global community in the recent decades. The reasoning is clear but action is slow in coming. Meanwhile, existing internal priorities within micro-systems - a nation’s polity or the community at the institution - need to be reset. The state cannot disown its responsibility to provide sustainable education at least to those who cannot afford to pay for it. State subsidies, U.G.C. funding and international patronage should be made available for free education to the socially and economically disadvantaged learners, not as auxiliary support but as substantial support from entry to exit within an educational effort. The private sector has a large role to play in being an enabling machinery rather than a profit-seeking enterprise. The older ideals of philanthropy and altruism may be recaptured. The economics of this effort needs careful study and analysis but unless funding is reorganised to benefit the poor substantially, sustainable education cannot be provided.

The model presented here may be seen to rest upon, among other things, equity, quality and sustainability. It may also be seen to be a dynamic continuum and cyclical in structure from entry to exit and then into entry again. This, it seems to me is the essence of sustainability.

4.0 CONCLUSION

Higher education needs a new look. From being a discipline-specific inquiry assisted by tools of process it has become a life movement to determine the continuance of humanity on this planet. Thanks to environmental economics which has pointed up sustainable development as a significant means to ensure it besides enlarging our understanding of development. Unless this is matched by efforts to provide sustainable education of high quality, the challenges of the global village cannot be met. Neither can education survive to serve developmental social needs
in order to fulfil generational and intergenerational equity. Our own country has no other greater need to fulfil than this.

REFERENCES

1. One of the bench-marks proposed by QAA, U.K. as a sequel to the Dearing Committee Report on global higher education at the INQAAHE conference held in Bangalore in 2001.


4. Reliance on the concepts set forth in *Natural Resource and Environmental Economics* by Roger Perman, Yue Ma and James McGilvray, Chapter 3 through the section is gratefully acknowledged.


## APPENDIX - I

### ENVIRONMENTALISM (R.KERRY TRUNER ET AL., 1994, P.31)

<table>
<thead>
<tr>
<th>Technocentric (overlapping categories)</th>
<th>Ecocentric</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>‘Cornucopian’</strong> Resource exploitative, growth- oriented position</td>
<td>Resource conservationist and ‘managerial’ position</td>
</tr>
<tr>
<td><strong>‘Accommodating’</strong> Eco-centric</td>
<td>Resource preservationist position</td>
</tr>
<tr>
<td><strong>‘Communalist’</strong> Resource conservationist and ‘managerial’ position</td>
<td>Resource preservationist position</td>
</tr>
<tr>
<td><strong>‘Deep Ecology’</strong> Extreme preservationist position</td>
<td></td>
</tr>
</tbody>
</table>

| Anti-green economy, unfettered free markets | Green economy, Green markets guided by economic incentive instruments (Els) (e.g. pollution charges, etc.) |
| | Deep green economy, steady-state economy regulated by macro environmental standards and supplemented by Els |
| | Very deep green economy, heavily regulated to minimize ‘resource-take’ |

| Primary economic policy objective, maximize economic growth (max Gross National Product [GNP]) | Modified economic growth (adjusted green accounting to measure GNP) |
| | Zero economic growth; zero population growth |
| | Reduced scale of economy and population |

| Taken as axiomatic that unfettered free markets in conjunction with technical progress will ensure infinite substitution | Decoupling important but infinite substitution rejected. |
| | Sustainability rules: constant capital rule. |
| | Therefore some scale changes |
| | Decoupling plus no increase in scale. ‘Systems’ perspective ‘health’ of whole ecosystem very important; Gaia hypothesis and implications |
| | Scale reduction imperative; at the extreme for some there is a literal interpretation of Gaia as a personalized agent to which |

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*Education, Sustainable Development And Educational Management*
Quality in Higher Education Sustainable Development

possible moral obligations are owed

mitigating all ‘scarcity/limits’ constraints (environmental sources and sinks)

Technocentric (overlapping categories) | Ecocentric

<table>
<thead>
<tr>
<th>‘Cornucopian’</th>
<th>‘Accommodating’</th>
<th>‘Communalist’</th>
<th>‘Deep Ecology’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support for traditional ethical reasoning: rights and interests of contemporary individual humans; instrumental value (i.e. of recognized value to humans) in nature</td>
<td>Extension of ethical reasoning: caring for others’ motive intragenerational &amp; intergenerational equity (i.e. contemporary poor and future people); instrumental value in nature</td>
<td>Further extension of ethical reasoning; interests of the collective take precedence over those of the individual; primary value of ecosystems and secondary value of component functions and services</td>
<td>Acceptance of bioethics (i.e. moral rights/interests conferred on all non-human species and even the abiotic parts of the environment); intrinsic value in nature (i.e. valuable in its own right regardless of human experience)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VERY WEAK SUSTAINABILITY</th>
<th>WEAK SUSTAINABILITY</th>
<th>STRONG SUSTAINABILITY</th>
<th>VERY STRONG SUSTAINABILITY</th>
</tr>
</thead>
</table>

ETHICS SUSTAINABILITY LABELS
APPENDIX - II

CONSOLIDATED TEACHER PERFORMANCE APPRAISAL

<table>
<thead>
<tr>
<th>DEPARTMENTS</th>
<th>Assessment by Experts</th>
<th>Assessment by Students</th>
<th>Assessment by Internal Peers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>79</td>
<td>75</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>91</td>
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<tr>
<td></td>
<td>78</td>
<td>77</td>
<td>72</td>
</tr>
</tbody>
</table>
APPENDIX - III

TEACHER FEEDBACK SHEET

Name ____________________________

<table>
<thead>
<tr>
<th>Profile</th>
<th>Score</th>
<th>Dept. Avg.</th>
<th>College Avg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
<td>4.00</td>
<td>3.52</td>
<td>3.55</td>
</tr>
<tr>
<td>Student</td>
<td>3.87</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Institutional</td>
<td>3.20</td>
<td>3.63</td>
<td>3.58</td>
</tr>
<tr>
<td>Overall</td>
<td>3.92</td>
<td>3.72</td>
<td>3.71</td>
</tr>
<tr>
<td>Research</td>
<td>9%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TEACHING PROFILES

STRENGTHS:
- Lesson well introduced
- Introduction situationalized
- Good summing up
- Illustrations familiar and homely
- Rapport with class

EXPERT COMMENTS: “Lively movement in class - interactive - participatory”

Areas which require better attention
- Knowledge level in subject to be raised - knowledge of genre, associative literary reference, ELT methods of teaching etc. was found wanting.
All other criteria in the teaching profile except the ones mentioned under “strengths” need improvement.

**Student Assessment**
Strength:
- Punctuality
- Clarity of instruction
- Openness to facilitate interaction
- Rapport

**Areas which require better attention:**
- Monitoring student learning experience outside classroom with sustained learner care through the year.
- Encouragement of independent work.
- Prompt and helpful correction to offer effective and timely feedback.

**Institutional Assessment**
Strengths:
- Compatibility with Colleagues
- Sparing use of leave
- Systematic planning of teaching work

**Areas which need better attention**
- Motivation for research and professional progression needs immediate attention.
- Exam work - preparation of students for internal and university exams.
- Greater involvement in institutional life and work.
Comments
1. Teaching skills such as introducing, explaining and presenting concepts/ tasks are of a high order.
2. Rapport with learners while the lesson is in progress is commendable.
3. Knowledge level needs raising with in-depth study and wider reading.
4. Research motivation needs strengthening.
5. Monitoring student learning experiences in and out of class with sustained learner care may make your skills beneficial to the wards.
6. The performance indicator of 4+ identifies a highly competent teacher. While your teaching profile almost matches it, the others need to be raised.

CONVENER

Additional Comments by Principal:

Date: Principal
QUALITY HIGHER EDUCATION AND SUSTAINABLE DEVELOPMENT: VALUES AND EDUCATIONAL STRATEGIES

Snehalata Deshmukh *

The concept of sustainable development appeared when economic growth was given ecological objectives such as prevention and reduction of pollution in order to preserve the environment. Sustainable development has come to underlie social evolution. It allows a long term utilization of environmental resources for social and economic development while at the same time, attempts to maintain the quality of the environment. Sustainable development offers a solution to eradicate rampant poverty by creating jobs, ensuring food, water, housing, medical and social assistance. The ways by which these objectives can be reached are many, but we consider higher and technical education to be the most significant means to achieve them. When we reflect on the role of intellectuals in a changing world, we realize that there are two forces with which they have to deal - one represents money and power and the other the struggle for restoring basic human dignity. It is this dignity, that is more important than mere materialistic success. The education imparted by universities continued to be stereotyped till NAAC, an autonomous body of the UGC, evoked the desire among higher education institutes to reform the system during the last decade. Curricular innovations, improvement of teaching

*Lecture delivered on July 30, 2004 at BBK-DAV College for Women, Amritsar.
and learning and other quality assurance strategies, are now widely attempted by them. The chairman, Dr. Nigavekar’s idea of expanding their role in regional and international issues like academic mobility will certainly enhance the quality of education.

QUALITY
There is always a criticism that we have permitted the mushrooming growth of institutions of higher education with substandard qualities and have thereby diluted standards. To address this, the National Policy on Education was framed in 1986; and in 1992 a revised policy document and action plan was approved by the parliament. The most important development, which has contributed to the assessment of the education system, is the establishment of the National Assessment and Accreditation Council, an autonomous institution of the University Grants Commission. NAAC has significantly contributed to the growth and governance of educational institutions during the last ten years. It has amply stressed the need for imparting quality education. Quality assurance is an evolving mechanism throughout the world. The Indian system of quality assurance is based on the philosophy “Well begun is half done” and the other half is to be done by fine tuning the experience of discovering our strengths and sustained improvement by eradicating weaknesses. Our strength is our heritage, talent and our well-acknowledged research work. Evolving indicators of quality to facilitate academic mobility is one of the most important regional and international dimensions of quality assurance.

One of the priorities of the UNESCO higher education programme has been facilitating academic mobility by promoting mutual recognition of qualifications in higher education. It depends on the confidence of higher education systems in each other’s processes and quality offerings. A good way to instill such confidence is partnership building and mutual recognition among Quality Assurance Agencies. QAAs in different countries are still in the process of evolving policies and strategies to achieve this. Their recommendations are important. The performance indicators include internal performance indicators, external performance indicators and operational performance indicators.
In India, promoting quality in education has been the focus of almost all committees constituted for the development of higher education. The National Policy on Education of 1986 makes an explicit mention of the quality assurance mechanism that is needed for the Indian higher education system.

EDUCATION AND VALUES

The word education derived from “educare” encompasses the enhancement of the learner’s personality through values. Bertrand Russel said, “The world could be transformed if the basis of education is knowledge wielded by love and values for sustainable development. Through education we need to pass on the message to the society that to maintain the quality it requires commitment, acceptance, reverence and eloquence. It is not the quantity of education but the quality that is important. To maintain quality it requires constant effort, courage, conviction and commitment”.

Education is a dynamic process and it changes with changing times. The birth and growth of education in India can be traced to Gurukul when a child was sent to Guru gruha. He participated fully in all the activities at the Guru’s home and all the values are passed on to him. These values are of prime importance in education. In order to prepare a base we need to have values introduced right from childhood and the responsibility is not only that of teachers but of parents too. Imparting values has become a formidable challenge when we change from Gurukul to Cyberkul.

Values are our roots and success our fruit. To achieve value based education we need to have clearly defined core values - moral, rational and aesthetic values. We are all familiar with Chanakya Niti but very few of us know that Chanakya was an example of one who had held high ethical values. One day, while Chanakya was doing his office work at night, a friend of his walked in to have a chat with him. Chanakya immediately put out one oil lamp and lighted another. The friend was astonished, and Chanakya explained that the oil in the first lamp was provided by the king and that the oil in the second was purchased by him.
The first lamp was only to be used for office work. This was his commitment to ethical and moral values. In today’s society these values are rarely perceived. Hence changes need to be introduced in the curriculum to impart education that makes a complete social and moral individual.

GLOBALIZATION AND CONVERGENCE OF DISCIPLINES

While we would welcome the universities, private and overseas, to be part of the process of globalisation, we need to strengthen our own universities. It is desirable that they not only impart the stereotyped education which sharpens the intellect or augments memory and recall, but they should also concentrate on the enrichment of human personality. In the words of William Hazlitt it should develop “persons with a seeing eye and understanding heart”. In a materialistic world of today, unfortunately quantity scores over quality. “How Many?” has more relevance than “How is it to be done?” Quality of education is fundamental, and it cannot be ignored because it leaves an indelible imprint on the future of an individual and collectively on the future of a nation. Quality is not something that can be argued into an article or promised into it. It must spontaneously evolve. If one analyzes the greatest success stories of an individual or of an enterprise, even in the era of fiercest competition, when everything would seem to be a matter of price, there lies still at the root of great success the most important factor of quality. The surest foundation of any endeavour is quality. Cost comes much later. Our higher education in the global village dominated by the hegemonic economic forces has to refashion itself to face the highly competitive intellectual world. We are caught between the competing demands of a globally oriented scholarship fed by cyberspace and internet on the one hand and the national and even micro demands for essential human resource development in terms of basic literacy, gender equality, human rights and communitarian values on the other. The other strand of environment-related sustainable development philosophy has been propelling fairly drastic changes in our educational curriculum. Environmental sciences and a variety of interdisciplinary sciences, biotechnology, genetic engineering, computer-aided information processing, bioinformatics, etc. are pulling down the
traditional boundaries of sciences, both physical and social. In universities interdisciplinary centres are the need of the day. The pattern of science education is being debated. The rate of new knowledge generation has increased, scientific breakthroughs are taking place. Discreet boundaries no longer exist between various natural sciences such as physics, chemistry, biology, mathematics etc. New paradigms of seamless sciences and seamless engineering are emerging. We not only need borderless thinking but also fusion. It is not the improvement of our knowledge and insights alone but also making economic sense of science that the strategy of borderlessness helps.

A new drug discovery is aided by the fusion of various disciplines. The time taken for developing the new drug is being reduced by bioinformatics and combinatorial chemistry. We also would take up the concept of borderless and fusion to create knowledge networks. In my own field i.e. medicine, we have seen that a cross-field endeavour of physics and biology can work wonders. That is why it is necessary that rigid academic curricular and hierarchical management structures need a change. The environment in an institution must foster imagination and not imitation. Advances are always a sum total of numbers, creative ideas and interdisciplinary cooperation. In industry as well as education individuals with diverse scientific and technical backgrounds work together and such work is oriented towards a mission. The driving force is innovation. There has to be an intermeshing between various disciplines of arts, science and commerce so that there will be team spirit. Such modified innovative courses will strengthen our educational inputs for the good of the society. There is a noticeable trend towards technisizing society, which has necessitated the introduction of vocationalisation of education. Job oriented courses like travel and tourism, hotel management, industrial chemistry, hospital management, mass media, journalism, event management, banking and financial management attract our youth who are in search of jobs. As far as women are concerned job oriented courses are designed such as dress designing, jewellery designing, home management, etc. In the rural areas food processing and preservation has also gained strength. However very little effort is being made towards interdisciplinary education. Large scale tertiarization of education of
diverse function-specific skills is currently a universal phenomenon. Our higher education must catch up with this societal demand. New initiatives are being taken up of networking of educational and scientific institutions. For bridging the gap between education and industry a model has been proposed. It is important to have better linkage between the centre and the state. Colleges are central to the education activity affiliated to the University. They can have better access to state level R and D institutions. The industry on the other hand can interface with state level or private R and D institutions. In this model a state level R and D body would act as the technology innovation centre to five or six colleges and this can closely interface with both industry and the college. This will require complete database of all colleges. The database on selected parameters would help in suggesting new linkages in skill development and also in the planning process.

We are one of the youngest nations in the world with 54% population below 25 years. We have the best-qualified human resource and that is the reason why education has to be the biggest business in a developing country. It should have the largest number of owners; the most extensive and expensive plant; and it utilizes the most valuable raw material. It employs the greatest number of operators. The greatest investment in money and time, rightly so, because its product has the greatest influence on both the country and the world. As the government funding is decreasing, industry must fight just as passionately for educational freedom as it does for economic freedom because that which threatens educational freedom threatens all freedom.

Education is a debt due from the present to the future generations. Higher education should contribute to our country its Gross National Mind (GNM), it should grow in pace with its Gross National Product (GNP), or even faster.

**MEDICINE AND MODERN SCIENCES**

Let me now talk of my own specialty i.e. medicine. ‘Prevention is better than cure’ is the key word in medicine. Diseases like T.B., AIDS can
certainly be prevented if we enlighten our youth through our higher education. The engineering student, the student of architecture, the student of social studies or of management studies has to be made aware of the various infectious diseases and their prevention. A good knowledge of nutrition is therefore also necessary to improve our immunity. Water-borne diseases can be definitely prevented and so also several diseases of the respiratory system like asthma, which are caused as much by environmental pollution as by any other are cause preventable. A total health concept consisting of mind and medicine needs to be introduced at all levels. Acidity, anxiety, blood pressure, cardiac diseases, diabetes, emotional disturbances are consequences of our changing societal concepts. Dead lines, forecast aims, targets, market mechanisms are our buzz words. The race continues, in the college going student project work assignments to be completed, dead lines to be met. The dialogue continues with executives - “My office never closes”. “I feed my Desktop data on PC”. “I do not even close my eyes in the flight”. “I have my laptop and a palm computer. I have no time for lunch and dinner, it is an unproductive activity, lunch is replaced by mac sandwich or macroni, the only exercise is clicking the mouse and changing channels by remote”. All this results in nutritional deficiency and ultimately diseases like anemia and ulcer conquer our body. On the one hand we face explosion of population, on the other is the unformate couple who have problems in reproductive life. The incidence of congenital malformations in children increases as a result of wrong lifestyles and pollution. A potentially life changing frontier is biotechnology. Scientists have mapped DNA, cloned animals and altered plants. The goal is to benefit humanity with new vaccines to cure diseases and to grow crops that are resistant to destructive pesticides. Stem cell research and genetic engineering has offered a cure for several incurable diseases.

Genetically engineered crops, the germplasm, enhancement of maize-such genetically engineered crops may be a threat to soil fertility. Without soil food web plants would not obtain the nutrients necessary for growth. There is a complex ecological interdependence among soil organisms. Soil ecology is thus important.
With the technological advances we face problems with E-waste. We succumb to the natural calamities like earth quakes, floods, famine etc. It is therefore necessary that nature conservation, rainwater harvesting, solid waste management, use of solar energy, a proper planning of tall buildings should also be included in our teaching temples as add on courses.

Space debris is worrying us. The study of space assumes importance and the idea of creating a space university is welcome. Satellites will be active for futuristic development.

EDUCATIONAL PLANNING

Demographic changes, attitudes towards society, social relevance of education and the emerging occupational patterns have a great significance in the direction of higher education. Our educational planning should be interrelated to instructional methodology, delivery system and relevance of the academic content of courses to employability of students but in a formal system of higher education functional paradigms are comprehensive and hierarchy-specific. We are interested in starting institutions of higher learning, teaching the same age old curricula. This is because of the affiliating system which takes a long time to update curricula and to change courses according to the relevance of time. Autonomy to colleges imparting higher education thus becomes a necessity. Instead of multiplying colleges which turn out a multitude of unemployed, underemployed or improperly utilized graduates, we could think of establishing community colleges. They offer vocational and professional education. As an institution of recent maturity, recognition and interest, it is more vitally linked to community requirements and works with a strong emphasis on a variety of vocational programmes offering a diversity of opportunities for life long education which is accessible to all. It is not only the availability but also the accessibility, which is important. The concept is very popular in Tamilnadu and its popularity is due to strong community relevance with its capacity to meet community obligations. They are philosophically and academically committed to the attainment of competence in defined areas of societal needs. The idea is to give people an opportunity to meet their own needs and to achieve importance. Community colleges in U.S. exist in a healthy
economic environment, which is a significant factor for their survival. Academic courses have a strong relationship with work and they have equally strong placement cells. In the 21st century technology and technical advances made through projects like Edusat have become important. Virtual University and E-learning radio stations and TV channels have been started. They are very useful for imparting quality education. In his book 'India Vision 2020’ our Hon’ble President Dr. A.P.J. Abdul Kalam states that the most important need is to impart good quality education and skills for all, so that we provide employment opportunities to all. He also states that we need to assess our core competencies. Our most important core competency is human resource. This is India’s strength if we can train an unskilled Indian, if we can impart better skills to a skilled Indian and if we create a more challenging environment for the educated. By building avenues for economic activity in agriculture, industry and service sectors, we will not only meet the targets of growth but will excel other countries. The report of the UNESCO International Commission on education for the 21st century has stressed that the role of the teacher will remain critical despite the emerging technological innovations. Indeed the very existence of this new pedagogic paradigm will involve a higher level of expertise and constant enhancing of skills if teachers have to cope with the new challenges. It is mandatory for teachers to upgrade their skills on a continuing basis at least once in two years.

Cost and Fee Structure

Higher education has always been expensive. It is a paradox that while for primary and secondary education we are prepared to spend more by way of cess and fees there has been a freezing of the public grant, and consequently, the tuition fee collected by colleges and universities. The community is averse to the idea of a rise in expenses at this stage. Private institutions like colleges of engineering, architecture, medicine and management collect higher tuition fees. This creates chaos and many a time admissions to such highly specialized colleges are at stake. There has to be a uniform formula, a well worked out formula based on proper information to decide the optimum fee structure and the institution should be made accountable. Accountability of any institution of education is a
necessity. Admission procedure has to be online in the interest of transparency and fairness, so also that of examination. With the present view of tax on education one could create a ‘kosh’ as has been aptly put up by the chairman of UGC, Dr. Nigavekar. This money could be gainfully utilized for newer experiments in higher education.

**Corruption**

Corruption is another disease, which needs to be surgically treated. Jobs for sale, education for sale, caste certificates for sale are instances of several scams that mar the higher education system. Mankind has one distinct advantage over dinosaurs; it has the capacity to envision situations, tackle circumstances when things go wrong. So before this corruption becomes deep rooted, we must remove it completely from the system. Money should not become the sole measure of success in education.

We in our country, understand that without building character, the fruits of education cannot be realized. Therefore due emphasis on character building through education was always laid. Our ancestors had also understood that the test of learning was best manifested in conduct orientation. This character building will certainly prevent the problem of frustration among youth.

Science is galloping at a breath-taking speed. The rate of new knowledge generation has increased manifold. Scientific breakthroughs are taking place at breakneck speed.

Discrete boundaries do not exist between disciplines like engineering and medicine. There is technology in medicine. The recent acquisition of robotic surgery is a marvel. A doctor sitting in San Francisco can give instructions for a surgery being performed in Germany. Commands can be given through satellite communication. This is called Transatlantic Tele-Surgery. A lady suffering from a disease of the gall bladder in Stassburg in Germany was operated on through this technique by a surgeon in America. The robot exactly looks like a video game player and it is called. Isop, Zuis, Hernis or Darnis. This technique can be used for telemedicine, telemonitoring and telementoring.
CONCLUSION

There was a man doing difficult technical jobs, in his place a robot was appointed, so where the man was working the robot worked and a dog was kept to watch them. So instead of one man there were three people the robot working, the man supervising, and the dog watching the man whether he was touching the robot inadvertently. However the human touch is important, in the words of T.S. Eliot “Where is the wisdom that we have lost in knowledge; where is the knowledge that we have lost in information?” The Cycles of heaven in twenty centuries bring us farther from God and nearer to dust.

With the growing expansion of proprietary control of information and innovations now taking place, we should also remember the words of Einstein “Concern for man himself and his fate must always form the chief interest of all technical endeavours in order that the creation of our minds shall be a blessing and not a curse.”
QUALITY ENHANCEMENT AND SUSTENANCE FOR HIGHER EDUCATION: PROBLEMS OF OWNERSHIP AND COHERENCE AT THE SYSTEM LEVEL

A. Gnanam *

CHANGING PARADIGMS

The post-industrial knowledge economy in the core, the economic development of any nation is linked to its ability to generate, acquire and apply knowledge. When knowledge becomes important, so does higher education. Countries need to raise more of their population to higher levels of education than before, diversify educational offerings and ensure the maintenance of quality in both knowledge and skills for wider economic application and national competitiveness. In this context, the higher education institutions (HEIs) of today are expected to reorient their structure, re-tool their function and remain accountable. They are expected to focus on international competitiveness of the national system and develop skills, competencies and knowledge of a new order to meet it. Application orientation, trans-disciplinarity and heterogeneity in the skills needed for its mastery characterize the knowledge of the new order. In addition, higher education has to be versatile in the increased use of new forms of educational delivery that are based on Information and

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Communication Technologies (ICT), particularly the internet. Resorting to these new sources and methods of learning has become essential as they facilitate not only students and teachers in flexible educational transactions but also in lifelong learning. More than anything else, universities have to respond now to the changing paradigms faster than ever before. An attempt is made in this paper to broadly analyze the changing expectations – paradigms - of the national higher education system, hurdles likely to be encountered and what it needs to fulfil these expectations.

At the outset, let us be clear as to what is meant by the term “education system”. It is a comprehensive concept that includes the functional units like all the individual higher education institutions (both public and private) in the country with their faculties, students, campuses and other infrastructure, as well as the funding and policy-making bodies like the governments. This will also include the regulatory agencies like the Indian UGC, AICTE and others.

The required changes arising out of the new paradigm fall into two major categories. Some of them relate directly to the domain of the HEIs themselves and some to the system managers and providers like governments and their agencies. The tasks that fall under the purview of educational institutions are mostly related to academic aspects, like curricular design and curricular transactions. Change from the traditional role of ‘transmission of knowledge’ to skill and competency building; teacher-centred pedagogy to learner-centred architecture; and other similar changes will come under this category. Likewise, making a flexible curricular structure that is facilitative rather than rigid and increasing the use of non-traditional modes of educational provisions will also come under the purview of the responsibilities of individual institutions. In short, all changes required for enhancing and sustaining the quality of education fall within the institutional domain. Educational institutions are generally empowered to respond by doing their best within the financial and regulatory constraints they confront.
On the other hand, issues related to national policy on private participation and whether or not higher education should come under the category of public good or to be treated as tradable service need the intervention of the national government. The same is true of changing the nature of institutional functioning from a monopolistic style to a more competitive ambience. Determining the extent to which the focus can be shifted to international orientation and devising corresponding national strategies are some of the policy matters, which properly belong to the domain of the national and state governments, for they alone can make decisions and commitments on these issues. Although the two types of changes required to meet the new expectations come under two different domains of the educational structure viz., the institutional or the regulating providers, they are not mutually exclusive. Successful implementation of policies and strategies requires the coordination among different functionaries of the system as a whole. Teachers, institutions and governments have to share the responsibility of ushering in the intended changes to meet the challenges of the new millennium. Most of the changes are necessitated by the demand for value-added human resource in a variety of settings which include socio-political transformations, knowledge explosion, global economy and increased mobility of learners and workforce across the globe. All these challenges put together can be broadly clustered under the following five familiar academic and structural elements. The collective responsibility to implement them falls on the system as a whole:

**ACADEMIC AND STRUCTURAL COMPONENTS**

*Curricular Design:* In the institutionalized education system, the curriculum is the core around which the entire education edifice is built. Although the academic community has to ultimately build the curriculum, the increasing role of educational providers and the employers is very much in evidence in the recent changing context. The curricular content should be built around the specific purpose for which the educational provisions are made and they should be made explicit to students, employers and to the society at large. It should also contain, besides other details, a set of standard benchmarks to indicate the level of achievement a student can aspire to reach. Evolving subject benchmark statements,
offering modular credit-based courses, and ensuring attainment of adequate levels of skills and competencies are some of the essential efforts that need immediate attention.

**Curricular Transaction:** Curricular transaction is the core function of educational institutions at all levels of education. Even with the best of curricular design, unless curricular transactions are effective and facilitative, the learning outcome of any programme will not be at the desired level. It is a multi-factorial transaction involving teachers, students, learning resources, training centres, institutional links and academic management.

For effective curricular transaction, proper professional training of teachers is critical. As of today, the academics in higher education are rarely ‘trained’ teachers. In the main they learn ‘on the job’. As such they tend to perpetuate traditional methods in education and are often found to be ill equipped.

In the new context, teachers at the tertiary level are expected to be the facilitators of learning rather than teaching, laying greater emphasis on the range of academic skills and abilities including ‘critical thinking’. They have to be conversant with handling new forms of education with on-line courses and interactions. These new forms of education require skills of a different order that include the facile use of information technology, mainly computers and the internet. Another critical element of curricular transaction relates to the evaluation of student performance. Well designed evaluation is essential not only as feedback on the effectiveness of teaching but also for measuring the learning outcomes of students. Effective curricular transaction also depends on the extent and quality of institutional infrastructure, learning resources like library, laboratory and access to computer facilities. Along with these basic facilities, academic activities like workshops, conferences, overseas collaborations and seminars enrich the learning ambience. Any quality enhancing effort should ensure these facilities and activities.
Institutional Governance and Educational Management: In any mass education system where many thousands are involved, appropriate management structures under a different governance system are essential. The term ‘governance’ indicates the formal and informal arrangements that allow higher education institutions to make decisions and take action. It also includes, both external governance, which refers to relations between individual institutions and their external controllers; and internal governance, which refers to lines of authority within institutions. The ‘governance’ that generally relates to policies considerably overlaps ‘management’ that relates to the implementation and execution of policies. Management is essentially the tool for achieving good governance. For example, fostering academic co-operation with other institutions, creating research centres, and setting up industry and other feeder lines like schools will need a flexible governance structure that can make faster decisions and a management system that can execute decisions effectively.

Supra Institutional Reforms: Besides this preparedness at the institutional level, a great deal needs to be done at the ‘System’ level, where the providers — both governments and private groups — play a determining role. The changes at this level have more relevance to the Indian context where the medieval practice of dispensing higher education through what is known as the affiliating system is prevalent. In this arrangement, the university provides the academic programmes and plays a regulatory role to ensure satisfactory standards of the education provided by the colleges ‘affiliated’ to it. In this arrangement neither universities nor colleges have any choice on whether or not, and with whom, the affiliating relationship could be established. By and large, location and contiguity decide the jurisdiction; and the functions are determined by the statutory provisions in the Acts of the Universities. With the expansion of the system and with hundreds of colleges affiliated to universities, the academic-leadership that the university is supposed to provide has been reduced to that of conducting examinations and awarding degrees. This affiliating model in which one provides the academic content, another teaches and a third (the government) provides the funds is not conducive to the prompt response demanded by the changing needs of the society. More than that, the
ownership of quality and excellence of education got diffused and none feels accountable. This becomes the extra-institutional constraint in promoting the quality of education and needs correction with suitable alternatives. There are a few other issues that need the attention of providers and regulators and they cannot be tackled by institutions themselves.

**State and National Initiatives:** In the current context, where the mobility of students and workforce across national boundaries has been augmented, the national character of education should be built on comparability and competitiveness rather than being totally oriented to local conditions. A large number of policy decisions are involved in either promoting or regulating such mobility, which only the national government can decide. Issues like foreign currency and visa regulations and quality assurance modalities cannot possibly be sorted out by educational institutions. Although it is very difficult to generalize the level of national initiatives to be taken, there are three areas where concrete measures are warranted. Evolution of the National Qualification Framework, Firm policy on Private initiatives in higher education and National quality Assurance mechanism are the main areas which require intervention. Our country has taken action on some and others need immediate attention.

**REGULATION OF KEY NATIONAL INITIATIVES**

**National Qualifications Framework:** It relates to the comparability of duration and structure of national qualifications. The prerequisite for mobility is the recognition of qualifications gained in one country by others. The basic need for this is that the qualifications framework in a given country should broadly conform to the trend seen internationally with a sufficient and precise description of the purpose, content, duration and level of each one of the qualifications offered in the country in a general way. There are now variations in the structure and duration of academic programmes even among the 36 states of our country. The overall pattern of 10+2+3 that was recommended a few decades ago is yet to be implemented in some of the states. Likewise many of the certificate and diploma programmes offered are of varying durations ranging from
three months to three years and they have not been properly slotted yet to be integrated with various levels of qualifications. The countries of the European Union, with the hitherto diverse and non-comparable qualification structures and durations, have now agreed to have their higher education programmes uniformly structured into two main cycles of three years of undergraduate, and two years of postgraduate, studies. Intervention of the national government may be needed to reform the national qualification system, which has been pending for long.

Promotion of Private Participation in Higher Education: A clear national policy on private participation in higher education is yet to be formulated. Private participation at the collegiate level commenced in a large way about two decades ago with the knowledge and indirect approval of governments. While the national policy is not clear, unplanned market driven expansion of higher education with the help of ‘for profit’ providers is underway. Statutory recognition of, and extension of marginal support to, private providers can accelerate access to higher education besides improving the quality of education in a competitive environment. After all, this move towards private participation in education is only a return to the pre-independence practice, when private institutions were predominant at all levels.

National Quality Assurance Mechanism: The world over, the advent of the massive higher education system has led to the need to assure high quality of educational provisions. External quality assurance at the national level is considered as a good option and many national governments have established national quality assuring bodies. In India there are three such bodies: one for general higher education, another for engineering education and the third for agriculture education. As of now all the three are under the control of regulatory agencies like the UGC, the AICTE and the ICAR. They need to become both comprehensive and effective. They should seek mutual or multilateral recognition with their counterparts around the world with their proven track record of performance and by their compliance to international norms evolved for the purpose. Ensuring autonomy in operations and upholding their independent status are very
crucial to be accepted as trustworthy quality assurance agencies by the international community. Moving away from the traditional inspection-oriented and centralized regulation of higher education by the government or its agencies and augmenting reliance on the outcomes of national quality assurance bodies can help to integrate quality assurance with the higher education system. Besides these issues, there are many more concerns that need the attention of the governments at the policy level in the context of globalization. The implication is that they have to be tackled appropriately and collectively by all the stakeholders, taking action at different levels of the system’s functioning. As indicated earlier, the institutions individually or collectively cannot possibly undertake any policy-based reformatory measures, which may involve the interplay of different ministries. With the advent of private providers including transnational agencies devising a national framework is an urgent need and it would need dialogue between ministries. They should take a fresh look at the role of the national quality assurance agencies in the process. Similarly, promoting regional or global collaboration in education can be achieved only through a dialogue between the education ministries of participating countries. The Bologna Declaration is a typical example of such ministerial level commitments. In the same way with the advent of borderless education through electronic media, national infrastructure like communication and computer facilities should be developed with enormous inputs and only the political will of the nation can do it.

Although the division of responsibilities between educational institutions and providers is self evident, there is a great deal of confusion at the operational level. The diversity and the number of governments involved, the number and diversity of ministries responsible for different sectors of education like general and professional agencies, the multiple set of national and state agencies with some overlapping prerogatives complicate and delay academic reform. The maladies arising out of the lack of clarity as to who is responsible for the support and regulation of higher education and lack of a suitable mechanism to ensure coherence in what little they do are briefly highlighted with few examples. Some possible solutions to resolve the problems are also indicated in the following pages.
From the above it is clear that not all the restructuring needed to meet the changing paradigm can be made at the institutional level. While the first two aspects are clearly within the domain of the institution, the last two are clearly the responsibility of the providers. The third issue relating to governance and management falls in between. Academic reforms can be managed by the institution with some financial support, but structural and policy dependent initiatives have to come from the national and state governments. Often times, perceptions of governments rather than deliberate planning are allowed to determine their policies that in turn transform into practices. Any perceptual flaw, therefore, affects the whole education system.

**PERCEPTIONS, POLICIES AND PRACTICES**

The perception of the national and state governments ultimately sets the mission and performance of the national system of higher education. The perception of the national government that came after the British rule was that higher education is the key to national development and that the expenses incurred to strengthen it was a national investment for public good. This perception had led to the nationalization of many private universities and colleges, besides establishing many more for increasing access to higher education for eligible age groups. The higher education system that used to cater to less than one per cent of the eligible age group has grown to the present size and caters now to nearly 6% of the age group between 17 and 23. It amounts to six to seven-fold expansion of the system in about 50 years. In the process of rapid expansion, quality has become the casualty.

Now, the perception of the national government seems to have shifted once again as it has reached its limit of budgetary provisions to support the education system. The perceptual shift to the idea that higher education is not anymore a *public good* surfaced about 20 years ago and is evident in the near total freeze of the expansion of public institutions of higher learning after that time. Without going into the merits of the issue, one has to think how best to save the system that was built over the past 50 years and ensure the quality of education and its sustenance. Mobilizing
additional resources through some kind of educational tax is one possibility. Seeking private participation and private resources may be another option. While the perceptual change and attendant resource constraints are evident, the consequential policy-frame is not clear. There is no declared policy on the privatization of education and consequently, no clear-cut strategies were evolved for moving in that direction. Though there is nothing wrong in private participation in the education sector as in any other, its unplanned expansion by private providers determined only by market forces will hurt the system and the nation in the long run. A look at what other developing countries in the region do in this regard, including China, would be useful, particularly when the expansion of higher education to educate at least 20 to 30% of the eligible age group, the threshold rate development, has become essential to remain competitive in the global knowledge-driven economy. Leaving it to political vagaries would only slow down national growth.

Another perceptual flaw relates to the general liberal arts education. It is generally perceived by both government and private providers that general education is a kind of ‘janatha’ (ordinary) category and it is treated accordingly with indifference. It may be because it constitutes the bulk of the higher education provisions catering to nearly 85% of the eight million students. The fact that this system generates the core of flexible generalists who can fit into most of social and political leadership, government services, commerce and business undertakings besides the service sector is forgotten. When the quality of the general higher education becomes a matter of concern, it is attributed not so much to job relatedness of the programme content as to meagre inputs. Many forget that high quality liberal education is not inexpensive and its pay off in the long run is quite vital for the nation. In fact the more expensive general education programmes are not meant for all, or even the majority, of students. It should be aimed at the brightest and the most highly motivated in any cohort. Though it may appear that the connection between the short-term needs of the labour market and general education may be weak, it should be realized that in the longer run general education is an excellent investment for both individuals and nations. Unfortunately, the situation
stands reversed due to some mysterious perception of both government and society. If one looks at the huge public and private institutions of the west, one could see that they are composite institutions as they offer both liberal and professional education and they do not make any differential provisions between them in either unit cost or general facilities.

As far as B.Tech or B.E graduates who come out of many public institutions are concerned, a sort of caste system is perpetuated among them. A comparison of graduates from private for-profit colleges, state government engineering colleges, state universities of engineering, regional engineering colleges (now the NIT) and the Indian Institute of Technology reveals the prevalence of this discrimination. It ranges from sub-standard to substantial quality. Each one of them generates the same type of professional graduates but admittedly of different quality and calibre commensurate with the level of the unit cost provided. While the state government engineering colleges spend about 20-25000 rupees per student per annum, IITs run by the central government spend as high as 500000 rupees per student every year. There does not seem to be any justification to provide two different inputs to two classes of institutions that offer the same qualification. It is obviously another perceptual flaw that the country can tolerate quality variance within a group of trained human resources.

It is not uncommon, to find that the government budget allocations for technical and other professional education that cater to hardly 10% of the total student population are substantially higher than that which is allocated to general education. It hardly works out to per capita spending of about Rs. 5000 in the colleges and marginally higher in the universities. On the other hand, the per capita spending by the government is 1.5 to 5 lakhs of rupees in the technical education depending on the stature and hierarchy of the institutions. Understandably, the janatha approach has made general education even more janatha in its quality outputs. The janatha perception is naturally extended to agencies like the UGC, as it is associated with the general higher education. Anything important that needs to be nurtured and promoted in education with vision and
leadership is done directly by the ministry or through another agency. Any area the government wants to promote, whether it is technical education, management education, open learning units like IGNOU are not left to the care of the UGC. Some of the quality institutions that were originally with the UGC got out of its fold quickly before it was too late. The Indian Institute of Science is a typical example. Even now, no one can understand as to why areas like management education, biotechnology, teacher education and open and distance learning units are outside the purview of the UGC. How does biotechnology and management education fit in with the AICTE is still an enigmatic question. It is true for quality assurance efforts as well. The NAAC, that quality assures the janatha general education institutions is still struggling over amendment of its Memorandum of Association and registration of the revised by-laws which threaten its autonomy by making the role of the UGC more dominant in the NAAC. One fails to understand the meaning of autonomy if 90% of the nominations to the Executive Committee of NAAC, the body that administers the NAAC, come from the UGC or its Chairperson or ex-officios. At the same time, quality assurance of technical education and distance education are outside the purview of the UGC. It is beyond comprehension why the quality assurance of distance education covering all the distance education providers of the country, has to be with IGNOU which by itself is a distance education provider.

THE OWNERSHIP PROBLEM

There is a general confusion as to who owns the responsibility for the health of the higher education. This is one of the major hurdles in promoting quality education relevant to contemporary needs. The ownership of higher education has been a bone of contention for more than five decades now. Higher education has been in the list of concurrent subjects virtually since 1950 when the constitution was adopted. The 42nd amendment in 1976 has only brought other sectors of education under concurrency. That means both the state and the central governments are jointly responsible for the maintenance and development of education. In reality, the state governments are in the driver’s seat; they establish and fund all the educational institutions in their respective states except
perhaps for the few centrally sponsored ones. Most of the states spend about one fourth to one third of their total budget allocation on education. Some spend even more. The national government with its over-riding powers acts like a back seat driver and tends to play a dominant role by prescribing without substantial, even adequate, financial and professional involvement. The fund at its disposal may appear larger than that of any single state, but it is very little when compared to the total amount spent by all the state governments put together. Besides, most of their budget provisions are meant for the centrally sponsored universities, colleges, IITs, IIMs, IIITs, an Open University and a plethora of councils. That leaves them with very little to help the bulk of the national higher education networks that function with the support of the state governments.

Since the central government represents the nation as a whole, it has the control to regulate international linkages, access to all international funds and bi-national exchanges and linkages, and the import or export of education as a service. That gives the central government certain leverages. The central government has established many advisory specialty councils like Bar Council, AICTE, and Medical Council to advise and help the central ministry in its regulatory moves. Of these councils some have statutory powers to intervene with the functions of the universities and some do not. The central government has over the years established many supporting agencies for educational research and extension like NIEPA whose research outputs are seldom used.

The State governments have very little to spare for the development expenditure after meeting the maintenance needs of existing institutions. This is in spite of the fact that they spend nearly 25-30% of their annual revenue on education. Understandably, the State governments are not happy with the over-riding interventions of the central government or its agencies. This state of affairs makes one wonder who owns the higher education system in the country and who is responsible for its functioning.

Similar conflict of interests interfering with the routine functioning of universities and colleges and between Chancellors and state governments
are not uncommon. The same situation exists between affiliating universities and affiliated colleges. Affiliating universities determine academic programmes and their curricula and they award degrees after conducting common examinations. Affiliated colleges do the teaching. In this context, who is responsible for ensuring quality has been an unanswered major question all along.

This kind of lack of clarity and uncertainty about ownership should be resolved and it does not help educational institutions in any way. The national apex bodies like CABE should resolve these dichotomies and fix the ownership one way or the other.

PROBLEMS OF INCOHERENCE

About half of the students receiving higher education live in the developing world but that does not account for half of the global wealth. Among other things, lack of a critical size of those who reach higher education and the poor quality of education offered in most developing countries are generally perceived as major causes. There are many reasons for the malady, chief among them being resource constraints, inefficient use of whatever is available, lack of management experiences and so on. While there is not much one can do about the resources one can do better in the effective use of the limited resources. Lack of coherence in whatever is being done, with what little is available, results in a highly wasteful expenditure without any desired outcome. Quality and relevance of education are multi-factorial and unless all the efforts cohere at least at some level, it is difficult to ensure sustained quality. As outlined earlier, in the Indian context, the multi-factorial element includes multiple ownership and lack of coherence between what they do, individually and with others. A few examples are highlighted to indicate how these avoidable mistakes can contribute to the overall decline of quality.

Let us examine the question of expanding the higher education system as a whole in response to the changing global context. The emergence of “knowledge” as the major driving force of a national economy has left no other option other than that of expanding the higher education base. The
quantum of access to postsecondary education in the age group between 17 and 24 determines a nation’s economic health and standing; nations with the highest ratio, higher than 50 are the wealthiest and those with less than 10%, the poorest and the rest fall in between. The two most populous countries of the world, China and India have the dismal access ratio of less than 10% while middle income countries are struggling with about 20-25%. World over, countries are taking major policy decisions to improve this magic number. India is yet to make any policy decision with appropriate resource back up except for some reference in the 10th plan document of the UGC.

The real reasons for the poor access ratio in India are not necessarily wholly due to lack of political-will, public funds and other resources. There may be other factors that need correction before one plans on expansion of the higher education base. The most important reason that is not given adequate attention in many policy discussions, is the lack of demand for higher education from the population. In most of the Asia-Pacific countries the annual growth in demand for higher education has been only 2-3% over the last two decades and has been about 5% in India and marginally higher in China.

Without any attention to the lack of demand from the students, attempting to expand the system with the help of the ‘for-profit’ private providers, as it is being done, will only lead to further complications. The figures indicate that these private providers are catering only to the existing clientele by attracting it with popular and job-oriented programmes from public institutions. They do not add up to the real expansion in the overall enrolment.

The apparent lack of interest for higher education among the population is due to many reasons. Foremost among them is the prevalent unemployment rate among the educated in the developing countries which are still groping with agricultural and traditional industries that need only a semi-skilled or unskilled workforce. Another reason is the inadequate spread of school education that is the feeder line for higher
education. School education was supposed to have been universalized in India long back, but that has not taken place for various reasons. If these are not corrected, mere expansion in the number of higher education institutions with or without private participation will not bring the desired results.

Another glaring example of incoherence can be seen in the UGC efforts to improve quality of education. It has now prepared national curricula in about 30 subject areas at undergraduate and postgraduate levels. It is apparently a revision of the common curricula it had framed about 20 years ago. From its circular, it appears that it is mandatory for the universities and colleges to adopt them with some modifications. Apparently the perception behind this effort is that academic contents of the Indian qualifications are not of expected quality and standards. Universities are expected to upgrade and revise their curricula every year and they have statutory provision to do so and one would wonder what makes a central agency like the UGC prescribe curricula to nearly 15000 institutions in the country.

The lack of coherence in this well-meaning effort causes more damage than good. For example, it is understood that the UG curricula prepared by the UGC in most of the subjects are no better in content than that of the 12th standard. A proper coherence between school and higher education in the matter of curriculum would have provided a seamless transition to the learners. Now, a good school student has to suffer repetition of what he has already learnt. S/he naturally would lose interest in attending the classes. When the undergraduate curricular level is diluted to that of the 12th standard, one fails to understand the rationale of having Academic Staff Colleges to run refresher courses for teachers. Does the UGC think that national universities have no expertise to evolve their own curricula? Does it think a large country like India should have one common curriculum with no scope for diversity? What is the superior wisdom to which such an agency has access that is not available to the state and central universities? There are many instances of such incoherent efforts leading to wasteful expenditure and effort at all levels.
Many of the so-called ‘schemes’ of the UGC should have been tested with the central institutions that come directly under its control. They are presumably nurtured as models spending more than 70% of the Commissions budget. A pilot study before advocating to others would have ensured the effectiveness of such schemes. The major functional incoherence at the UGC level is that it has to spend much of its resources to one category of institutions viz., central ones and has to appear to co-ordinate the poor cousins viz., the large number of state institutions, with meagre leftovers. Admittedly, 95% of its resources are distributed among less than 5% of the national higher education institutions.

It is not uncommon to see such incoherence in many of the activities undertaken at the institutional level as well. The most common example is that both universities and state recruitment boards including agencies like UPSC and SPSCs, while hiring the faculties look for the candidates’ excellence in research training and outputs but never provide opportunities or facilities for continuing their research interest once hired. Sometime ago at least M.Phil level research was considered essential for teachers. For a job in which they have to teach at least 16-18 hrs a week on a full time basis, no question is asked about their interest in teaching, on research related to teaching or experience in teaching. Though things are getting corrected, we have more teachers who are more interested in research than in teaching, a situation not conducive to quality education.

In the final analysis, more than the financial constraints, multiple ownership and in-coherence in plans and actions seem to have been the causes of most of the maladies of the higher education institutions in the country. If something is not right or is wrong, it is common for those both within and outside the ‘system’ tend to blame the institution and its immediate functionaries. The quality and relevance of education depend on the coordinated efforts of the providers, national agencies that regulate institutions and their functionaries and stakeholders, including the society at large. If the educational quality is the prime agenda in the new millennia, it is important that a coordinated strategic plan should be in place that can work within the limits of resources while an all out effort...
is made to enhance the resource base from all around. Though one can be frugal, one should do well to remember that the outputs are always the function of the inputs and excuses, however legitimate, are not acceptable in the competitive world.
QUALITY HIGHER EDUCATION AND SUSTAINABLE DEVELOPMENT: PUBLIC POLICY CONCERNS

Jandhyala B.G. Tilak*

I feel honoured and distinctly privileged at the invitation of the University of Hyderabad and the National Assessment and Accreditation Council to deliver this special lecture in the NAAC Decennial Year Lecture Series. I am grateful to Professor Prasad, Chairman, NAAC for the honour.

I wish to begin my lecture by referring briefly to the context of global policy in which the emerging Indian higher education policy may be placed and then review the conception of the role of education in development. After briefly noting the achievements and failures of our higher education system, as it evolved during the post-Independence period, I wish to concentrate on the issue of quality of higher education and show how the recent public policies and approaches of the government towards higher education, specifically relating to funding and privatisation, cause irreparable damage to quality of higher education. I end up finally making a few general observations on what needs to be done. I have been highly selective in choosing issues for my lecture today and I cannot claim to be anywhere near being comprehensive to deal with

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various complex issues of higher education, or being thorough even in my limited analysis. The broad canvas that I have tried to paint may raise more questions than it answers.

The Global and National Policy Context

For quite sometime, higher education policies in many developing countries, including India, have been based on several questionable premises, such as:

- higher education has over—expanded in developing countries;
- higher education has expanded at the cost of primary education;
- higher education is heavily subsidized by the State; and
- developing countries do not require higher education, as they do not contribute to development.

Policy prescriptions, particularly from the World Bank, have argued against the expansion of higher education, and for an exclusive focus on primary education; and they have contributed to the spread of the questionable assumptions and presumptions mentioned above. The unquestionable acceptance of the above by developing countries either out of compulsion or out of conviction, has led to the overall neglect of higher education. Many developing countries have shown apathy towards higher education, deliberately ignored it, reduced public investments in it, allowed laissez-faireism, and even adopted policies towards marketization of higher education. Market forces have become very active, but since the markets in developing countries are incomplete, and imperfect, the outcomes are also far from perfect, and in fact, in some cases, the market forces produced disastrous consequences on quality, equity and access to higher education. India is a typical case in point.

In this context, some of the developments in the arena of higher education policies are worth noting. I have described elsewhere (Tilak, 2003) in some detail the chronological developments of the recent period and their effect on higher education policies in India. The 1986 World Bank Policy paper,
that has clearly recommended reallocation of resources in favour of primary education and against higher education, has a tremendous effect on educational policies in developing countries. The 1990 “Education For All” conference at Jomtien has convinced many that unless the growth of higher education is capped, EFA goals cannot be achieved. The introduction of economic reform policies in India in the early 1990s changed the whole discourse on higher education in India leading to public apathy for higher education and the corresponding market reforms and even to attitudinal changes on the role of higher education - that it is not a public good, not a merit good, no further expansion is needed, and the State can even withdraw from higher education. Most of the developments that followed in India testify to this. The effect of the above has been so significant that the 1998 UNESCO world conference on higher education, the report of the international Task Force on Higher Education and Society, titled, ‘Higher Education in Developing Countries; Peril and Promise’ or the 2002 World Bank report on ‘Constructing Knowledge Societies’ - all of which emphatically argued in favour of higher education but they could not change the attitudes and public policies towards higher education to any considerable extent.

HIGHER EDUCATION AND DEVELOPMENT

I wish to underscore four important issues:

a) Higher Education and Sustainable Development

First, the role of higher education and sustainable development. As the Routledge Dictionary of Economics defines, sustainable development is “long term development which includes the establishment of basic economic and social institutions necessary for economic growth.” In the present myopic stage, where we are unable to look beyond immediate current needs, the criticality of having a long term perspective for development of societies needs to be underscored. Education is one such institution that is both an ingredient as well as an instrument of sustainable development. Recognising this, the United Nations has launched the decade of sustainable development.
Sustainable development is about making sure that all people can enjoy their lives fully in the present as well as in the future. It refers to sustainable society in terms of social, economic, political, and cultural aspects of people’s well-being. It is a holistic concept necessitating a holistic approach to development. Sustainable development refers to sustainable future, in addition to the present; it requires reorientation of the present modes of development towards not just present levels of development, but to the development of the future. The UN Commission (2000) has identified poverty, demographics, health, education and human settlements as key dimensions of sustainable development. Education forms an important ingredient of sustainable development, and higher education an important instrument of achieving sustainable development. The long term influence of higher education on all the above key dimensions of sustainable development is well known. For example, the role of education in reducing poverty, both at individual and national levels, in improving the health and nutritional status of population, in reducing fertility and population growth and thereby contributing to demographic transition, in strengthening democratic forces and in ensuring civil and political rights of the people - is well documented.

Sustainable socioeconomic development of the societies requires sustainable education systems. It is necessary to build the educational edifice that focuses on human capital as well as human development; economic growth as well as equity and reduction of poverty; modern techniques of development as well as traditional methods; national, local as well as global concerns; and secular human values. Only strong and vibrant education systems, based on sound assumptions and approaches, can play the constitutive and instrumental roles for development. In other words, a strong and sustainable education system is necessary to serve (a) itself as development, as ‘freedom’, as a ‘capability’, as a human right, and as human development, as a key dimension of sustainable development - as an end, and (b) as a means of sustainable development from economic, social, cultural,
and political points of view. Higher education is an essential tool for achieving a sustainable future. In the very context, construction of knowledge societies is also found to be increasingly relevant. It is clear that knowledge societies cannot be constructed without building strong and dynamic high quality higher education institutions. After all, creation and expansion of the frontiers of knowledge and dissemination of knowledge is the main function of universities and other institutions of higher education.

b) The Elusive Triangle in Higher Education

Second, the elusive triangle in higher education. Unfortunately we have come to a stage when we have to repeatedly remind ourselves that by higher education we actually mean quality higher education and not any higher education! In fact, if higher education does not produce high quality graduates, it cannot and does not deserve to be called ‘higher’ education. Quality encompasses almost every dimension of higher education. Drawing from the familiar growth versus equity arguments in the theory of economic growth, the equity versus efficiency quandary was propounded by many in the area of education. But I firmly believe that access, quantity and equity - all the three dimensions of higher education are very closely related to each other. A higher education system which is accessible to many and equitable, but of low quality is as weak a system as a higher quality system that is inequitable, providing low access to the youth of nation. If a system of higher education is described as excellent and of high quality, but its doors are closed to many eligible youth, one may find the very definition of excellence and quality problematic. As Amartya Sen remarked, excellence in higher education must include equity. A properly developed higher education system that accords due importance to access, equity and quality can be viewed as a right-angled triangle, which J P Naik referred to as an “elusive triangle” in the Indian case. This still eludes. In the context of sustainable development, a holistic perspective of looking at all the three dimensions of higher education assumes utmost significance.
c) **Higher versus Secondary versus Primary**

Another prefatory statement I wish to make is a similar one, having three angles. If one speaks about higher education, it has become fashionable to look at him or her as an opponent of primary or school education, and vice versa. It is being increasingly viewed that higher education prospered in India at the expense of primary education and that more importantly, primary education suffered as higher education progressed, and hence if primary education is to be universalized, there is need to arrest, if not to cut down the growth of higher education. Such a view ignores the inter-dependencies of one layer of education on the other. After all, it is higher education that provides the manpower - teachers, planners, and administrators - a critical input into primary and secondary education. On the other hand, the graduates of primary education form inputs into higher education. Hence, one has to have not a fragmented, but an integrated holistic approach to education development, rather than holding one level of education against another. All the three layers of education are three important faces of the education edifice.

d) **Higher Education for Development**

Fourth, there is also a misconception among many that higher education is not important for development, particularly in a developing economy like India, and that developing economies cannot afford it. Such a view is also propagated strongly by some international organisations like the World Bank. Estimates on internal rate of return also contributed to the strengthening of such a presumption. Though the international rates of return to higher education are lower than the rates of return to primary and secondary education, it must be nevertheless noted that the rates of return to higher education are positive, and are higher than alternative rates of return, in many developing countries, including India. For example, the social rate of return to higher education in developing regions of the world was estimated to be above 11 per cent, which is regarded as a fairly attractive rate of return, justifying public investment.
While primary education provides the base, it is after all higher education that provides the cutting edge. Historical and contemporary evidence shows that societies that concentrated exclusively on literacy and primary education and ignored higher education (e.g., Lao PDR, Lesotho and Rwanda) could not develop economically, socially or politically. It is higher education that forms the basis for technology development and even revolution in technology. Only those countries that have invested heavily in higher education could rank high in terms of the index of technology achievement, as the UNDP report on development has shown. It is higher education that makes the difference between the rich and the poor and between rich and poor nations. In the case of India too, it has been found that higher education has a significant effect on economic growth and a negative effect on poverty. After all, higher education is widely recognised as an important investment in human capital, a necessary engine of economic growth.

In short, higher education is an important form of investment in human capital. In fact, it can be regarded as a high level or a specialised form of human capital, contribution of which to economic growth is very significant. It is rightly regarded as the “engine of development in the new world economy” (Castells, 1994, p.14). The contribution of higher education to development can be varied: firstly and most importantly, higher education helps, through teaching and research, in the creation, absorption and dissemination of knowledge. Secondly, it helps in the rapid industrialization of the economy, by providing manpower with professional, technical and managerial skills. In the present context of transformation into knowledge societies, higher education provides not just educated workers, but knowledge workers to the growth of the economy. Thirdly, it creates positive attitudes, and makes possible attitudinal changes necessary for the socialisation of individuals and also the modernisation and overall transformation of societies. Fourthly, higher education also helps in the formation of a strong nation-state and at the same time helps in reaping gains from globalization. After
all, it is only those countries that have invested heavily in quality higher education benefited from globalization (e.g., East Asian Countries), and conversely, those countries that have no strong higher education system, suffered the most from globalisation policies (e.g., countries in sub-Saharan Africa). Lastly, higher education allows people to enjoy an enhanced ‘life of mind’ offering the wider society both cultural and political benefits (TFHES, 2000, p.37). So belittling the importance of higher education for development enfeebles development itself.

HIGHER EDUCATION IN INDIA: ACHIEVEMENTS AND FAILURES

During the last fifty years after Independence, higher education has expanded in India somewhat remarkably. The number of universities has increased from a meagre 20 at the time of independence (1947) to about 300 in 2002, and the number of colleges increased from less than 500 to more than 13,000 during the same period. There was an explosion in student numbers, the enrolments in higher education swelled from less than a quarter million in 1947-48 to 8.8 million in 2001-2002. Even in case of professional education, there has been “the most spectacular achievement” (Adiseshiah, 1994, p.133). Compared to an almost zero professional education base at the time of Independence, today we have seven technological institutes of high standard, six top level institutions of management, a few world class institutes of medical sciences, besides a large number of engineering colleges, medical colleges, agricultural universities, etc., in addition to a large number of private institutions that have been set up in the recent years. There are also specialised science and technology institutions and industrial research and development laboratories that concentrate on fundamental as well as applied research in the public sector. Public sector institutions also include institutes specializing in social sciences at a higher level. All these institutions could contribute to rapid accumulation of specialised human capital. Accordingly, India is regarded as having the third largest reservoir of scientific and technical manpower in the world of nations with an estimated stock of about seven million. The out-turn of scientific and
technical personnel from the vast higher education system is of the order of about 250 thousand per annum.

On the whole, today India ranks fairly high in terms of the size of the network of higher education institutions, and enrolment therein. Such an educational explosion has been inevitable as the provision of educational facilities in the pre-Independence period was very insignificant; and Independence has created an unquenched thirst for knowledge resulting in an abnormal rise in social demand for higher education. Secondly, building up a new socio-economic order after the end of colonial rule required large scale manpower with varied skills, and so the government has deliberately expanded the higher education system significantly.

However, it must be noted that despite massive growth in numbers, hardly 8-9 per cent of the 17-23 age group population in the country are presently enrolled in higher education institutions, while the corresponding ratios are above 60 per cent in USA and Canada, more than 40 per cent in several European countries, and more than 20 percent in many developed countries and also in several developing countries. In this context, international evidence must be taken note of. It shows that no country could become an economically advanced country, if the enrolment ratio in higher education is less than 20 per cent. We find no country in the group of the developed countries - whose enrolment ratio in higher education is less than 20 per cent, and conversely we find very few countries with an enrolment ratio of above 20 per cent among the developing countries. The exceptions are very few (some countries in Latin America and Philippines). Thus a level of 20 per cent of enrolment ratio seems to be the threshold level of higher education to contribute to rapid and sustainable economic progress. This evidence refers to early-to-mid 1990s. More recent evidence may indicate that the threshold level may be higher. A 20 per cent enrolment ratio in higher education may not necessarily automatically lead to high economic growth, but such a ratio in high quality higher education should necessarily contribute to high economic growth.
The massive expansion of higher education also contributed to the phenomenon of what may be called democratisation of higher education. Presently a large number of students from lower socio-economic strata constitute a sizeable proportion of the total enrolment in higher education. One-third to 40 per cent of the enrolment in higher education belongs to lower socio-economic strata, compared to the extremely elitist system inherited from the colonial rulers. Women students form currently about 40 per cent of the total enrolment. These are no mean achievements for a developing country. The emerging open learning systems, comprising traditional methods of correspondence courses, and also modern methods of distance education also contribute significantly to ‘massification’ of higher education, though a high degree of inequalities does persist between several states, between various groups of populations, and between several institutions of higher education, besides different kinds of imbalances between different areas of study.

In brief, India has made significant achievements in the development of education: the Indian education system was thrown open after independence to all at all levels-rich, poor, and middle income classes, men and women, rural and urban populations, backward and non-backward segments of the population. Social and cultural diversity has also become an important strength of Indian higher education. Secondly, as a consequence, there has been a veritable explosion in numbers - student numbers, institutions, and teachers. Thirdly, there has been the development of institutions of excellence, producing highly specialised human capital. Lastly, it could produce the second largest (next only to China) stock of educated and skilled manpower in the world, and the third largest reservoir of scientific and technical manpower.

While the strengths and achievements of higher education are significant, equally, if not more, significant are the problems and weaknesses it is associated with. As already noted, the quantitative expansion is not adequate, as only 8-9 per cent of the youth are enrolled in higher education; inequities among gender and socio-economic groups of population, and between various states are quite marked, especially in
certain regions of the country; and the inequalities among different institutions in quality are alarmingly striking.

QUALITY OF HIGHER EDUCATION

In fact, among many, the most important problem that the higher education system in India confronts is poor and deteriorating quality. Quality of higher education is indeed too difficult to measure in any comprehensive and acceptable manner. One can look at the quality of output, in terms of quality of the graduates universities and colleges produce, the values they acquire, employability of graduates, and earnings associated with their education. The labour market performance of the graduates, generally referred to as the external efficiency of education, and often measured in terms of rates of return, is taken as an important indicator of the quality of the education they have received. It is well documented that both in India and other developing countries, the rates of return to higher education are sizeable. But they indicate only a partial dimension of the quality of education, and cannot capture many other dimensions, particularly the values the graduates have acquired.

What we find in India is: there exists a good number of universities and other institutions of higher education of excellence, at the same time there also exists a large number of institutions of substandard quality. As a result, while in terms of the total quantum of output of our higher education institutions it is one of the largest in the world, the quantum adjusted for quality, and in case of even indicators of quantity, India does not necessarily rank fairly well with many developed and even developing economies. For example, India has a huge stock of above 7 million science and technology manpower, consisting of scientists and engineers, and ranks third in the world. But the myth of the third largest stock of scientific and technical manpower in the world stands exploded if one carefully examines the quality of the manpower (Tilak, 1997). The stock is not adequate to match the requirements of the economy. Any standardised international comparisons of the stock of science and technology manpower would not make any tall claims tenable. For example, for every one thousand populations, there were only 7 scientists/engineers in India.
in 1999, while in many other countries the corresponding figure is 10-30 times higher. The stock of manpower is also made of first graduates (in sciences and engineering). Post graduates are few; and doctorates are fewer. This reflects the ‘quality of the science and technology manpower India has.

As high as 89 per cent of the enrolments in higher education were made in the first degree (or undergraduate courses) in 2001-02. Students enrolled in postgraduate studies are few (9.3 per cent); and fewer are those enrolled in research (M.Phil and doctoral studies) (0.7 per cent); and 0.9 per cent in diploma and certificate courses. Further, hardly one per cent of the postgraduates who appeared for the qualifying examination in 2000 and 2001 for Junior Research Fellowship was found eligible and only 2-3 per cent of the candidates who appeared for the lectureship eligibility test in 2001 were successful. Further while about 60 thousand students are enrolled in research, the out-turn of doctorates is only of the order of about ten thousand per annum. The research output of our higher education system in terms of quantity and quality, measured in terms of easily measurable indicators, of say number of products, processes, design prototypes developed, or publications and citations, also does not compare very favourably with many other developed and even developing countries.

Quality of output of higher education depends, inter alia, upon the quality and quantity of a variety of inputs, such as physical infrastructure and teachers, which can be summed up in the form of financial resources. Hence I wish to briefly discuss the policies and trends with respect to financing of higher education in India and one or two other major policy approaches of the government towards higher education, which have a direct relevance for quality of higher education.

PUBLIC POLICIES

Funding Higher Education

Development of education, for that matter, of any sector, critically depends upon the quantum of funds available. Finances also reflect the priority the
government accords to education. A cursory look at the trends in the public expenditure on higher education during the last decade reveals a disturbing trend. Public expenditure on higher education began to decline since the beginning of the 1990s. In real prices, the union government’s expenditure on higher education declined from Rs.645 crores (in 1993-94 prices) to Rs.559 crores in 1996-97. Then there was an increase in the following two years, but the increase could not be sustained. Like the beginning of the 1990s, the beginning of the present decade marks a decline in total expenditure on higher education. Since bulk of the expenditure is incurred by state governments, the total expenditure on higher education in the country as a whole did not decline so steeply. Though state governments had experienced severe fiscal problems, they could not cut the budgets for higher education, essentially because they are non-plan expenditures, or simply the maintenance expenditure. But of course there was no significant increase either. Cut in the union government’s expenditure does mean cut in plan allocations for higher education that have a direct bearing on quality. It is interesting to note that this is the period during which it is being repeatedly stated that the quality of higher education has to be improved to produce globally competitive graduates. Perhaps another faulty assumption made is: quality of higher education can be improved without substantially increasing resources.

In terms of relative priorities as well, higher education suffered severely. The share of higher education in the national income indicates the relative priority the government gives to higher education. Available statistics show that the importance given to higher education has declined steeply, with the share of higher education in GNP falling from 0.46 percent in 1990-91 to 0.35 percent in 1997-98. It’s only in the later years, some increase in the ratio can be noted. But again the increase does not seem to last. According to the budget estimates, the corresponding proportion falls to a level below that of 1990-91 i.e., to 0.4 per cent. Note that India was spending about one per cent of her GNP on higher education at the beginning of the 1980s. Many advanced countries seem to spend much higher proportions of their GNP on higher education.
The share of higher education in the total government expenditure may tell us more clearly about the priority that the government gives to higher education, as the government has more direct control on its own expenditure than on the national income as a whole. But this has also experienced a similar trend. As a per cent proportion of total government expenditure, the share of higher education declined from 1.6 per cent in 1990-91 to 1.3 per cent in 1996-97; it has increased in the later years, but again declined to 1.3 per cent in 2002-03 (budget estimates), i.e., to less than the 1990-91 level. In short, currently India is spending on higher education, in both absolute and relative terms, less than what she was spending about 12 years ago!

More strikingly, allocations to higher education in the eighth and the ninth five year plans reached the all-time low. Though plan expenditures in education are generally small compared to huge non-plan expenditures, since they set directions for future development having a significant bearing on quality, allocations in the Five Year Plans assume much importance. Hardly 0.3 per cent of the total Five Year Plan expenditure in the eighth Five Year Plan was devoted to higher education, compared to 1.2 per cent in the Fourth Five Year Plan. Interestingly, contrary to general beliefs, the decline in allocations to higher education has not necessarily benefited elementary or secondary levels of education in terms of increased allocations.

The entirely disturbing financial squeeze gets reflected in the physical infrastructure of our higher education institutions. It is common knowledge that many colleges, and even universities suffer from severe inadequacy of physical resources such as buildings, classrooms, libraries, etc., not to speak of high-tech modern equipment, as one frequently notices higher education institutions being run in poor quality buildings with inadequate libraries and laboratories, classrooms often without power, no sufficient playgrounds, etc. One notices that the situation is far from satisfactory in many universities, including in some of the best universities, whether central or state. The situation is worse in affiliated colleges, where 90 per cent of the undergraduate students and 34 per cent
of the post graduate students study. While this is most likely the correct
diagnosis of the situation, no systematic evidence is available on these and
related aspects. In fact, there has been no proper attempt to make a
detailed survey of the physical infrastructure and of even teachers available
in higher education institutions, of the kind made in school education (by
the National Council of Educational Research and Training through its All
India Educational Surveys). It would be useful to have such a survey once
in a while, if not at regular intervals. Such a survey would be extremely
useful to examine the quantum and quality of physical inputs that go into
higher education. This may serve as an eye-opener to many to the ground
realities, and may also help in better planning.

Financial stringency also affected the quality of teachers and their
recruitment. There were in all 4.3 lakh teachers in higher education
institutions in 2001-02. Again even though detailed information is not
available, it is widely felt that only a small proportion of them hold
doctorate degrees. In this context, it is also necessary to note that it is only
recently, particularly after the National Policy on Education 1986 was
formulated, some important efforts have been initiated for the
improvement of quality of teachers. A number of academic staff colleges
were established to improve the quality of higher education through
orientation and reorientation of college teachers on a regular basis. There
are presently 51 such colleges. In addition, quite a few university
departments also organise refresher courses to college teachers.

While speaking about teachers, we may note that occasionally the
University Grants Commission and other bodies and committees refer to
small pupil-teacher ratios, and the need to rationalize them. But pupil-
teacher ratio, a common indicator of quality of teacher inputs in school
education, may not be a relevant indicator of quality in higher education
either; nor can it be used in teacher planning. There is also no justification
for non-filling up of hundreds of vacant teacher positions in the universities
and colleges, a measure that is adopted to save financial resources and also
to avoid problems of management of teachers. Certainly such an approach
does not lead to sustainable quality higher education.
A very drastic decline in public expenditure on higher education can be noted, when we examine the trends in per student expenditure. In 1993-94 prices, expenditure on higher education per student declined from Rs.7676 in 1990-91 to Rs.6149 in 2002-03 (budget estimates), a decline by nearly 20 per cent points in the index. Decline in per student expenditure means decline in real resources available per student on average, seriously affecting the quality of higher education. After all, there were steep cuts in budget allocations, for libraries, scholarships, faculty improvement programmes, etc. As a consequence, serious effects on the quality of higher education are already widely felt.

More importantly one can also notice a decline in the public expenditure on inputs that are directly related to quality, such as research. The central government’s plan expenditure on research has come down from a low level of Rs.5.35 crores in 1989-90 to 4.6 crores in 1994-95. In real terms, it declined by 11 per cent every year. Non-plan expenditure on research also declined in real terms. This is in case of research in general education. Research in technical education suffered more severely: even in current prices, the plan expenditure declined by 60 per cent and non-plan expenditure by 82 per cent. Obviously the decline in real prices is higher. Quite interestingly such data are not available for the later years! However, some other relevant piece—meal statistics is available from the UGC. According to the latest available statistics from the UGC, research fellowships awarded by the UGC amount to a petty. 1.8 per cent of the total non-plan grants of the UGC in 2002-03, compared to 5.7 per cent in 1995-96. Government’s budgetary allocations for scholarships, a crude measure of equity and also excellence, declined quite steeply during the 1990s; as a proportion of the total expenditure on higher education, it declined from 0.6 per cent in 1990-91 to 0.23 per cent in 2001-02 (UGC, 2003). In 1990-91 the UGC grants for ‘quality improvement in education and research’ amounted to 76 per cent of the total plan grants of the UGC. The same budget head does not appear in the budgets of the later years. But if ‘promotion of excellence and quality’ is the substitute for it, it received only 25 per cent of the plan grants in 2001-02! In 1995-96 another substitute term was used: grants for ‘promotion of excellence and research’
and the grants made for this purpose worked out to be only 14 per cent. Grants for quality improvement and research programmes such as College Science Improvement Programme (COSIP) and College Humanities and Social Science Improvement Programme (COHSSIP) have flown quite erratically in the recent years, making sharp ups and downs. Both together accounted for Rs.1.93 crores in 1999-2000, which declined to Rs.1.14 crores in 2000-01 in current prices. In 2000-01, 2003 ‘major’ and ‘minor’ research projects were approved, and the total grants (including for the on-going projects) were of the order of Rs.25.4 crores; in the following year, the number and the grants both declined: the number of projects approved were only 1609, and the grants released were Rs.17.6 crores. The total number of minor research projects was 1737 in 1998-99, which declined to 1184 in 2001-02. During the corresponding period, the number of major research projects declined from 447 to 425. The overall shift in allocation of resources away from research activities could be largely attributed to the myopic conception that research is not necessary for improvement in the quality of higher education or that research is not an important part of higher education or that it is not important for national development either. It may be remembered that traditionally universities are homes of research and that research and training mutually strengthen each other, besides contributing to national development in several ways.

The sum up, higher education institutions are being treated as if they are a part of a non-essential sector with the attendant vulnerability to the vagaries of fluctuations in public spending. This has to change and higher education needs sustained funding from the public exchequer.

Though finances do not solve all problems, they are absolutely necessary for any improvement, even for the maintenance of the system. It can be said that though finances are not a sufficient condition for development, they form a crucially necessary condition for the development of higher education. Inadequate funding certainly would seriously affect the quality of higher education. The budgetary squeezes compel the universities to spend considerable time and energies of the faculty and the heads of the institutions not on improvement of the quality of research and teaching,
but more on mobilization of financial resources. As a result, mobilization of resources and reduction in costs are becoming important, if not the sole objectives of university management. More than academic management of the institutions, of late, financial management has become an important concern of many institutions of higher education in India. Accordingly, institutional heads are chosen not necessarily with high academic credentials, but more based on their proven ability in financial management. Because of such policies, even some of our institutions of higher education known for excellence are in peril (Indiresan and Nigam, 1993).

**PRIVATISATION OF HIGHER EDUCATION**

Another important policy issue relates to privatisation of higher education. Private education is not an altogether new phenomenon in India. But since the mid 1980s the term ‘privatisation in higher education’ has surfaced more explicitly, almost with a different connotation, comparable to privatisation in normal economic goods, which can at least partially be attributed to the emphatic policy prescriptions of the World Bank (1994). Today terms like even ‘profit making private institutions’ and ‘commercialisation of education’ seem to be no more a taboo in discussions on higher education in India.

We do not have nation-wide statistics on private higher education in the country. But whatever limited information is available, that indicates clearly that (a) the profit-making private sector in higher education is growing rapidly; b) it is not confined to a few engineering and management disciplines, but is extending its coverage to all areas of higher education (c) the private sector has already become so large and dominating in some states that the public sector has become diminutive in relative size, and (d) the rapid growth of private higher education is indeed causing serious damage to various dimensions of higher education, including specifically equity and quality of higher education. For example, 65 per cent of the one thousand and odd degree colleges in Andhra Pradesh were private (self financing) colleges in 1999-2000, compared to zero number of such colleges in 1956-57, i.e., at the formation of the state.
The growth in private higher education has already resulted in a steep decline in the quality of higher education in the country, as the quality of private higher education is itself poor, besides having a contagious effect on public higher education, pushing down the overall quality of higher education in the country. This has also been the experience of a few other countries that opted for the predominance of the private sector in higher education, such as Philippines, and some countries in South America. The absence of any strong regulatory mechanism is one principal reason for the same. Based on large scale evidence on various countries, I have exploded in another place (Tilak, 1991) several myths about the superiority of private higher education. That private higher education institutions cause distortions in information to show high rankings is also widely noted. On the whole, the growth of private higher education has contributed to more problems than solutions in terms of all the three dimensions, viz., access, equity and quality.

Further, while one can say confidently that higher education contributes to economic growth, one cannot say the same with any confidence that private higher education does contribute to development. If one looks at international evidence, we find that countries that are characterised by the predominance of private higher education systems could not progress much - economically or socially or even politically. Exceptions to this are very few (e.g., Japan and Korea). Even with high enrolment ratios, such countries (e.g., countries in Latin America) continue to remain underdeveloped, or ‘developing’.

In addition, since higher education is allowed to be guided by market signals, the meaning of the very concept of quality began to change. Quality is interpreted to mean ‘saleability’ or marketability. Accordingly, most higher education institutions tend to concentrate on marketable courses that yield quick money. As long term national considerations give place to short term immediate private needs, diversity in curriculum is not cared for. Areas of study that used to be considered traditionally as the backbone of higher education, such as basic sciences, and social sciences get relegated to a secondary place, and courses such as business
management, hotel management, fashion technology, and computer packages get priority. Many institutions tend to concentrate more on offering short term programmes that train learners in marketable skills, often missing even the distinction between higher education and training. As Clark (1995, p. 159) notes in the case of USA, which seems to be applicable to India too, humanities and social sciences are thrown aside; doctoral programmes in not only social sciences but also in basic natural and physical sciences are “surprisingly weak”; most advanced-level education is “radically underdeveloped”; and the research - teaching - study nexus has become highly problematic. This is mostly attributable to the increasing role of the private sector in higher education.

Most importantly, as market forces predominate, the public benefits of higher education recede from view. Market driven modes displace liberal intellectual traditions. As markets respond to demands, and not to needs, national manpower needs and social needs go into oblivion to individual demands to dominate higher education. Social, cultural and intellectual diversity, a strength of most public higher education systems cannot be adequately maintained by private higher education systems. Diversity can be under a serious challenge. As a result, private higher education systems might produce a somewhat homogeneous group of graduates, homogenous in their values and ideology, which can even be detrimental to the progress of the society. Therefore, it has to be realised that “even when markets work well and students receive a quality service, private institutions may still fail to serve the public interest” (TFHES, 2000. p.28). Private higher education, where students have to pay heavy fees, often equivalent to the full cost, if not more, has thus a serious effect on the values that the students acquire. Students paying exorbitantly high fees obviously do lack any consideration for national interest such as public services, service in rural areas, service to the poor, etc. The sole objective of these students, whether realised or not, is to recover the investments made in education and / or to emigrate to greener pastures. No wonder, the products of purely materialistic education cannot be expected to be otherwise. This would be the most harmful effect on the society. This shift in the values may be a very bad reflection of the quality of higher education.
OTHER POLICIES

However, there are some welcome interventions and initiatives that are being made to improve the quality of higher education in India. Assessment and accreditation has become an important initiative taken by the government in the recent years, which can have a very positive effect on the quality of higher education in the country. This is indeed surprising that this was not taken up for a long time. The assessment and accreditation programme had indeed shaken up some of the universities and colleges and provoked soul - searching about quality. After all, assessment and accreditation form an important instrument of maintenance of quality and standard in higher education. There may exist scope for making these processes highly respected and valued by the universities and colleges, but nevertheless it has to be realised that there is no substitute for assessment and accreditation. This may help in identifying not only black sheep, but also shining stars.

Secondly, following the resolve made in the National Policy on Education 1986, to encourage institutional innovations and experimentation, emphasis has been placed on autonomy; and a good number of colleges are given autonomy under the programme of establishment of autonomous colleges to promote new methods of teaching, research and learning. Currently there are about 130 such colleges affiliated to 29 universities. Autonomy should, however, mean mainly academic autonomy to design new courses and curricula, to promote quality and to make innovations, rather than financial and administrative autonomy. By granting autonomy, the role of the government should not get minimized particularly in funding, planing and in providing a healthy sustainable teaching - learning environment.

Thirdly, more recently the UGC has started a programme to identify and support universities with potential for excellence, in order to improve excellence and quality in these institutions, which may influence the quality in other institutions as well. But such initiatives are too few to have a massive effect on higher education. More sustained and concerted efforts are needed to promote high quality higher education.
CONCLUDING OBSERVATIONS

Sustainable development requires a sustainable education system, and within education, higher education is particularly important. A strong sustainable higher education system is both a part of sustainable development and a means to achieve it. Higher education institutions are indispensable because they form a vital part of, and at the same time contribute to, the social architecture (Perlmutter, 1965). Building up of a strong, higher quality and vibrant higher education system requires sound policies and sustained financing. I have argued in my lecture that faulty assumptions about higher education would lead to unsound policies and building up of weak and fragile educational structures. It is also noted that there are some significant achievements of our higher education system of which we can be proud, but at the same time, there are also glaring inadequacies and failures. Deterioration in quality has been one of the most serious problems of higher education in India and in this context, I have tried to show how certain policies, particularly those relating to funding and privatisation have been aggravating the situation. Let me conclude by outlining a few general considerations for the improvement of quality in higher education.

It is necessary to plan development of education in such a way as to contribute significantly to sustainable development.

- Sustainable education development requires a long-term perspective plan. A long-term vision is critically important. The long-term perspective vision would form the basis of medium and short-term plans and policy changes.

- Sustainable education development requires balanced development of all layers/types of education. Emphasis on one level of education cannot be at the cost of another level of education. While literacy and school education provide the foundation for development, it is higher education that can provide the wherewithal for sustainable development and help in the construction of knowledge societies.
Quality is one of the most important aspects, for education to be sustainable and it contributes to sustainable development. Substantial allocations have to be made for improvement in the quality of higher education, focusing on improvement of quality infrastructure and teachers.

Equality of opportunity is one of the most cherished objectives of educational development everywhere. Specific focus has to be laid on improvising equity in higher education - by gender and also by other socioeconomic characteristics.

The role of the State in providing higher education cannot be minimized under any circumstance. The state has a vital and irreplaceable role in higher education. The private sector cannot be relied upon for provision of education, which is a public good, and which is also considered nowadays a ‘global public good’.

We need to expand higher education, as we have to raise the enrolment ratio in higher education to above 20 per cent for the economy to rapidly progress. But this does not mean that there can be proliferation of low quality institutions all over the country. That would indeed be counter productive. There is need for a strong regulatory mechanism that would ensure higher quality and standard.

As Kalam (2003) recently noted, ‘empowerment of higher education’ is the critical need of the hour. Higher education needs to be empowered, as it and it alone helps in sustainable social, economic and political development of the societies. The empowerment of higher education should include (a) provision of a basic minimum level of physical infrastructure facilities to all the colleges and universities (a crash project like the Operation Blackboard project in primary education may have to be launched), (b) recruitment of good quality teachers in all institutions, and further enhancement of
their quality, and above all (c) sound public policies particularly relating to funding and management.

- Universities are traditional homes of research. To transfer research from universities to specialised research institutions, and to leave only teaching to the universities may not be proper in the long run. After all, research and teaching are inter-related mutually strengthening each other.

- Lastly, higher education develops and nurtures values. It is important that special efforts are made to preserve and promote educational values as thirst for knowledge, critical thinking, and search for truth, and more importantly to inculcate universal human values such as peace, tolerance, non-violence, love, patriotism, social welfare, etc., through education. Such an education will have an everlasting effect on achieving sustainable development. This is perhaps more important in the era of globalisation, when national and traditional values are fast getting replaced by global, in fact Western, and market values. This may, in the final analysis, reflect the true quality of our higher education. These are the educational and human values that Jawaharlal Nehru expected our universities to provide, when he observed, “A university stands for humanism, for tolerance, for reason, for the adventure of ideas and for the search for truth. It stands for the onward march of the human race towards even higher objectives”.

REFERENCES


UGC (2003) Annual Report. New Delhi (and reports of earlier years)


World Bank (1986) *Financing Education in Developing Countries*. Washington DC.


TRANSITION TO KNOWLEDGE SOCIETY: WHAT UNIVERSITIES CAN AND SHOULD DO

Goverdhan Mehta *

This afternoon I have chosen a somewhat esoteric theme. At first sight it may not appear to be important but it is not difficult to perceive this to be the essential basis of what our country needs to be doing in the area of higher education, and of the university system in particular. As I shall be covering a vast canvas during my talk, much of what I have to say will be on the macro level and I shall leave a few random thoughts for you to ponder over. If, at times, my lecture appears to be negative, I hope you will not only forgive me but you will try to understand it in the light of my belief in raising issues of the kind I am raising. It is really a wake-up call for the education system in this country.

The title is self-evident: “Transition to Knowledge Society: What Universities Can and Should Do”. Nevertheless it is not prescriptive as I do not have any set or definite recipes as to what universities should do to provide wholesome and relevant education. I strongly feel that universities must begin to think creatively about what they should be doing and find their own direction and goals. In fact, I could as well have titled my talk as “Transition to Knowledge Society: Challenges and Opportunities” but my specific focus is narrower. At this point of time we

are primarily concerned with knowledge as we live in the knowledge era. There seems to be a general consensus that the twenty-first century will be a century of knowledge.

**KNOWLEDGE SOCIETY**

What is “Knowledge Society”? It will be difficult to jettison it within a definitional framework. However, one can, perhaps, identify its characteristics and that is what I have tried to do. A knowledge society is one that uses knowledge holistically to enrich and empower the people. It is an integral driver of sustainable development for societal transformation. It must also have the attribute of life-long learning that is committed to innovation, competitiveness and skill development. It helps the people to acquire the capacity to generate, diffuse, utilize and protect knowledge in order to create economic wealth and social equity. Finally, and this is very important, it enlightens people towards an integrated view of life as a fusion of mind, body and spirit. It is not as though the knowledge society and knowledge era has descended upon us overnight. It has evolved over several centuries.

This slide shows the stages of the evolution of human society over the last few hundred years and also the accompanying societal transformation.
The progressive transformation of human society from an agricultural society in the Middle Ages through an industrial society to a knowledge society in modern times is shown by the upward arrow in the figure. Accordingly, economic growth is marked by skills steered by technology, information networks and cognitive innovation with the changing outputs of industry, information and knowledge respectively. It is obvious that such a transformation has been propelled by two factors, namely, education; and science and technology. I would not go into what science and technology can contribute to knowledge because that will be a bit too specialized and, therefore, I shall focus on the knowledge facet of it. As far as science and technology is concerned, I think the following quote should suffice to show that human development is contingent on the knowledge of science: “The twentieth century’s unprecedented gains in advancing human development and eradicating poverty came largely from technological breakthroughs.” The dramatic impact science and technology has made on human conditions and economic development in Europe is just one shining example.

KNOWLEDGE - DIVIDE AND ASSYMETRY

The world is in transition to the Knowledge Society and it is learning to cope with the challenges of globalisation the transition has made inevitable. The assymetry in the global society has made this progress anything but smooth. The growing inequalities prevalent in the world have led to the great knowledge divide. The three illustrations that follow make evident the paradox of imbalance of knowledge which works against equity.

1. The assets of the three richest persons in the world exceed the GDP of the poorest 48 countries and almost one-fourth of our country’s GDP is less than the combined wealth of these richest persons.

2. 1.2 billion people, out of the total global population of 6.2 billion live on less than one dollar a day and 2.8 billion on less than two dollars a day according to 1988 figures. Nearly half of humanity lives on less than two dollars each individual a day.
3. U.S. with 5% of the world’s population consumes 85% of the world’s resources.

I shall try to project also another dimension of this asymmetry. The following figures show the vast disparity between knowledge haves and knowledge have-nots.

<table>
<thead>
<tr>
<th>Population</th>
<th>Connectivity with internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed World</td>
<td>15%</td>
</tr>
<tr>
<td>Developing World</td>
<td>85%</td>
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</tbody>
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In the developed world only 15% of the population lives with 88% connectivity with internet. In the developing world 85% of the population lives with only 12% connectivity. Connectivity through internet is indispensable to knowledge society as it is said, “When society gets connected knowledge flows”. When we have such disparities between sections of population and the rate of connectivity, knowledge does not, and cannot, flow uniformly to all parts of the world. This disparity is serious especially in the context of the galloping pace of knowledge.

The following analysis proves the observation.

- **OOAD**  - 1750  Knowledge doubled (in 18 centuries)
- 1750    - 1900  Knowledge doubled (in 150 years)
- 1950    - 2000  Knowledge doubled (in 50 years)
- after   - 2000  Knowledge doubles every year

There is an estimate that more new information has been generated in the last 30 years than in the previous 5000 years. The pernicious paradox is the ever increasing concentration of growing knowledge in fewer and fewer hands with the galloping pace of knowledge explosion and its denial to a majority of people.

Yet another dimension makes this phenomenon quite disturbing. This is the paradox of explosion of knowledge on the one hand, and shrinking
time domains between the generation and use of new knowledge on the 
other. Faraday, for instance, discovered electromagnetic effect in 1830. It 
took 51 years before the first bulb was lighted. Watson - Crick discovered 
the DNA structure of the double helix in 1950 and took only 20 years 
before the first successful genetic experiments were made in 1973. Today 
computing power is doubled in every 18 months. Networking (bandwidth) 
is doubling every 12 months. These are the figures of last year and the time 
span has shrunk further since then. The day is not far off before Richard 
Fineman’s (a great physicist of the last century) prophecy comes true - he 
said, “A time will come when Encyclopaedia Britannica can be stored on 
the tip of a pin”.

The knowledge divide is so formidable that we have a long way to go 
before we bridge the gap. The following photographs prove the gravity 
of the situation. On the left side of the slide

![A long way to go...](image)

SLIDE - 2

you see the photograph of a class room in a South Indian school: there 
is no electric light, only a single petromax is kept on a sill under the 
thatched roof, in front of the learners who are squatting on the floor. On 
the opposite side is the photograph of an affluent class room in an internet 
business school in the developed world: everybody is sitting before a
monitor as the teacher is making a power-point presentation. Much time, effort and resources need to be expended for the latter privilege to become universal.

However, there is hope, there is promise. I am sure many of you are aware of the “hole-in-the-wall experiment” successfully made by NIIT in Delhi

\begin{center}
\textbf{But there is promise...}
\end{center}

\textit{The ‘HOLE-IN-THE WALL’ EXPERIMENT, NIIT, INDIA
Experiments in Minimally Invasive Education}

\textbf{SLIDE 3}

A computer terminal and a monitor were installed in a niche in a wall in a slum. Within a few days the children of the slum learnt not only to use them but they also learnt to serve on the net and glean some useful information. This helps us to perceive that talent is all pervasive, access and opportunity are not. In a country like ours which has a population of one billion, people are a renewable source of knowledge if only it is tapped. At once this leads to the inevitable conclusion that education is all important.
EVOLUTION OF THE HIGHER EDUCATION SYSTEM IN INDIA

In the year 1835 Lord Macaulay introduced Western education to India. He was a much maligned man but, in his own right, he was an intellectual who was quick to perceive the importance of science to the country. The minute of the British parliament which ushered in the modern system of higher education includes the comment: “The great object of the British Government ought to be the promotion of European literature and science among the natives of India.” So he could be credited with giving modern science and English to India which we consider today to be the great assets for finding our place in the comity of nations.

The first attempt was made in our country to restructure and devise a system of higher education immediately after Independence in 1948 when the Government of India appointed the Radhakrishnan Commission. The following quote from its report is as relevant today as it was at that time: “The universities, as the makers of the future, cannot persist in the old patterns however valid they may have been in their own day. With the increasing complexity of society and its shifting patterns, universitates have to change their objectives and methods, if they are to function effectively in our national life.” Incidentally, it was on the basis of the Radhakrishnan Commission report that the University Grants Commission was formally set up.

In 1966 another effort was made to reform education by the Kothari Commission. It made detailed recommendations not all of which were adopted. The following are a few of them which were accepted: free compulsory education; common school system; introduction of the 10+2+3 system of education; vocationalisation of school education; and education for moral, social and spiritual values. In fact, Kothari Commission was probably the last serious effort made in our country to reform the education system.

We did make a feeble shortlived effort in 1986, following a similar effort in 1968. The National Education Policy (NEP) had two distinct features
besides reiterating whatever was already there. These are regeneration of universities with higher investment and better integration of educational agencies. We may note that each one of these efforts corresponds to the colonial era, Independent India and India in transition towards a knowledge society respectively. The Kothari Commission recommendations were made at a time when India was in transition through changes which had not yet marked the confident path of progress. The Green Revolution was yet to come. The mind set of the people at that time was different. In 1986 when the National Policy on Education was evolved, momentous global geopolitical and economic changes were taking place. It was in this context the policy change was attempted. It is important to realize that the period of forty years that followed the Kothari Commission effort has been one of paucity of substantial educational reform except for a few sporadic, piece meal attempts at reforming a stray feature here and there. A holistic reform has been indefensibly missed.

ROLE OF UNIVERSITIES

I have not relied on published material on higher education although there are many books and articles written about it, especially about the role and strategies of universities. What follows is my own personal view of the role of universities. One needs to distinguish between two of their roles, the traditional and the modern. The traditional role of universities in our country demands

- to meet human resource needs for building human capital for national development;

- to encourage the professional growth and satisfaction of every individual who is looking forward to a meaningful and purposeful life;

- to be the repository of the nation’s intellectual resources guarding against its depletion in the interest of maintaining its intellectual wealth;
to create a pool of enlightened citizenry; and

to secure the nation’s future through knowledge creation and innovation.

These are the kinds of activities universities were expected to promote during the last fifty years. Whether or not we have successfully done them and where we have failed are questions posed to all of us in the process of honest heart-searching. This limited role, however, is not adequate for the future because we are in transition to become a knowledge society. The new challenges universities are expected to meet currently are:

- building human capacity for gaining a competitive edge in global economy (and this is different from building human capital);

- acquiring expertise in, and training people for, sustainable development - a task which a university system alone can perform better;

- shaping a more inclusive and equitable society because the world is conflict-ridden and unhappy because of growing inequalities; and finally;

- fostering global collaboration and partnerships to explore “authentic spaces of possibility” with the help of the concerted and corporate effort of the entire university system rather than by individual institutions or agencies.

These are difficult to achieve unless the university system is reformed in the direction of creating a society of knowledge and skills in our country. We all know that India has one of the largest systems of higher education in the world. Just a glance at the figures will make this clear:
Number of universities         310
Number of colleges            15,500
Number of engineering Colleges 1,200
Number of students            9 million

This large system is basically robust and has withstood the test of time. Nevertheless it has been in a state of neglect and allowed to degenerate. Its robustness nurtures the hope that, if unleashed imaginatively, it can propel our country to become a superpower or a developed nation. As for the neglect, we, who belong to the university system, need not fight shy of admitting our own share of the blame without playing the blame game. Politicians have contributed to it; society has contributed to it; and we, the academics have contributed to it. It is high time we had set the agenda for change. It must evolve from within, from internal churning and debate. And the change envisioned should be holistic and not fragmentary or piecemeal. We may be well warned against sharing the infirmity of the Indian mind which hampers thinking strategically. Such an admission demands ruthless honesty indeed. We have suffered this malady far too long, over the last forty years, and it is time to get out of it.

THE STRATEGY: INVENT THE FUTURE

Before we attempt to invent the future, let us redefine our aspirations. I would like to redefine them as follows:

As a nation we must have the capacity to generate, assimilate, compete and protect new knowledge and innovations on real time to create wealth, alleviate poverty and enhance national security.

Are we striving to help achieve them? I am afraid, we are not. We have only been passing the buck, doing little ourselves.

The way to achieve them and to invent the future lies through making what I call a paradigm shift. A major change from the past may be that of re-establishing the balance between learning and skills. The oxford dictionary discriminates between them: ‘learning’ is knowledge obtained
from reading or studying and ‘skills’ refer to the ability to do things well. The following slide shows the interplay of skills, learning, knowledge and information.

Information is necessary for learning. When there is a dynamic interaction between information and learning, knowledge flows. I have shown the dynamic equilibrium between knowledge and learning with reversible arrows. It must, however, be remembered that while information is important to learning, too much of it will be detrimental to knowledge. Hence the superscription on the slide: “Too much information = ignorance”. Tomorrow’s world does not need a pile of text-books because all information will be available on the desktop. Therefore, the shift must take place from information learning to learning that generates skills.

What should the skills be for? They should inculcate the capability for innovations, competitiveness and entrepreneurship. These will be the major instruments we need to equip ourselves with, if we have to be a player in the emerging knowledge-based world.
Reforms triggered by such an understanding of the paradigm shift mentioned here will, hopefully, bring about a change through a process of progressive integration. In the first place a national workforce with multiple skills will emerge. We live in an era of fast changing technologies in which unifocal training in limited skills can clog progress. For instance, today we have draughtsmen who no longer depend on gestetners. The services of the gestetner operators in many universities cannot be meaningfully utilized unless they are multi-skilled. This applies to many areas of training which thus need streamlining to include multiple skills. Secondly, the reforms will lead to better social integration defusing present social tensions which rock our national life. Thirdly, they are expected to lead to a better integration into working life. Finally there will, hopefully, be an effective integration into the world.

I have a little tool box of what is needed for tomorrow’s knowledge society. Every young man and young woman needs to be equipped with this tool box. And the following are the tools:

- To learn how to learn. Much information is available and to extract utilizable information will itself be a challenge. It is like mining for precious metal in vast quantities of ore.

- To learn how to live.

- To learn how to communicate. Communication is hardly taught effectively. It is indispensable to everybody.

- To learn how to dare.

- Equip to be emotionally competent, innovative and entrepreneurial, competitive and to be an experiential learner of life skills.

This being the centenary year of the Wright brothers, who invented the first flying machine, I wish to show you this slide as an impressive instance of dare.
The caption at the bottom is appropriate “12 seconds that changed the world”. Wilber was a thinker and Orville was a tinker. They never went to school, never had any degree but they were outstanding engineers. It is said, their father, who was a venture capitalist (bishop), gave them a thousand dollars and asked them to go and make a flying machine. The brothers had a cycle repair shop and when they invented the flying machine, their invention was not accepted, nor their genius acclaimed. They were skeptical about its success but the brothers said, “We will fly it even if it crashes, it doesn’t matter”. That is the spirit of dare, the spirit of innovation which is required for tomorrow’s world. I am sure, there may be similar instances in the past of our own country but I mention this for the reason given earlier. In the background of the picture you see Wilber flying the machine and Orville watching it from a coast in Atlanta in 1904. This is the spirit universities should inculcate in our young men and young women through exposure and interaction. And we need venture capitalists like the father of the Wright brothers.

What is the new paradigm of education? Earlier I mentioned one at a major macro level. The following is at a semi-micro level:
We need a major rethink about pedagogy and curriculum.

It is essential to have an imaginative synergy between knowledge streams in the present context of convergence of different strands of knowledge. The present practice of streaming courses in +2, for example, into maths, biology, commerce and other groups is old fashioned. A scientist can also be a musician, an engineer also an artist. An imaginative synergy between different streams of knowledge, therefore, will foster the development of multiple skills.

Rekindling interest in experiments and sensory observation is quite important. Sensory observation, a unique gift of human evolution, cannot be compromised for the tedium of a sedentary lifestyle in front of a monitor which is likely to be forced on us in the future. While we should harness the full utility of machines we should not be their slaves.

We must restore the inspirational role of teacher as motivator and mentor. I plead guilty of preaching here but we must be free from the temptation of becoming trendy when we are short of ideas. We may be fascinated by web-based distance learning. Just imagine the handicap of missing a teacher if we rely on only web-based distance learning.

All education systems must integrate with imparting knowledge about concepts of sustainable development. Tomorrow’s scholars and students cannot afford to be ignorant about issues of our environment — about energy, climatic changes and gender equity.

Finally, let learning be an enlivening experience, neither esoteric nor prosaic. Life without learning is no life at all. Strengthening education at all levels is an enabling requirement for a strong self-standing nation or national.
These are initiatives that brook no delay. Comprehensive urgent reforms are necessary, not piecemeal and sporadic attempts at remedies. It is sad that such reforms were not attempted over the last forty years. We should look at the horizon, not the instant. We need new structures for science and technology support systems. We need flexible institutional structures to promote innovation and entrepreneurship. We must understand our higher education system in the context of the global system. While it must have something Indian about it, for sure, it must be part of the global alliance. We need alliances to build capacities for the generation, fusion and absorption of technologies in real time. Again, I emphasize, we need to harmonize knowledge with sustainable development.

CONCLUSION

I read this morning the centre piece of the Indian Express (13 August, 2004) by our ace sprinter of the sixties, Milka Singh. I was very impressed with the title of that article, “Billion Excuses, No Medals”. I thought of it to be a fitting message to educators here and now. We often disclaim any accountability when we blame and complain most of the time. Should we not seek to justify our commitment to our nation and so steer it as to make its transition into the future knowledge society smooth and easy? If it is so, nothing less than a comprehensive reform of our education system is the need of our time.
LEVERAGING QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION FOR DEVELOPMENTAL EDUCATION

Ram G. Takwale *

1. HIGHER EDUCATION – MAJOR CONCERNS AND PROBLEMS

A large group of students in Pune University demanded “We do not want degrees, we want jobs”. The then Vice-Chancellor, a renowned academic, replied: “The university is not an employment exchange; we give you only education and knowledge”. This happened four decades ago and can happen now any time anywhere in India. When I was the Vice-Chancellor of Pune University two decades ago, the then Chief Minister of Maharashtra, while addressing the university academia, was critical of universities because they created graduates who have unrealistic expectations but do not perform well in life and work. He, therefore, was inclined to believe that general education was futile. As teachers and academics, we may have justifiable reasons not to endorse such a criticism for many reasons.

* Lecture delivered on August 16, 2004 at Jadavpur University, Kolkata.
But the fact remains that a large majority of students in Indian higher education going for general degree courses do not find employment in life on the basis of the skills and competencies or the knowledge they acquire during their studies. The system of higher education produces unemployed or unemployable graduates. It is often observed that the unemployed are being educated without a goal or direction: most of the students will accept jobs if they are available, rather than go through a full course of study.

India has one of the biggest systems of higher education with more than 350 universities of all types, 15000 colleges, 9 million students and 500 thousand teachers. Nearly 85% of students go for general degrees, 10 per cent for post-graduation and research and the rest for professional degrees. However, the population covered is hardly 6-7% of the age group between 17 and 24 and is far less when compared to those covered in developed countries. Nearly 20% of the students get qualified through open and distance education. Raising the coverage up to 12-15% in the formal system would need far greater resources perhaps amounting to Rs.200 thousand crores and our nation is far from reaching such a target.

Besides the numbers, higher education in India faces the problems of poverty, illiteracy, ignorance, and under-development with which the country is burdened. Besides these, the disparities such as rich-poor, urban-rural, developed-undeveloped, literate-illiterate and now the digital divide are creating social conflicts and tensions throughout the country. The recent parliamentary elections of 2004 have shown a sharp reaction of the common people to their exclusion from total well-being due to the processes of competitive globalization, liberalization, privatization, and IT based development and its application. The system of Indian higher education is, therefore, required to meet the challenge of addressing the problems of quantity, quality and equity with justice to all.
2. **GLOBALIZATION : CHALLENGES AND RESPONSES**

Persons, groups, communities, institutions and organizations get connected through the internet and communicate with anyone, anytime, anywhere. Information Technology (IT) has created a process of globalization and liberalization. It is now entering into all walks of life — economic, socio-cultural and political—and is creating new ways of communicating and working. The process of globalization primarily affects economic activities leading to globalization of trade and expansion of markets. Every area of human endeavour at any place and locality can get globalized through network communication.

Application of Information and Communication Technology (ICT) in the field of education is creating a new scenario for marketing education. By creating educational content in multimedia and multi-lingual formats and by offering learning services, education can be globalized and marketed throughout the world. This commodification of education, though not liked by all and debated all over the world, has become a reality. India is throwing higher education open to global competition and, after April 2005, Indian colleges and universities would face competition from overseas institutions of higher education. Education is a big business and is estimated to be worth US $3500 billion annually, which is far larger than the turnover of IT business. The global competition is driven by high quality, low cost and high brand value of educational products and services. Internationalization processes and job opportunities available now globally for Indian graduates are driving the Indian educational system to face these challenges and offer its response.

On the whole, the Indian system of education is very sluggish in responding to these challenges of education. Developed countries, through their universities and alliances, have started marketing their education in India. They are creating their presence in India through partnerships with local and private institutions; and the process would be accelerated once GAAT becomes operative. The Indian
response to globalization so far is mostly confined to encouraging privatization of education, allowing industries and private agencies to enter into this field through private and deemed-to-be universities; and by encouraging some for marketing Indian education abroad where Indian presence exists.

Privatization of education has created a new situation and conflict in Indian society, which is highly stratified on socio-economic basis. The high unit cost of professional education, which is about Rs 2.5-3 lac for medical, and Rs.30 – 60 thousand for engineering courses, and the inability of the government to evolve a suitable policy to support students with merit from weaker sections of society have created much discontent among middle and lower classes. The inability of the govt. to support higher, professional and general education, particularly when it is expanding to cover larger numbers in tertiary education, has made education accessible only to rich classes. This is cultivating money—driven values, rather than humanity—driven values. This ultimately violates the basic right of equity guaranteed by the Indian constitution; and would create social strife and conflicts if this trend continues.

The major problems and concerns of our higher education system are:

1) Increasing the coverage from its 6-7% substantially with the least support from the State and making it affordable to people from lower and weaker sections.

2) Raising the quality of higher education and making it accessible to all sections of society in all higher education institutions in India,

3) Raising quality and decreasing the unit cost of education so as to be competitive in global markets;
4) Linking education with development by making it locally relevant so as to develop communities at local and global levels; and

5) Creating a new paradigm of participatory and co-operative education focused on development (Developmental Education) so as to offer alternatives to the current marketing processes.

These issues cannot be addressed with ‘more of the same’ approaches followed during the last half century; and need a great transition and transformation to the Information Age, wherein ICT could be used effectively by all for sustainable development of their localities in the context of globalization.

3. HIGHER EDUCATION FOR ALL

Besides increasing coverage of higher education for the 17-24 yr. age group, the distance and open education system has extended education to mature adults of higher age groups. One national and ten state Open Universities and about 70 Distance Education institutions of traditional universities are offering higher education to nearly 20% i.e. 2 million students. While establishing the YCMOU in Maharashtra, the question of the relevance of existing higher education to adult learners was examined. Its description as tertiary education links it with primary and secondary education, which is appropriate for children and youth. A mature adult in any society acquires life and work skills through informal and family traditions; and therefore has some content- knowledge and skills. The need to make functionality in life and work govern the appropriate knowledge base directly related to skills, and competencies was emphasised. The defining criterion is the capacity to enable the adult to participate in the developmental process in a sustainable way. This gave us a different way of looking at higher education, which could be extended to all, even the less educated, by using appropriate
teaching and learning methods. The success of IGNOU in certifying learners in tannery-related skills and competencies, some of whom were uneducated or less educated, shows the way out. Less educated farmers in Maharashtra who are innovative and possess practical knowledge of agricultural processes have the potential for high learnability which can be exploited with appropriate training for its development.

It is our considered opinion that by creating training and learning processes related to developmental activities of common people, it is possible to develop a better higher education system that benefits all. This is also a need of the information or knowledge society.

4. **IT DEVELOPMENT AND E-EDUCATION**

The process of globalization generated by ICT is creating networks that link every user through internet connectivity to anyone, anytime, anywhere. The user should have network access devices such as PC or handheld device with appropriate facilities. With the rate at which ICT is spreading in India, it is estimated that 80% of the population will be networked through wireless and online appliances by 2012.

The *trend-setting technologies* in future networking are:

1) Mobile and wireless broadband Internet
2) Networks and networking technologies
3) Direct to Home (DTH) & WLL to address the last mile problem of connectivity
4) Grid Networking Architecture that enables to develop Knowledge Grid.
5) Software for various processes, interactivities and systems.
6) Technologies for personalization, group customization and localization
Almost all communication in a networked society will be through networks; and could be recorded at various places and servers. The information stored in the network would show the behaviour, likes and dislikes of the people who communicate. By using search engines and analyzing tools, it is possible to obtain from information stored in networks, useful knowledge about people and their behaviour. The knowledge so obtained could be gainfully used for value addition or wealth creation. The knowledge generated in the networked society would, therefore, be creating knowledge economy and knowledge-based jobs. The Indian education system has the responsibility to prepare youth and people for the knowledge based society.

Development of network is a gigantic task and is carried out by every sector of social and industrial activity. It needs using expertise and technology developed by specialists and special institutions. In this period of globalization, one cannot think of creating in-house expertise in all the areas essential for education or development. Hence partnerships and outsourcing become necessary for creating excellence in products and services offered by any sector of activity.

Information Technology offers to the educational field:

I) **Network** for connecting students, teachers & institutions
II) **Knowledge grid** to store knowledge and content with push-pull facility for any user.
III) **Broadband connectivity** through on-line and wireless communication for creating distributed classroom and intimate interactivities.
IV) **Software** for all types of interactivities between learners and learning/teaching resources
V) **Personal appliances** like PC, mobile cell-phone and handheld computers for personal Assistance in personalized activities and work.
All of these would be obtained from companies and agencies specializing in various areas. Many of the educational, administrative and managerial tasks such as communication with students through call centres, student registration, conduct of examinations and certification, etc. could be outsourced to small and big specialized agencies.

A group of teachers and institutions can offer education of the highest quality by pooling their academic resources, best expertise and experiences. Educational products and services can be offered to learners not only in a face-to-face (formal) mode but simultaneously in e-Education or through the distributed education mode. These types of virtual institutions (virtual colleges, virtual universities) have already been established to raise competitiveness and quality in offering educational services to learners not only locally but also globally.

Besides networks, software and access technologies for connecting, communicating individually or in groups (distributed classroom), the e-Education system requires:

1. **Content in e-formats** of static or stable nature and dynamic content created through interactivities.
2. **Educational Delivery System** that offers content and services to students anywhere, anytime.
3. **Management of organization** of resources and services required by learners along with Quality Assurance and Certification of the institution.

The UGC has undertaken programmes of network building by
- developing its information net by creating 17 mirror sites in India, where all content is reflected;
- connecting universities and colleges through Internet; and
- creating e-content suitable for various courses and programmes.
The UGC is also linking libraries (INFLIBNET), EMRC and AVRC’s through CEC to offer facilities for e-content generation and delivery through network. The ISRO is launching an educational satellite with 7 transponders and 72 channels (EDUSAT) in September 2004 and has a plan of creating countrywide distributed classroom by installing about 10,000 V-SATs throughout the country so as to link all educational institutions in India within the next 3-5 years. A Maharashtra Knowledge Corporation (MKCL), a public limited company for profit established by the Government of Maharashtra with shareholding by universities, colleges and individuals interested in education, has drawn a plan for networking of all universities and colleges going down to schools and community learning centres at the village level and is trying to provide total educational solution to institutions to offer their products and services (ref. www.mkcl.org & www.parivartan.net (Marathi)). Many institutions and organizations – private and public – throughout the country are using ICT for educational technology development for offering education of high quality to larger numbers. International norms are also getting evolved for electronic storage and communication of content and for mobile communication so that individuals and groups can communicate easily with each other anywhere anytime.

**Mantra and Tantra of ICT:**

The IT is used in two ways. The first and well established practice is to use IT in an enabling way in the educational process. The IT-enabled education helps to achieve better efficiency, reduces costs and extends outreach and coverage to a large number of students outside the campuses of the institution. It basically does not change the processes and hence mode of education. Another way is to use IT in a driven way. The IT-driven education changes the methods of content generation, content storage, content packaging and content delivery and hence offers new paradigms in different processes and modes of education.
IT driven processes lead to **mass-personalization**, a process unknown so far. The IT is therefore creating new paradigms and new processes such as just-in-time education, mass-personalization, group customization and localization.

ICT has been applied in an IT driven way in some simple processes, such as:

- Personalized examination and testing at different difficulty levels and domain achievements (ETHRL)
- Total e-Governance of educational processes (MKCL)
- Mass-personalized admission to Pune University for admission at PG level and external student registration.
- Farm specific consultation/advice to farmers (MKCL).

The mass-personalized systems are the data and rule-based decision and support systems. They are very user-friendly, and give access to anyone anywhere.

The **mantra** of the Information Age technologies is **mass-personalization, group-customization and localization** in the global network environment. It brings relevance to the technology and content for local and personal development.

It should be noted that the Agrarian Age had personalized and localized education and production systems were based on the support of natural resources. The Industrial Age had and continues to have mass-production and mass-education systems with globalization in the context of secondary/industry products and services. The Information Age is combining both these features of Industrial and Agrarian Ages; the mass – personalization with globalization + localization (globalization) in the context of knowledge and information resources made available over global networks. Hence the **mantra** of the Information Age.
The *tantra* (technology) for using the *mantra* is the effective use of ICT and network facilitation for social mobilisation - building techno-social networks. Hence the *tantra* of the Information Age is to build techno-social networks by mobilizing people and institutions, by establishing partnerships, particularly public-private partnerships for creating products and services of the best quality with personalization / customization / localization.

The use of ICT for networking; for creating software essential for network and personalization; for e-education or distribution education; for e-content and services offered to all with the strategy that *content is free and services are charged*; for knowledge grid; and for creating virtual institutions and organizations for education and development. This would, we believe, offer the way out for quality education to all at affordable cost.

5. **QUALITY IN HIGHER EDUCATION**

In response to the National Policy on Education (1986) and the Plan of Action (PoA 1992), the National Assessment and Accreditation Council (NAAC) was established in 1994 in Bangalore. The NAAC has the responsibility of assessing and accrediting institutions of higher education in India.

The mission and processes of institutional assessment refined through the past decade have enabled more than 1500 institutions to make self studies of their performance and also to make creative reforms in their systems in order to reach excellence. This initiative on the part of the HEIs will, hopefully, be followed up with more comprehensive and substantial changes immediately necessary to make education available to all.

*Changing Over To Learning And Developing Society*

In the Information Age, a knowledge-based economy and society is being developed. As education is indispensable for acquiring knowledge, it is assuming the central role in all processes of development. The link
between education and development should be intimate, tangible and measurable in terms of the physical, financial, intellectual, socio-cultural and ethical wealth it generates in the individual, groups, communities and society. The Quality Assurance and Accreditation system should therefore promote development education; and the types and models of development should fulfil the needs, requirements and aspirations of the locality and the community served by the institution.

6. LEVERAGING QUALITY FOR DEVELOPMENT:

The NAAC has carried out Assessment and Accreditation of more than 1500 institutions. Since the validity period of accreditation is 5 years, nearly 50 institutions have applied for second or re-assessment and accreditation for the next five-year period. It has already decided to keep the same frame of work of seven criteria and core indicators as well as weightages to the criteria for universities, affiliated and autonomous colleges. For re-assessment, it has been decided, after wide consultation, to add five core values that would enable colleges and universities to move towards developmental education, total quality management and e-education. The five Core values are linked to the processes and activities related to

1. promoting use of technology, particularly ICT,
2. relating education to national development,
3. nurturing global competencies among students,
4. inculcating values and
5. institutionalizing quest for excellence.

The NAAC is now working on evolving a system and methodologies for including the core values in the self-study processes of the institution. It proposes to

1. move towards educational process assessment,
2. establish the IQAC to enable institutions to set up, organize
and continuously develop processes of internalization of quality by, **building capabilities and using them fully** for educating students and for developing a system of education and

3. use ICT in various functions and processes of education imparted by the institution initially by establishing a website of the institution and gradually linking all the stakeholders to establish an institutional network.

The NAAC proposes to offer software support to the institutions that would help them to do self-assessment and even arrive at the grade the institution can get rightfully.

1. **Promoting use of ICT:**

   Since ICT is a driver to create the Information Society and knowledge economy, IT has to be used by establishing

   1. **IT infrastructures** such as website, LAN, V-SAT, server with data base distributed classrooms, institutional network, access devices for administrative & academic staff and students, internet connectivity (on-line & WLL) and

   2. **software use for academic and administrative functions,** (such as LMS, CMS, e-governance etc) so as to move slowly towards

   3. **IT literacy and functional training** to all staff and students for using ICT systems.

   The goal should be to move towards e-education that combines face-to-face education, distance education and web-based education. While using ICT, the institution can incorporate IT promoted value systems such as
Quality in Higher Education Sustainable Development

- democratic participation,
- transparency and accountability,
- decentralization,
- cooperation and partnerships; and
- sharing and caring.

The ICT will also enable the institution to link itself with local and state/national level institutions and organizations for establishing partnerships and collaboration.

2. **Relating Education to Development**

The teaching, research and extension activities of the institution should slowly be linked to developmental processes and activities going on in the community and locality as well as nationally and internationally. The following steps could be taken:

- linking curricula and content with the areas of development at national and local levels and
- offering courses related to extension work linked with developmental programmes and processes at the international/national/local levels.

**Examples**

1. Medical faculty/colleges linking with community health.

2. Engineering linking with rural and industrial development of the region and quality and utility of the work done or services offered.

3. General degree programmes linked through extension work with community and social development.

4. Students sent to overseas institutions to study some courses in their local/national context for a term or two.
5. Serving the cause of social justice—i.e. ensuring equity and increasing access to education by helping schools/students, etc.

The goal of linking education to development is that of contributing to the development of locality, community and individuals in a tangible way; studying the appropriate developmental models which benefit community and locality and ultimately integrating work with learning in a sustainable manner. The processes and models of development, apart from their outputs and outcomes, are based on some specific values and group activities. Institutions will have to identify their own value systems for promoting the specific developmental models they adopt for the development of the students, teachers and communities they serve.

3. **Nurturing Global Competencies among Students:**

In the context of globalization, liberalization and GATT agreement, students should search for job opportunities not only locally but also globally. It is therefore essential to cultivate among them skills, competencies and values that are of acceptable quality and standards at national and international levels. The institution should identify global competencies and inter-cultural values and develop these in their students through courses and activities. Partnering with overseas and Indian education institutions may help in training and developing students. For becoming internationally competitive, it will be essential to educate students to be innovative, creative and entrepreneurial. Partnership and collaboration with industries may help in linking with the world of work, which is fast changing under the impact of globalization and modern technologies.

4. **Inculcating Values**

HEIs have the responsibility of inculcating desirable cultural values and those enshrined in the Indian Constitution.
The institution should prepare individual profiles of degree students, with information about their knowledge, skills, competencies and values cultivated in them.

5. **Institutionalizing Quest for Excellence:**

As proposed by the NAAC, each institution should establish an IQAC in order to

1. identify strengths and weaknesses in the process and the outcomes of teaching, learning and evaluations;
2. raise capability to higher levels;
3. identify processes for developing capabilities and quality in all the seven-criteria of the NAAC;
4. create a mechanism for developing competencies and skills for higher quality and excellence;
5. develop a feedback mechanism and use it for reforms and development; and
6. obtain process information so as to use it for better and effective processes of education and management

The goal is to continuously develop capability and achieve excellence with Total Quality Management (TQM). The institution, hopefully, would be able to follow a path of development. The five core values can ensure

- institutional development,
- educational system development and
- student and community/locality development.

While considering development, it is essential to work for sustainability in all its essential aspects. Sustainability would require

1. creating and generating financial resources to support developmental activities;
2. generating socio-cultural wealth that sustains support to, and participation of, the neighbourhood/community in development; and

136
3. creating intellectual and ethical wealth for developing the institution and the community around.

Devising the right model of developmental education may lead to the right sustainable model of development the institution, may adopt.

7. CAPACITY BUILDING AND MATURATION MODEL FOR INSTITUTIONS

Currently the NAAC is facing the following issues and concerns:
1. On-the-spot evaluation is like end-examination and has all the attendant problems such as dissatisfaction of the institution, subjectivity of the Peer Team etc.

2. Quality of educational assessment and accreditation depends on the quality of interactivities between learner and learning/teaching resources. Hence process assessment rather than input-output assessment should have dominance.

3. Development of an informational model of Quality Assessment and Accreditation in which institutional customization and localization are achieved by retaining global measurement parameters.

4. Change over from one-time assessment in five years to a continuous self-assessment and accreditation process.

The transition from the existing process could be achieved by developing an e-Assessment and Accreditation process in which the institution gathers all the information at the source when it is generated while carrying out various activities of the institution, analyzes the information automatically with the help of software; and links the outcome with the seven-criteria and 42 core indicators treated as processes.
It will be essential to evolve benchmarks for each core indicator from the best practices followed or those obtained from or accepted by the best institutions or by the best perception of the best quality levels recognized globally. This is rather an important and involved exercise and has to be carried out over time through continuous reformatory processes.

It would be essential to develop a built-in guidance system that would give not only levels of achievement, but also what remains to be done to achieve higher levels in the quality of education.

By following the practices in other areas of institutional and industrial life, assessment and accreditation could be limited to five well-defined levels of capacity development and their full utilization or maturation in imparting the highest quality education by achieving Total Quality Management. We call this process as Capability Building and Maturation Model (CBMM) for educational institutions.

We may define the five levels and link them with grades in the nine-point grading system being used currently as:

**Level I – Initial level:**
The institution establishes IQAC and inspection processes for quality control on an adhoc basis, which usually results in unpredictable results. (Could be linked to C-grade)

**Level II: Quality Control for Repeatable Outcome**
The IQAC establishes the management system that ensures repeatable performance (link with C+, C++)

**Level III: Quality Control developed with defined processes**
The Cell identifies the process, establishes a management system for each one and integrates systems for ensuring total institutional performance (link with B, B+)
Level IV: **Quality Assurance well Managed**

The cell manages the processes and output and outcomes by establishing information gathering system managed quantitatively (link with B++, A)

Level V: **Quality Assurance Institutionalized – Total Quality Management**

Process improvement is institutionalized and Total Quality Management achieved. Besides process management and improvement till the highest maturation level, the CBMM has two other dimensions of institutional development.

- capability building, and
- education system development

**Capability Building** is quite a complex process and will go through cyclic reforms. The Capability is based on processes for creating higher level of facilitation and infrastructure, and for capturing and disseminating information/knowledge. Building capability would need new ideas, concepts, solutions and innovations, which could help in capacity building that would help leveraging and institutionalizing Best Practices. The ultimate objective is to achieve enhanced performance to reach the goals of education set forth by the institution. Capability building would need enhancing motivation of the institution in order to seek, collaborate and develop a culture of openness and change and management that would go a long way in achieving sustainability in developing the processes generated.

**Educational System Development** would require setting progressively higher goals for educational programmes, consistent with the Information / Knowledge Society being formed in the country or internationally. The five core values proposed, and partnerships and consortia with other institutions and organizations may help to achieve higher levels of education in terms of quality, affordability, global and local relevance and linkages of education with work and development. Developing capability
and a system of education on the model of development appropriate to the needs of students and stakeholders is the most important task of the institution.

**Methodology of QAA under CBMM**

We propose that the system should be based on self-assessment and self-accreditation; and the role of NAAC is to help achieve higher levels by giving support and guidance through a Peer Team appointed for the institution for a specific period, say of 5 years. The NAAC should also develop a knowledge base to support the assessment and accreditation activities over a network accessible to all concerned. The process should use ICT for information gathering, analyzing, accrediting and for communicating with the Peer Team and the NAAC. Since education has many stakeholders, the relevant information should be accessible to students, teachers and society. When the Head of the institution and the Peer Team agree, an on-the-spot visit could be organized for validating and assessing; and the result should be either agreeing to the self-assessed grade of the institution or not agreeing with it by giving reasons for such disagreement.

The new process could be implemented on a continuous or annual basis, and would eliminate many concerns and problems faced in the existing model of Quality Assessment and Accreditation.

The programme and ideas proposed above are at present at the R&D stage and are yet to be considered and approved by the NAAC.

**7. TOWARDS LIFE-LONG DEVELOPMENTAL EDUCATION**

The development of an institution as well as an institutional educational system is considered through CBMM. The networking of educational institutions, using EduSat in creating distributed classroom, developing e-content and knowledge grid, creating software for mobilizing and for partnership building and for personalizing / group-customizing and localizing; gives challenging
opportunities to develop an Indian System of Quality Education for All. National / International and State level groups of colleges and universities with specific domain and developmental interests can form consortia to offer the best of learning to individuals, groups and communities. The strategies proposed could be used effectively for building Life-Long-learning (L3), L-groups and L-communities. In fact, the UNESCO has identified building L-Communities as the main goal for university education. The cost of education could be reduced substantially by making content free but charging only services. Our guesstimate is that professional fees could be reduced to one-third of the present rates and other general course fees could be brought down to about 10% of the existing unit cost. In case of students with merit from weaker sections, earning and learning could be practised and institutionalized. Thus the path towards knowledge in the Knowledge Age could be followed with equity to all, and the “elusive triangle” of quality, quantity, and equity may be resolved by employing ICT exclusively in the Information Age.
It is a singular honour for me to have been asked to deliver this lecture organized on behalf of NAAC by Cotton College Guwahati, an institution of great distinction which has developed remarkable traditions during its long history. The term “sustainable development” which appears in the title of this lecture is normally used to refer to sustainability in the context of the man-nature dialectic, i.e. ecological sustainability, or the sustainability of a development trajectory in the light of its demands on scarce natural resources and the damage it inflicts on our eco-system. There is, however, another aspect of sustainability which is scarcely ever discussed, namely sustainability in the context of the man-man dialectic, i.e. social sustainability, or the sustainability of a development trajectory in the light of its ability to enlarge the opportunities available to the people at large, and to generate, as a consequence, a degree of social consensus around itself. In what follows I shall be concerned with sustainability in this latter sense.

* Lecture delivered on August 28, 2004 at Cotton College, Guwahati.
I shall not discuss at any length the question of what a socially sustainable development trajectory should actually look like. My views on this particular question would of course be different from those of others. What is important for society, however, is that a sufficient number of intellectuals should be engaged at any point of time with the issue of social sustainability of the development trajectory, i.e. engaged in critiquing the development trajectory from the point of view of its social sustainability. Borrowing a Gramscian term I would call such intellectuals the “organic intellectuals” of the people. An important purpose of the system of higher education in any country, especially ours, must be the production of “organic intellectuals of the people”. And unfortunately we face today, in the realm of higher education, an unprecedented assault the object of which is precisely to preclude the production of such intellectuals.

The importance of higher education for our national life is scarcely ever appreciated, even by distinguished educationists. Some even argue that institutions of higher education constitute a white elephant, a drain on the nation’s resources which can be better deployed in promoting the spread of elementary education in the country. Instead of the pyramidal structure we should have built up, of a broad base of elementary education supporting a smaller apex of higher education, we have actually built up, they contend, a top-heavy structure where a plethora of colleges and universities has grown up within a vast ocean of illiteracy and ignorance.

The proponents of this argument include many progressive and sensitive thinkers, but nonetheless it is fundamentally flawed. There can of course be no two views on the urgent need for eradicating illiteracy and enlarging the spread of elementary education. In fact, it is a national shame that even after half a century of independence more than one-third of the population in the country remains illiterate, and around 40 per cent of children of school-going age remain outside the ambit of formal schooling at any given time. But the mistake consists in believing that an absolute
curtailment (or even a curtailment relative to GDP) of expenditure on higher education is necessary for overcoming these failures. The shortage of resources that is usually cited in this context as a constraint is a mere alibi.

I shall discuss what has been happening on the resource front in the more recent period later in the course of my lecture. But the crucial point is this: at no stage during the entire post-Independence period has India spent an adequate amount on education, by any reasonable definition of the term “adequate”. In fact the proportion of GDP that the white-supremacist South African State spent on the education of the black majority even during the apartheid period, notwithstanding the massive drain on its exchequer that the maintenance of the highly oppressive police, military, and intelligence apparatus entailed at the time, was higher than what the Indian State has ever done throughout its entire post-Independence history. The matter, in short, is one of priorities. Any government that has the political will to eradicate illiteracy and provide universal primary education would always find the resources for doing so without curtailing higher education. And any government that complains of lack of resources, and considers it necessary to starve higher education, in order to provide for the spread of literacy and primary education, simply lacks \textit{ipso facto} the political will for effecting universal literacy and primary education.

While strengthening higher education does not preclude, in any way, the expansion of elementary education, such strengthening is essential for the development of the country, indeed for the very survival of the freedom of its people. The realm of higher education is the cradle of ideas; the shrinking or extinction of this realm necessarily makes a society parasitic on others for its ideas, and such a parasitic society cannot remain free.

John Maynard Keynes, the greatest economist of the twentieth century, may have exaggerated a trifle when he wrote“.... the ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else”\textsuperscript{2}. But the exaggeration is no more than a trifle.
After all Bertolt Brecht, coming from a very different segment of the political spectrum also wrote: “Hungry man, reach for the book!” The hungry man however must reach for the right book, one that does not tell him that his chronic hunger is the result of sins committed in some previous birth, but educates him instead on the social conditions that keep him hungry. This presupposes that the right book must be available, that the crowd of hungry men must have their own “organic intellectuals” whose ideas must develop independently of the ideas of those who preside over a social arrangement that keeps the hungry hungry. Independent institutions of higher education are essential for this. To be sure, having such institutions is not a sufficient condition for the development of independent ideas relevant for the life, freedom and progress of a particular society. But it is a necessary condition.

The mass mobilization that constituted our freedom struggle would not have been possible if the intellectual groundwork for it had not been done by pioneering thinkers like Dadabhai Naoroji who dared to think independently of the prevailing theoretical constructs in the institutions of higher learning in the metropolitan countries. This tradition of independent thinking is necessary also for defending the gains of our freedom struggle. And since we are now in a position to have our own institutions where the conditions for independent thinking can prevail as a matter of course, we must develop and nurture such institutions.

II

Implicit in what I have just said is a whole series of rejections, which have a particular relevance for the functioning of NAAC itself. First, there is rejection of the view that different institutions of higher learning belonging to different societies can be ordered as being “better” or “worse” along one particular axis. If these institutions are to be “organic” to their specific societies, then, since the interests of these societies are quite obviously not in harmony, each set of institutions must be different from the others to fulfil its legitimate role. I often feel amused when I hear comments like “Guwahati University (or Jawaharlala Nehru University for that matter)
should imitate Harvard”, “Our institutions should enrich themselves by borrowing ideas and faculty from advanced country institutions”, “We have to judge ourselves by how well we are recognized by top institutions in the world” and so on. This whole approach is to my mind wrong. It sees higher education as a homogeneous commodity of which some institutions are better producers than others, and not as a means of producing “organic intellectuals” for a particular society. I referred above to Dadabhai Naoroji whose contribution to the struggle for the freedom of our society was enormous. But scarcely any one in Harvard or Cambridge doing economics would have heard of him (though those doing “India Studies” might have). Modelling our institutions after Harvard or Cambridge, which would entail copying their curricula and syllabi, would therefore necessarily mean sacrificing, to our great cost, the conceptual framework, the perspective and the insights of a thinker like Naoroji.

Secondly, my argument rejects the view that the professionalization of subjects like “economics”, and “political science” is a desirable process. The “profession” in these disciplines as well as in others, is dominated by the advanced countries; therefore recognition in the “profession” would necessarily mean sacrificing any independent thinking in the interest of parroting borrowed concepts. This would not matter if these borrowed concepts were genuinely “scientific” and not imbued with the ideological objective of defending the hegemony of the advanced countries. In the social sciences at least, as I shall illustrate later, such is not the case. This does not mean that everyone engaged in social science research in the universities in the West is a conscious ideological defender of imperialist hegemony, but everyone is entrapped by the need to belong to, and to be recognized by, the “profession” and therefore, undertakes research within strictly circumscribed limits which preclude any critical awareness of the role of the handed down conceptual apparatus in the ideological defence of imperialist hegemony. Stepping out of these limits invites reactions of unease, astonishment, silence, derision and even hostility, resulting in the loss of academic and financial status. Hence even the best-intentioned dare not step beyond the limits. In societies like ours where the domination of
Quality in Higher Education Sustainable Development

the Western theoretical orthodoxy in social sciences is far from complete, thanks precisely to our rather recent birth as a nation after a prolonged anti-imperialist struggle, any emphasis on “professionalization” would mean voluntarily surrendering ourselves to this domination, closing the space which has been made available to us for independent thought.

Thirdly, my argument entails rejection of the attitude which places a special value on “recognition” in the advanced countries, and hence on awards and distinctions bestowed from there. In the social sciences at any rate, all such awards and distinctions are conditional on conformity, on keeping within the “limits” and abjuring the use of concepts that critique imperialist hegemony. Unfortunately this attitude of prioritizing “recognition” in the West is all too pervasive in our country. Almost all of us, when we sit on selection committees, prefer a candidate who has published in a western journal over one who has published within the country, even without looking closely at the quality of the two publications. By doing so, however, we contribute to stultification of the tradition of independent thinking.

To say all this is not to reject the notion of quality, or to argue that we should not have criteria for judging quality. But these criteria must be our own, and not those employed in the institutions of advanced countries. Developing these criteria, to be sure, is not easy, but there is no escape from the need to do so if we are to preserve a tradition of independent thinking.

III

Let me give an example, drawn from my own discipline, Economics, to underscore the necessity of a tradition of thought independent of the prevailing orthodoxy in the West. One consequence of the policy of “liberalization” has been the relaxation of restrictions on the flow of finance into and out of the country, because of which it so happens that significant inflow of foreign exchange has taken place of late. To prevent the exchange rate from appreciating, the Reserve Bank of India has
intervened to buy up the foreign exchange that has been coming in, and as a result, we currently have exchange reserves of nearly $120 billion. Now, holding such large reserves is not a sensible thing to do. Foreign exchange reserves are nothing else but IOUs of other countries; hence holding such IOUs represents a waste of resources that could be more productively used elsewhere. What is more, since the rate of return, which those bringing funds into the country earn is higher than the rate earned on these reserves (which is a trivial amount), the country is in effect borrowing from abroad at a higher rate to lend at a lower rate. This is palpably unwise.

In this connection suggestions have been made by the Bretton Woods institutions, and by independent analysts, including academics, in Western financial journals that India should allow its exchange rate to appreciate, and that towards this end the RBI should stop adding to its reserves, and lower them instead. Several Indian academics and financial journalists have also endorsed this idea. Let us look at the implications of such a move.

If the rupee appreciates, then our goods become uncompetitive vis-à-vis foreign goods. Since such an appreciation would not expand the total domestic demand, this relative cheapening of foreign goods would mean that a given volume of domestic demand would be met by foreign goods rather than by domestic goods; and likewise our exports would be supplanted by foreign exports. It follows that an appreciation of the rupee would lead to a closure of domestic producing units and to higher unemployment, together with an increase in our trade (and current account) deficit (which is in fact how the reserves would have got used up). We would have in short unleashed a process of “debt-financed de-industralization”, i.e. borrowed to finance the ruination of our own production base. What is more, when the time comes for foreigners (or Non-Resident Indians), who are not bringing finance into the economy, to start taking it out, we would have no funds to cover the outflow, since these would have been used meanwhile in financing imports at the expense of home production. In short, frittering away foreign exchange
reserves through an appreciation of the rupee would mean a ruination of the country twice over; through de-industrialization and unemployment now, and bankruptcy later.

This of course would work to the advantage of the foreign, especially metropolitan, countries: they would obtain larger markets now, which, given the prevailing recessionary conditions, they desperately need (it is noteworthy that a similar demand for revaluing the exchange rate upwards is being made with regard to China); and they would be able to impose whatever “conditionalities” they choose in the future, when our country, in order to finance capital outflows, approaches them or agencies like the IMF and the World Bank dominated by them, for loans. It is not surprising then that the Western Press, the Bretton Woods institutions, and many Western academics are demanding an appreciation of the rupee. But to oppose this demand, to avoid this double ruin, and to protect our sovereignty and freedom, it is essential that there be people within the country who think independently and have the capacity to see the implications of such moves.

If, it may be asked, holding large reserves is unwise and getting rid of reserves through an appreciation of the rupee even more so, then what should the country do? Obviously if there was an agency that undertook productive investment, either using the reserves, or on the strength of these reserves, i.e. using these as cushion, (since plenty of unutilized domestic industrial capacity also exists), then they would have been put to some good use. The only such agency can be the State (since capitalists’ investment decisions are spurred by their own calculations and cannot be stimulated just because the country has a plethora of unused resources). True, even if the State undertook investment on the strength of these reserves, and used up a substantial chunk of them, when the time comes for finance to flow out, the country may still find itself short of funds (unless the investment undertaken in the mean time earns sufficient foreign exchange). Some degree of control over capital flows therefore would have to supplement larger State investment. In short, a combination
of capital controls and larger state investment is required if the country is to cope with the burgeoning capital inflows.

But both these are anathema as far as the theoretical orthodoxy in the West is concerned. There may, of late, have been some grudging admission of the need for capital controls, but larger State investment is taboo, especially for third world economies. The only reasonable way of coping with financial inflows is thus closed to us if we follow the lead of the dominant theoretical orthodoxy in my discipline. This fact, however, only underscores the absolute need for independent thinking in societies like ours.

Of course, simply having institutions of higher education does not mean that this need gets automatically fulfilled. A whole range of measures have to be undertaken to ensure that these institutions play the role that they should; but that is a separate, albeit vital, issue. Not having any such institutions completely forecloses the possibilities of any independent thought.

IV

The pressure for “professionalization” is one persistent factor working towards the destruction of independent thought, and thwarting the emergence of institutions capable of producing “organic intellectuals” for our society. In addition to this, however, two other specific factors have emerged in recent years which would work in the same direction. The first is the tendency towards privatization which has gathered momentum on account of the fiscal crisis of the State. This crisis existed even earlier, but it has become greatly accentuated by the pursuit of “neo-liberal” policies at the behest of the Bretton Woods institutions since the beginning of the nineties.

The fiscal constraints on an economy pursing neo-liberal policies are obvious. Since “liberalisation” must include trade liberalization, customs duties must be brought down; since the State which lowers customs duties
cannot simultaneously increase excise duties (for otherwise it precipitates gratuitous de-industrialization by favouring imports over home production), its capacity to raise revenues from indirect taxation as a whole gets reduced. To entice foreign capital, which is supposed to play a central role in ushering in development, it must lower direct taxes on such capital (whether or not foreign capital actually comes), for otherwise capital would go to destinations with lower tax rates. To maintain some \textit{inter se} equity between foreign and domestic capital, the latter also cannot be taxed too heavily, so that corporate tax revenue shrinks relatively, which cannot be offset, again for reasons of \textit{inter se} equity, through larger personal income taxes. It follows that the logic of a “liberalized” economy is to reduce the tax-GDP ratio. This in fact is what has happened in a host of economies adopting neo-liberal economic policies, and India is no exception. If we take triennium averages, then there was a reduction of 1.6 percent in the ratio of Central Gross Tax Revenue to GDP and 1.3 percent in Central Net Tax Revenue to GDP between the triennia centred on 1990-91 and 1999-00. Even taking the lower of these figures, it would turn out that if only the same tax-GDP ratio had been maintained at the end of the decade, as prevailed at the beginning, prior to “liberalization”, the Central government would have garnered an additional revenue of Rs.26000 crores in one single year alone.

There is an additional fall-out of “liberalization”. It invariably entails an increase in the rate of interest which the government has to pay on its borrowings. An estimate for India, for instance, suggests that the increase in the interest burden of the public exchequer on this score, even without taking into account the compounding effects of higher interest rates, was as much as Rs.13000 cr, in 2001-2. The total drain on the Central government exchequer of both these measures, therefore, amounted to about Rs.40,000 crores at the end of the decade of the nineties compared to the beginning of the decade. And the Centre “passed on” this “drain” to the state governments making the latter’s fiscal situation in turn precarious.
The effect of all this, together with the fact that the fiscal deficit under the neo-liberal dispensation is supposed to be kept under strict control, is a curtailment in total government expenditure which has a particular impact on expenditure on social sectors like education and health, which unleashes in turn a tendency towards the privatization of these sectors.

The implication of privatization, which necessarily brings in the profit-motive into the sphere of education, has been missed by many, including by several sensitive thinkers who see no harm in it. If education becomes a business, then it loses its capacity to produce “organic intellectuals” for the people. Education, in short, is not a homogeneous good, like steel or cement, which can be produced by the public and private sectors alike. Education, seen as the product of educational institutions, is fundamentally heterogeneous. Education that enables a person to get a well-paid job in the existing job market is not the same as education that produces an “organic intellectual” of the people (a distinction which is analogous to what the late Paul Baran drew between the “intellect worker” and the “intellectual”)⁴ To draw this distinction is not to say that “organic intellectuals” of the people should be incapable of obtaining a job in the job market; the point rather is that even while imparting education to enable persons to obtain jobs and serve the country as “intellect workers”, education must simultaneously ensure that they do not remain mere “intellect workers” but also become “intellectuals”, in the sense of “organic intellectuals” of the people. Privatization of education produces exclusively “intellect workers”, and no “intellectuals”.

The matter can be put somewhat differently. Privatization of education turns it into a commodity where the buyer’s preference must necessarily enter to determine the nature of the commodity produced. There is a basic difference between education that satisfies the preference of the buyer and education that is undertaken in the interests of the people. And if education is to be undertaken in the interests of the people, to defend their interests, then it must be publicly financed. If it ceases to be publicly financed, then the education that increasingly gets to be produced is one that is intrinsically incapable of serving the interests of the people.
But then, it may be asked quite pertinently: how can we ignore altogether the dictates of the market? In the era of IT revolution we have to have people with IT expertise. Universities consequently have to orient themselves towards imparting knowledge of IT rather than continuing to emphasize traditional subjects like liberal arts and producing unemployable graduates even while the country misses out on the new technology that is unfolding. In other words, the market is a signaling device which indicates changing demands that are by no means socially irrelevant. Ignoring the dictates of the market therefore is a perilous venture for any society.

It seems to me, however, that the objective of higher education that I have been outlining is perfectly compatible with the other purpose which education serves, namely, to impart skills, the nature of which changes with changing technology. Sensitivity to the latter need is not synonymous with the commoditization of education. The point at issue is the exclusive determination of educational priorities by the market, and privatization of education has a tendency to lead to such exclusive determination not just in the privatized segment, but over the sphere of higher education as a whole through the pressures it brings to bear on the non-privatized segment.

Some contend that if the State is afflicted by a fiscal crisis, then this fact ipso facto implies that the people are not paying for producing “organic intellectuals” for their own cause, i.e they have implicitly “voted” not to have such “intellectuals”; not much tears therefore should be shed over this fact when the people themselves want it this way. It is not the ordinary people in the country however who have been the beneficiaries of the reduction in the tax –GDP ratio which underlies the fiscal crisis. On the contrary, while the tax concessions have gone in favour of the rich, the ordinary people, especially in rural India, have suffered from the effects of deflation via unemployment and cuts in social expenditures. They are not the votaries but the victims of these cuts. Privatizing higher education in this context has the effect not only of excluding them from its ambit, but also of muting whatever intellectual opposition exists against the policies that victimize them.
The need for nurturing such intellectual opposition arises not out of any charity, nor out of a mere transcendental commitment to democracy and egalitarianism. It is essential for social peace, indeed for social survival, or, as mentioned at the beginning of this lecture, for the social sustainability of the development trajectory. Society, in short, can ignore this need only at its own peril, for in the absence of an intellectual articulation of the plight of the victims, in the absence of “organic intellectuals” who can provide such articulation, the opposition of the victims to their plight takes on highly destructive, socially debilitating, and extreme and unproductive forms which cause much suffering, usually pointless suffering, all around.

V

One cannot however be critical only of privatization of higher education without raising one’s voice against another phenomenon that has been quite pervasive until now, namely the appropriation for purely private ends of public education. I have in mind the fact that a large proportion of the products of prestigious institutions of higher learning in our country, such as the IITs and Medical Institutes like AIIMS and PGIMR, whose education is financed in large measure by the ordinary Indian masses, who are among the poorest people in the world, then migrate to the advanced capitalist countries to make a comfortable living for themselves. I do not blame them for one instant. But I do blame our successive governments for having turned a blind eye to this phenomenon and permitted the continuation of a state of affairs where the poorest in the world are made to subsidize the health system of the richest in the world. Even if no restrictions on emigration are placed, at the very least, a minimum period of service in India could have been demanded, or a refunding, out of their sumptuous salaries abroad, the expenses incurred by the country on their education. Nothing of the sort, however, has been imposed, and the country has handed over gratis skilled persons trained at the people’s expense to advanced countries.
What is more, they have been lionized, notwithstanding their choice to leave the country. Their paltry contributions, setting up a hospital here or donating some money to their alma mater there, has been much heralded by the media and the government which by contrast have been resoundingly silent on the massive transfers, amounting now to well over $10 billion per annum, by the poor Malayalee Muslim migrants to the Gulf, which have been a major prop of our balance of payments. In the case of the other migrants, the skilled doctors and engineers, whose net remittances back to the country have been paltry, we have a clear case of private appropriation of public resources. The fault here lies not with the appropriators but with those who allow it. The lionization of such appropriators moreover amounts to an encouragement for such appropriation. It is imperative that the struggle against privatization of education should be complemented by a struggle against the privatization of public resources in the sphere of education in this manner.

VI

The second factor which works in the direction of enfeebling the generation of “organic intellectuals” in our society is the increasing sway of communal and obscurantist forces over the sphere of education. These forces, at any rate segments of them, often claim to be fighting “Western” influence on our education system (two names that figure in their perception of the “evil trinity” being Marx and Maculay). Paradoxically, however, they end up strengthening the very “Western influence” which they claim to be fighting. Their attempt at the introduction of courses in State-funded universities to turn out purohits and astrologers, on the explicit argument that there is a market demand for them, is as much a commoditization of education as the demand for capitation fees and the substitution of basic disciplines by more “marketable” subjects. Likewise their attempt to change text books to make them conform to the prejudices of a handful of bigots on the ground that nothing offensive to the “religious sentiments” of the “majority community” should be carried in such books is antithetical to the spirit of scientific inquiry without which there can be no “intellectuals”, let alone “organic intellectuals” of the people. The retreat
to prejudice, the promotion of obscurantism, the substitution of extraneous criteria for scientific investigation in evaluating the worth of academic propositions, all of these entail a devaluation of the content of higher education which actually disarms the country intellectually against the onslaught of imperialist ideology. If, at a political level, communalism and fundamentalism divide the people and contribute to a weakening of the nation visavis imperialism, then at an intellectual level too, they make a parallel contribution by obliterating the intellectual capacity to see through its machinations. The opposition to the ideology of imperialism, one must remember, was provided by an inclusive Indian nationalism that was secular, democratic and self-confessed socialist. Communalism, whether of the Hindu or the Muslim variety, never had an anti-imperialist thrust. Should it come as any surprise then that the emergence of communal politics and ideology also paves the way for the re-assertion of the hegemony of imperialist ideology?

VII

I have gone on long enough. Even though any such lecture entails a degree of sermonizing I must not cross limits. The issues I have raised need to be thought about and discussed at length. And now that with the change of government we have a welcome revival in the realm of education of the tradition of discussion and debate, many of you, I hope, would give some thought to my remarks. Thank you for your attention.

REFERENCES

1. The man-nature dialectic and the man-man dialectic are of course closely inter- linked. See Georg Lukacs’ The Young Hegel, and Maurice Dobb’s “Introduction” to Karl Marx’s A contribution to A critique of Political Economy, for further discussion of these issues.


QUALITY HIGHER EDUCATION AND SUSTAINABLE DEVELOPMENT: FREEDOM AND SOCIAL HARMONY

V. N. Rajasekharan Pillai *

The National Assessment and Accreditation Council has created a quality culture among the higher education institutions in this country. The promotion of excellence and recognition of quality are inevitable tenets of educational institutions. To commemorate the ten years of its successful presence in the higher education scenario, the NAAC has launched a programme of organizing lectures in various universities and colleges and I am happy to be associated with it. The focus of this lecture is on the relationship between quality education and sustainable development.

FREEDOM AND DEVELOPMENT

Development is a process of expanding the real freedoms that people enjoy. Identifying development with the growth of gross national product, or with rise in personal incomes, or with industrialization, or with technological advance, or with social modernization is a compartmentalized, narrow view of development. Growth of GNP or of individual incomes can be very important as means to expand the freedoms enjoyed by members of the society. But freedom depends also

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on other determinants. The social and economic arrangements like facilities for education and healthcare as well as political and civil rights like the liberty to participate in public discussion and scrutiny are other major determinants, which influence freedom at all levels. Similarly, industrialization, technological progress or social modernization contributes substantially to expand human freedom, but freedom depends on other influences as well. Thus, viewing development in terms of expanding substantive freedoms directs attention to the ends that make development important, rather than merely to some of the means that, among others, play a prominent role in the process. Education should be seen as that means which provides substantive human freedom and individual human security which ultimately leads to society’s overall development.

EDUCATION FOR LEARNING TO LIVE TOGETHER

Individual human security, individual freedom and the achievement in development are interconnected. The enabling conditions of education, health, economic opportunities and the encouragement and cultivation of independent initiatives positively influence achievement. The institutional arrangements for these opportunities are also influenced by the exercise of people’s freedoms, through the liberty to participate in social choice and in the making of public decisions that impel the progress of these opportunities. We need to look at the role of education in development in this holistic perspective.

The very purpose of education is to enhance the quality of life and life-management systems. Life is not livelihood or employment alone, though they are the most basic needs. The purposes of education are learning to know, learning to learn, learning to do and learning to live together. Imparting knowledge is considered as the most important purpose of education. We describe today’s society as the knowledge society. Knowledge is power. Generation of knowledge, dissemination of knowledge, storage and retrieval of knowledge are the main functions of an educational system, particularly higher education. Today with the advent of modern information and communication technology, education
concentrates on teaching students how to learn. Skill development is another important function of education. All these point to the holistic purpose of education which is the intellectual, physical, emotional and artistic development of the learner. The overriding purpose of all these should be learning to live together. In a multicultural society, harmonious coexistence with all sections of the society of the humankind and all species of the nature, giving due respect to all living and non-living forms of the universe is very essential. This is the crux of the well-being of society and of development of any kind. This learning to live together aspect of learning provides the foundation for any progress and growth in the right perspective. I may even add another purpose for education: learning to unlearn. The established educational process creates several prejudices in the learner. Some of the learning and training may become irrelevant and out of place when one applies to life in an ever-changing society, in a different context and in different times. In such a context, one has to develop the process of unlearning in order to throw away prejudices. This process of unlearning is much more difficult than learning. Education must equip the learner for this process as well. That means, education should make us more open-minded and receptive to new ideas and challenges. Such new ideas, independent initiatives and ability to cope with challenges alone can lead to progress and development. Education should bring upliftment and reinforcement of the human spirit and the moral fibre of those who seek the advantage of knowledge. The liberating power of education is of great relevance to our society. The education system should produce citizens not only in diverse branches of knowledge, theoretical and practical, but also persons of positive outlook, inspired with the spirit of service.

EDUCATION AND SUSTAINABLE DEVELOPMENT

Being the basic component of societal development, education’s interface with sustainable development is well-established. It is the single most important means for empowerment and for sustained improvement in well-being. Education reinforces the socio-economic dynamics of the society towards equality promoting social order which facilitates an egalitarian ethos. The principle of equality and non-discrimination is the
foundation of international human rights law. Thus education serves as the best social investment.

Sustainable transformation and development throughout the economy can be achieved only through effective capacity-building inputs from an innovative, quality higher education system. Higher education exercises a direct influence on national productivity. Universities and higher education institutions support knowledge-driven economic growth and poverty reduction in developing countries in a number of ways. They provide training for a qualified and adaptable labour force which includes high-level scientists, professionals, technicians, teachers in basic and secondary education, civil service personnel and business leaders. They generate new knowledge and build the capacity to access existing stores of global knowledge and to adapt that knowledge to local use. In addition to providing the capability to integrate and create synergy among these areas, access to higher education offers better employment and income opportunities to underprivileged students, thereby enhancing equity. The norms, values, attitudes, ethics and knowledge that higher education imparts constitute the social capital necessary to construct healthy societies and socially binding cultures.

**EDUCATIONAL, DEVELOPMENT : NATIONAL SCENARIO**

Having glanced through the basic tenets of education and development, let us look at the developmental imperatives of our country and the role of education therein. We have stated that the objective of India is to become a developed country by 2020. What does this mean in educational terms?

- The advanced/developed countries have universal primary education.
- They have near universal secondary education.
- Developed countries are moving towards mass higher education. In the US, 81% of the age group is in higher
education; it is 80% in Australia; more than 50% in all
developed countries.

- A survey made in 192 countries showed that development
depends 20% on natural resources, 16% on infrastructure
and 64% on human resources and social factors.

In India, literacy was 65.4% as per the latest census in 2001. Not more
than 10% of our population has education above 10th standard of schooling.
Only 7% of the age group (16 – 23 years) is in higher education. We expect
our enrolment in higher education to be around 20-25% of the age group
by 2020. This means a near three-fold or four-fold increase in our college
student population. How are we equipped for meeting these
requirements?

For achieving universal primary education, we have made it a
constitutional obligation (93rd amendment) to provide free and compulsory
education to all children between 6-14 years. We have not thought of the
ramification and challenges to collegiate and university education systems
which arise out of this. We have 30 million children to be given education
in schools in this age group within the next 3 years. To educate 30 million
children in the conventional schooling system, we need one million
teachers for schools alone. We have only about 3.5 lac teachers in both
the recognized and unrecognized sectors of school education. Providing
the required number of trained school teachers has to be taken up as a
priority area of the higher education system. How can technology be used
to cater to the training of teachers in the more expedient way is an urgent
necessity. The availability and retention of teachers, particularly in the
school education system, is a major concern not only of India, but of all
developing countries. A major activity which can be considered by the
university / college system is the creation of an expedient teacher training
system making use of the large pool of graduates coming out of colleges,
with the help of information and communication technology. New
technological institutions and IT establishments of liberal arts and sciences
and teacher education institutions should launch a nation-wide
technology-enabled pedagogical training facility to achieve this.
Technology can do a lot in this area. Technology cannot teach; only teachers can teach. Technology can enhance the teaching learning process. Here the integration of technology and open-distance learning methodology to teaching in the conventional mode is very essential.

GOVERNANCE STRUCTURES AND QUALITY
Throughout history, education has been locked in a triangle defined by balancing quality, access and cost. We need to create wide access to quality education at low cost. When you increase access or cut costs quality usually goes down. Conversely, most ways of improving quality restrict access or increase costs. We have to strike a balance here; technological innovations are necessary here. Change-resistant governance structures and rigid management practices of the university and affiliated college system are the real barriers to any innovation.

Our higher education system has to equip itself for higher enrolment in the coming years. In this context, our affiliating system as its exists now can only be described as a severe hindrance to quality and growth. We are continuing with a system that has become outdated and retrograde. The present system was started in 1857, with the establishment of the Universities of Calcutta, Bombay and Madras. Today there are some 16,000 colleges affiliated to a few hundred university level institutions. Higher education stands fragmented among these 16,000 plus colleges. Out of the 16,000 odd colleges only about 5000 have been recognized by the UGC. The others are not recognized for want of the necessary infrastructure and other technical requirements. There is no salvation for higher education unless we are freed from the bondage of the affiliating system. A thorough overhauling, or even dismantling the affiliation system is necessary.

QUALITY AND INSTITUTIONAL AUTONOMY
Another aspect of education in relation to development is the question of autonomy. The most important aspect of academic autonomy is that autonomy is for the teacher. In fact the teaching profession is the most
autonomous profession one can imagine. But in the affiliated system the college teacher does not enjoy any academic autonomy. Academic autonomy involves deciding the course content, evaluation of students and imparting information that one knows is the right one. Examination should be embedded in teaching. Examination after all is the means to find out how much the student has learned from one’s teaching. Repeated examinations/ continuous assessment are an integral part of the teaching process. Unfortunately, the teaching-learning process does not take place in our classrooms. If the teacher is not directly part of the examination system, if he is alienated from such vital academic functions, as is happening in our affiliating system, how can the teacher teach?

In general, the autonomous colleges, autonomous institutions like IITs, IIMs and other National Centres of excellence sustain quality performance in all areas. Along with their better capability, the autonomy raises them to a higher level of efficiency in operations. The criticism from some corners that college autonomy may lead to deterioration of quality and standards has been proved to be unfounded in the light of the achievements of the vast majority of the autonomous colleges. College autonomy is a challenge to the teacher. It is a teacher-empowering, learner-centric system. Seen in combination with accountability by way of quality assurance and accreditation, college autonomy is the most desired thing in the complex collegiate education system in the country. The premier institutions like IITs, IIMs and several deemed universities are totally autonomous systems with 100-200 teachers and 1500-2500 students. The teachers who teach in the class room in these institutions are directly responsible and accountable for the entire process of curriculum design, policy making, admission, teaching, evaluation, placement, extension and overall administration. If such a system is possible in institutions of this kind with UG and PG courses and research, why not colleges with about the same number of students and teachers in the conventional streams of arts, sciences, humanities and commerce also practise these autonomous procedures? The governance structures existing in the large affiliating universities in the country are essentially the same as those designed several decades ago when these universities were having just a few
thousand students and a few hundred teachers. Now in the affiliation system we deal with lakhs of students, hundreds of affiliated colleges and tens of thousands of teachers. A decentralized academic administration by way of making colleges autonomous by changing the Acts, Statutes and governance patterns of universities is essential for promoting the independent initiatives of teachers and individual institutions. Several colleges of engineering and institutes of higher technical education in the country have recently adopted autonomy for the purpose of availing themselves of international and multinational projects for infrastructure and academic development. This should be possible for the colleges of arts, sciences and commerce also which are in no way second in importance or relevance, if meaningful approaches are adopted.

When it comes to development there are also very specific cases. As already indicted, 89% of the undergraduate students are in colleges. 66% of the postgraduate students are in colleges, 85% of the teaching faculty work in colleges, but there are no positions of Professor in affiliated colleges although teachers are equally qualified as those at a university. There is a large number of M.Phil, Ph.D. programmes in affiliated colleges, but they are supposed to have no professors. This is a discouraging, debilitating attitude that cannot promote quality. But instead of promoting such initiatives, we unknowingly succumb to being considered second rate, to being denied academic benefits. Why can’t we have 5000 independent autonomous institutions that impart quality education in this country in liberal arts, sciences and commerce? We have about 300 universities. The United Kingdom with a population of only 6 crores has nearly 154 universities and 331 colleges that are autonomous and offer degrees. The US, with a quarter of India’s population has as many as 3264 universities. India must increase the number of degree conferring colleges, and make them autonomous.

To educate is to give people the keys to the world, which are independence and love; granting them the ability to walk alone, at the happy pace which is that of natural and free individuals. Education is a human right; it is the key to freedom; and it is the route to development.
The purpose of development is to expand freedom. The expansion of freedom drives development further because development depends on the free agency of people. Rabindranath Tagore said that, “the object of education is to give man the unity of truth”. He also observed “True modernism is freedom of mind, not slavery to taste. It is independence of thought and action”. The road to freedom of mind and to independence of thought and action is only lifelong learning. He expressed it perfectly when he said: “We can look at a road from two different points of view. One regards it as dividing us from the object of desire; in that case we count every step of our journey over it as something attained by force in the face of obstruction. The other sees it as a road that leads us to our destination; and as such is part our goal. It is already the beginning of our attainment”.

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This morning I have chosen to speak from a futuristic perspective within the broader frame of the topic assigned to me. The title of my talk is “Sustaining Quality in Flexible Higher Education”. However one may rightly ask whether we have a flexible system of higher education as yet and, therefore, logically question the relevance of talking about sustaining quality within it. The concept of flexible higher education is a twenty first century gift to higher education. It is given on the condition that we do not miss out on the race that we have to run with others who are better equipped than us. We will therefore, have to go in a fast track mode not only for the creation of a process for making judgement on quality in the flexible system of higher education that we should pave the way for ushering in, but also for creating an environment for sustenance of quality within it. Thus sustaining of quality in flexible higher education, in a way, becomes a continuous process. It is very much there in our exercises in higher education. Waiting for that which is not yet to be, may soon find us overtaken by others.

* Lecture delivered on October 01, 2004 at the University of Madras, Chennai.


The Background

The background is one of the massification of higher education. Higher education is expanding rapidly around the world, and it is also true that the resources and facilities needed are insufficient to meet this speed of growth. We may say that this is true of not only poor and developing countries, but even developed countries are finding it difficult to match resources with demands. It is estimated that today world over there are 75 million learners (9.4 million are in India) in higher education and that this number will be more than doubled to reach 160 million in 2025. To provide education to such a large number of students is a big challenge. It is certain that it would not be possible simply to expand and enhance the current infrastructure by creating more universities and by employing more teachers. It is necessary to meet the challenge by adopting different strategies for teaching and learning and also by using the new technologies to find cost effective ways to impart education. The growth of Open Distance Learning (ODL) and the use of communications and information technology are clear evidences of the inevitable attempts to meet the new challenges of teaching and learning in a different way. It is therefore necessary in this context to revisit the role of higher education.

REVISITING THE ROLE OF HIGHER EDUCATION

Higher Education an Instrument of Development

Education in general and higher education in particular is now accepted as an instrument for the socio-economic development and this is true in the case of both developed and developing nations.

The Central Agenda of Developing Nations

The Central Agenda of many of the poor and developing nations is to achieve social access and social equity in education. The number of youths going for higher education is increasing especially in developing nations because it brings social acceptance and credibility at a personal level to those who acquire degrees. It is the enhancement of this personal credibility at a social level and higher probability of acquiring gainful
employment that bring financial stability to a family that has thus made higher education a prime necessity for every youth in the eligible age group.

**ICT Revolution: Borderless Education**

Higher education has undergone a rapid change in the last decade of the 20th century. This is mainly because the convergence of information, communication and broadcasting technologies has led to an explosion of information and knowledge. The geographical boundaries have now disappeared. Education has now become borderless: one can learn anywhere, in any place, any time. This has added a new dimension to higher education. The twenty-first century has brought with it new dimensions for developing as well as emerging nations. The developed countries have already made enormous investments for creating and spreading knowledge. Augmented facility for flow of information and for well-developed educational structures have given them greater advantages. In a way, as it is so often said, there is a digital divide that is seen across the globe; a divide that separates developed nations from non-developed nations by widening the gap between knowledge-haves and knowledge have-nots.

**Equity in Access to Information**

The developing nations, therefore, demand equity in access to information. Creation of information flow network would bring equity in access to information. Of course, this would need a higher order of investments, but our investments are at a lesser level compared to the investment that would be necessary even to simply “scale up” academic and physical infrastructure to meet the ever increasing demands. It is not only the access to education that is at the centre stage but, in addition, it is the quality of education that has become the prime focus in the 21st century. And every student expects to receive “good” education wherever he or she is physically situated. Hence in the 21st century every nation is looking for equity in access to information and quality in teaching-learning
independent of geography. This leads us to discuss the nexus between education and economy.

**EDUCATION AND ECONOMY RELATIONSHIP**

*Education and Economy*

Now let me try to correlate three terms: education, economy and technology. Let me first talk about education and economy. As is well known today, ‘knowledge’ can be converted into ‘products’ or it can also be converted into ‘processes’ and further, it can also be converted into ‘services’. These three terms are important because they foreground knowledge-linked economy and also forge the link between knowledge and education.

*Knowledge and Education*

Knowledge is not a commodity that can be bought but it needs to be cultivated in the mind through Education. So this is the process by which education, knowledge, wealth, economy and social transformation get integrated. In fact, this is a new relationship that is developing the world over. I wish to underscore this relationship because in a way it brings together the concepts of ‘private’ and ‘public’ good and lays emphasis on ‘relevant’ and ‘quality’ education.

*Knowledge a Unit of Currency (KUC)*

These two have now become so important that ‘Knowledge’ today has in itself become a ‘unit of currency’. The term I wish to use is ‘KUC’. Knowledge as the Unit of Currency and it is a new coinage to talk about Education.

*Two Models*

Talking about education, I would like to place before you, two different models – one for the 20th century and the other for the 21st century. A perceptible difference has emerged between the two which we should take
note of. In the 20th century, education was looked upon as something that ensured employment to a person. Thus, for an individual it meant economic freedom which was naturally very important. Education, at that time, was also supposed to promote the economic growth of a society and a nation. Today, however, in the 21st century, the terms namely education and training have acquired different meanings. Education has become ‘Life Long Learning’, that lasts from the cradle to cremation. Life-long learning is indispensable for ‘social stability’. It there is no social stability, there can never be a good life. If there is no social stability, no nation can think of peace. Social Stability depends on ‘economic growth’ which is necessary for the removal of social disparities referred to earlier while discussing integration of education, knowledge, wealth, economy and social transformation. And the last and the most important point that is relevant to the 21st century education and training is, personal well-being. Every individual’s well-being is important. I shall define this term in a little more detail when I get back to re-defining quality in terms of the instrument used. It is indeed very interesting to see here how these terms relate in ever widening circles. When I talk of ‘personal well-being’ and ‘life-long learning’, it is the ‘individual’ who becomes important. It is the group and the society that become important when I refer to a term like ‘social stability’. And it is the nation as a whole that becomes an important entity when I talk of ‘economic growth’. All this is inter-linked with the global scenario which you cannot forget. Thus, in the 21st century one should look at education and training, from this particular point of view.

Shift in Economy: Dominance of the Service Sector

Let us now consider the new shift in economy. The entire world over, the composition of the GDP is undergoing a change - a change, where the Service Sector is becoming predominant. Almost 60 to 70% of the GDP in developed nations is linked to the Service Sector. Even for a country like India, the latest figures show that in 1992-93, 47.5% of the GDP was provided by the Service Sector. This year it is almost 56%. And this is bound to go up. The figure projected for 2010 is 62%. This shift in economy has to be given importance when we try to re-link matters. Such a shift
is possibly because of a change that has taken place in the use of technology.

**Shift in Technology**

What are the changes that have happened? The most important is the convergence of three great technologies – information, communication and broadcasting technologies. These technologies have converged and have brought about explosion of knowledge as well as information. This leads to a change in the manner in which we live, work and communicate. Consequently personal well-being has also changed. Every individual’s work culture and style of living have undergone a significant change. Hence, the three factors affected by the changes mentioned above—education, economy and technology—have created what I call the *new learning paradigm*.

**The New Learning Paradigm: Seamless Education and Blending**

The new learning paradigm has generated the concept of “seamless” education. The term seamless education, does not refer to the technology and the educational processes described earlier. Rather, it means education that is not confined to rigid structures: the technology is seamless, learning is seamless, the learning environment is seamless, economy is seamless, social transformations are “seamless” and so on. Thus, seamless is a kind of generic term. I want to re-emphasise this generic sense in relation to education by suggesting that we should forget the mutual exclusiveness associated with terms ‘conventional’ and ‘ODL’ often used independently of each other, even in opposition. Let us blend them. Which of them is more or less prominent in the blend will depend upon the environment under which we try to transfer learning and understanding to students. In some contexts, the conventional system is most important by itself or with a blend of ODL where necessary, while retaining the predominance of the conventional system. In another context it is the ODL that becomes more important. Yet another context may need an equal blend of both these two systems. And it is at this point we may examine the last few terms I wish to introduce to you: face-to-face education, video
conferencing, multi-media and e-learning. In fact, these terms are more or less the same. These are the techniques, the delivery mechanisms, which we often use. It may be a face-to-face model like the kind I am using today in front of you. Actually, however, I am using multimedia to make my face-to-face presentation a little more understandable. I might have used a video to illustrate what I am trying to say. Or, I could have gone down to using some e-learning mechanism. What I am essentially trying to say is that these terminologies which re-define the delivery system, are mainly for our convenience. Our objective is to go for the 21st century model involving ‘life long learning’ through such seamless blending. Seamlessness is determined by levelling differences in technologies in the primary interest of achieving the objective of life-long learning. They should not be used because we have them. If this is acceptable — and its seems to be the only choice - it has a two-fold purpose.

**Learning and Understanding**

It is here that a re-definition and re-emphasis with reference to learning and understanding becomes important. It is not for education alone. It is not for training alone. It is not for the use of technology *per se*. It is the learning that becomes important. It is the learning, which is essentially a seamless activity, in relation to understanding processes, that cultivates the mind. If we cultivate the mind, then it becomes the source of creating knowledge. And if we create knowledge in terms of products, processes and services, that becomes the source of wealth. And if there is wealth, change of economy is initiated. And if there is a strong economy, social transformation is a natural consequence.

**Learning Society**

The social transformation that we are looking for can make life on this a planet beautiful – and pleasant experience. In the final analysis, this is why we need to create a ‘Learning Society’ – a society that is continuously learning, a society that is seamlessly going through the process of learning right from cradle to cremation. Obviously, this requires new skills. According to me, one very important skill is ‘learning how to learn’. Unless
Quality in Higher Education Sustainable Development

one knows how one is supposed to learn and unless that skill is acquired, one can never be a part of the learning society. The second skill is that of learning to make critical judgment which is equally important. We must be able to make critical judgment of the environment around us. The environment in different areas is bound to be different. A local environment is certainly different when compared to a regional environment and it is certainly different from a national environment. And when I consider a nation in the global context, the scenario may change even further. Any learner must be able to make critical judgments. Making critical judgments has a reference to identifying the difference between good, bad and indifferent. Differences are relative; it is necessary to probe such relativism. Thus, what is ‘good’ in the local sense may not necessarily be ‘good’ in the regional sense or in the context of a nation. But if the well being of the nation as a whole is important, then we must be able to drop the ‘local good’ for the ‘national good’. Likewise, we must be able to think for the world as a whole. We must be able not only to make critical judgments but we must also know how to communicate them intelligently. Am I trying to inspire minds? Am I trying to bring the system to a level where learning matches understanding? And finally, we must learn to be flexible by being adaptable and tolerant to other creeds, situations and cultures. These are some of the questions we should ask ourselves. And that is where social stability begins. I personally feel that these 21st century skills in a learning society, where education and training require a new learning paradigm, become important. Hence, when I talk of ‘flexible’ education, to me, seamlessness becomes the critical, central focal point.

Quality

Now, assuming such a scenario, let me quickly go back to show how Quality may be viewed here. I think it is not a difficult task. We have done a really wonderful job in terms of defining quality, be it in the conventional system as we know it today or in the ODL system. But let us spend just a few minutes to understand, how we are assessing quality today. We are adopting two approaches. One deals with Institutional quality assessment. In fact, this becomes one of our focal points regardless of whether it is the
conventional system or the ODL system. The other deals with programme quality assessment and the process for both these approaches are very well defined. They are self-evident to all of us here. However, it appears to me that when we talk of seamless education, we must look at them slightly differently.

**QUALITY IN SEAMLESS EDUCATION**

In my judgment, we do not need to take a re-look at quality in terms of approach and process. ‘seamless education’, needs the same method for institutional and programme assessments. The process can remain the same - whether it is a self-study or a peer review or a judgment about quality. In fact, the process is perfectly sound. But, we need something larger than these to discern quality. The exception refers to our instruments and our methodology. Our instruments need to be developed a little more carefully. We need to refine the instruments by taking into consideration both learning and understanding; both are crucial for the sort of blended approach I have been talking about. This is indeed the big challenge we are going to face because the instrument has to be looked at from an entirely different perspective. We have to pull ourselves out from the box type of structure that we have created in our own minds and look at everything that we are going to do in the process of assessment from the learning and understanding point of view. Every query, every datum, every search that we would be dealing with in every parameter we define, must rest upon one single question: What sort of things are going to be needed if we have to achieve learning as well as understanding?

**Macro Level Challenge**

To me the challenge in terms of seamless learning, appears at two levels: the macro level challenge and the micro level challenge. And again, I am trying to relate it to the existing frame of reference. I always like to come back to my existing frame of reference because if I lose the existing frame of reference, I would be taking a flight of imagination in an open sky – a position that I cannot adopt. In today’s system, three entities are vital: academics, governance and resources. One has to redefine the governance
aspect by looking at it from the learning and understanding point of view - the entire operational, structural and legal processes. The question that must be asked is: Does my governance address the issues of learning and understanding? Is my academic component, which is at the core, addressing these issues and likewise, is the resources component also dealing with these issues? When I talk of resources, the term includes human resources, financial resources as well as academic resources – in fact, it includes all possible resources. To me it appears that this is where a formidable challenge is presented to us.

**Micro Level**

And this big challenge arises because I feel that at the micro level these are the aspects that we need to concentrate on. At the core, according to me is ‘content and learning environment’. And at the periphery is the ‘operating structure’ and ‘impact monitoring’. Hence, when I look at the academic point of view, I have to redefine every micro level aspect with reference to learning. My ‘two eyes’ in this regard are Learning and Understanding. And my ‘third eye’ which if you want, you may call the ‘third eye’ of Shiva, is an integration of the process of learning and understanding. In relation to governance too, these two aspects – the micro and micro levels - are important. The same applies to the matter regarding ‘resources’.

**Quality Assessment**

According to me, the quality assessment and accreditation process has a triple objective: one is to define and initiate healthy practices. Unless one initiates healthy practices and makes a very clear definition of them one cannot go ahead, because one needs to make a professional judgment which gives one a stamp on the observance of healthy practices. Whatever the NAAC or the NBA is doing today is in terms of giving a judgment stamp which refers to today’s environment. Of course, they do not claim that they are giving a “perpetual stamp”, because an institution may undergo metamorphic changes. An institution may change and in fact, that is what one expects to happen over a period of time. We are expected
to move from one level to another which is higher than the earlier one. But what is more important for us is to trigger a pro-active approach to improve the academic credibility. That becomes the ‘core’ in terms of life long learning - a continuous process that creates confidence in the minds of learners. Seamlessness in education is a generic term which, according to me, is for life; it is for the learning experience; it is for the delivery mechanism; and it is for the integration of various objectives, quality, therefore, needs to be organically embedded into seamless education.

Unless I integrate and embed quality in this manner, nothing is going to happen. And that’s why I would like to have the acceptance and success of this seamless education to be linked with the organic embedding of quality. in Flexible Higher education this appears to be the bottomline. That raises three points. One, I need to go back and accept the challenges; two, I need to revisit my instruments and methodology for quality judgment from the points of view of Learning and Understanding at both the macro and the micro levels and three, I need to create a mechanism, an operative system which allows me continuous checking and monitoring with reference to healthy practices so that education in the true sense, becomes a source for the development of an individual, makes the society rich and provides the lifelong learning skills necessary to implement the agenda of higher education, namely, creating a flexible system of higher education.

CONCLUDING REMARKS

The world of education, world over, is undergoing rapid change. The reasons for this are many; one may say that it is the thrust of technologies that is making the educational system change and some others may say that it is the impact of “globalisation” which has brought about the “commodification” of education that is driving the system to the level of “trade in education”. The developed nations are playing dual roles; one specific to their internal need and the other with reference to the global scenario. In both these cases they are in an advantageous situation because firstly, they have sound and well-developed educational structures and secondly, they also have access to and can afford, the technology. It
is this advantage that they are using for making their economy strong through commercialization of higher education. However, the developing nations are at a disadvantage both infrastructurally and in access to technology. Hence they continue to deploy the existing face-to-face education system and also distance education to make higher education more accessible. However these nations are also getting familiarized with the technology and the reduction in the cost of technology is encouraging them to adopt new strategies in delivery mechanisms. They hope, by adopting technology, to achieve better access and also “quality education”. However, both for developed and developing nations, the emergence of an integrated higher education system, as regards the various delivery mechanisms, is offering the new challenge of “judgement in quality”. And not only this, once having decided the “winning combination of delivery mechanisms” for giving quality education the focus shifts towards how to go about sustaining such “healthy practices” in a continuously dynamic technology change frame. This creates new dimension by creating a “responsive assessment and accreditation process” for judging quality in a flexible higher education system.

To me this is an interesting challenge for all academics and educationists the world over. It is going to be an exciting game and I am confident that the NAAC, who now play a bigger role in the 21st century, would be able to address such a challenge.
ABOUT THE SPEAKERS

1. JUSTICE J. S. VERMA
A distinguished judicial luminary, Justice Verma held the highest office in the Indian judiciary as the Chief Justice of India as well as many other responsible positions. His notable contribution to the social cause, among others, was made when he was Chairman of the Human Rights Commission. He is known for judicial accountability, probity in public life and for social justice. He was honoured by the university of Allahabad.

2. THE REV. DR. FRANCIS SOUNDARARAJ
A teacher, researcher and educational administrator, he taught for 43 years and headed three colleges in Tamil Nadu as their Principal. His work as Postdoctoral Fellow in the University of Edinburgh contributed to English language teaching in India through several publications. His extensive and innovative curricular reforms and his public speaking won him honours, notable among them being the “Award of Honor” given by a US College “for the betterment of relations between India and the US through cultural exchange” and the Father Matthias Award of AIACHE for his having been among the top ten innovative Principals of the country in the year 2003.

3. PROFESSOR SNEHALATA DESHMUKH
A reputed academic, educator and physician, Professor Deshmukh held responsible positions in the field of medicine and surgery. She was Vice Chancellor of Mumbai University. She received many awards including Dr. B. C. Roy Award and Woman of the Year Award (2000). Her single-minded devotion to duty and humanitarian zeal are well-known.
4. PROFESSOR A. GNANAM
A distinguished researcher in molecular biology and biotechnology, Professor Gnanam, after his doctoral work at North Carolina State University and teaching tenure at Cornell, established the well known School of Biological Sciences at Madurai Kamaraj University. He was Vice Chancellor of three universities in South India and held many national and international positions in institutions of higher education. His work as Chairman-EC of NAAC helped stabilize it as a national quality assuring agency. He carried its concerns beyond India and played a significant role in INQAAHE. Both his reforms made as Vice Chancellor and his efforts at NAAC are among his contributions, which have put our country on the global education map. He has more than 130 publications to his credit.

5. PROFESSOR JANDHYALA B. G. TILAK
An educational planner, Professor Tilak has done significant work at the National Institute of Educational Planning and Administration (NIEPA), the Planning Commission, the World Bank and other agencies. After receiving his Ph.D. from the Delhi School of Economics, he was Visiting Professor at overseas universities. His publications and awards are many and they mark him out as a distinguished economist of education in the country.

6. PROFESSOR GOVERDHAN MEHTA
An outstanding scientist of the country, he heads the Indian Institute of Science Bangalore. Professor Mehta is an organic chemist of international repute as his publications (more than 300), national and international, assignments and many awards testify. Particular mention may be made of the Van Humboldt Award of Germany for excellence in science (the first Indian ever to receive it) and the Lifetime Achievement Award of the Indian Chemical Society. He is consultant to the Government of India on Science and Technology.
7. PROFESSOR RAM G. TAKWALE

Professor Takwale is the Chairman-EC of NAAC. He studied physics at Pune University and pursued research at Moscow State University. His interest shifted to higher education in the latter part of his career, particularly to non-formal education through open universities. He is a pioneer in making this mode of education an instrument to achieve social access to higher education. His present concern is to meet challenges of massification of higher education through e-learning and IT strategies.

8. PROFESSOR PRABHAT PATNAIK

Educated at Daly College (as a merit scholar) and St. Stephens’s, where he received his first degree (BA honours), Professor Patnaik did his Master’s in Economics at Delhi University. He then went to Balliol and Nuffield, Oxford as a Rhodes scholar. He joined the faculty of Economics and Politics of the University of Cambridge, U. K in 1969 and was elected Fellow of Clare College, Cambridge. He returned to India in 1974 and established the Centre for Economics Studies and Planning at JNU where he became Professor in 1983. He teaches at the Centre. He specialized in macroeconomics and political economy. He has published several books in the areas of his specialisation, which are of international repute. Currently he is working on two books, *Money and Equilibrium* and *Marx*.

9. PROFESSOR V. N. RAJASEKHARAN PILLAI

He is Vice Chairman of the University Grants Commission. Earlier he was Director of NAAC. He was also Vice Chancellor of Mahatma Gandhi University, Kerala. He founded the School of Chemical Sciences in that University. A chemical scientist of repute, Professor Pillai has published widely (more than 200) and at present heads an international team of researchers in the area of biopolymer, peptidase. His publications have received more than 1500 citations in the last ten years. He has received many awards and honours. As a former Director of NAAC, he formulated an action plan for quality sustenance and evaluation.
10. DR. ARUN NIGAVEKAR

Professor Nigavekar is the Chairman of the University Grants Commission of which he was Vice Chairman between 1993 and 1996. Educated in Pune and Uppsala, Sweden. Professor Nigavekar became a well known materials scientist and he founded the Center for Advanced Studies in Physics and the Communication Science Department at Pune. He published more than 70 research papers. He has travelled widely and received many awards. As Founder-Director of NAAC, he pioneered in popularizing concerns for quality in higher education in the country. He was instrumental in designing the first instruments and shaping methodologies of assessment of institutions for NAAC. At present he is involved in making several academic and administrative reforms in the UGC.

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