Introduction

Modern times are known as the most turbulent times. Social, economic, political and technological conditions are fast changing and these changes will have far reaching impact on future. Change will be unprecedented and unparallel. Uncertainty about the emerging environment and other external and internal forces pose a serious challenge to humanity. The future shape of things is too complex to envision with precision. Auden calls this as “advent of anxiety”. We are treading on new era that can be called “World Revolution”. Changes have been occurring which reach to the very foundations of human life and society. The writings on philosophy, history and ethics, depict that though there is considerable progress in our civilization due to advancement of science and technology, there is widespread confusion and possible disintegration. Levi says “There is in the modern world a sense of impending disaster, a rootlessness, of the person and a pervasive tenseness which
points to certainties dissolved and emotional centres displaced."

It is felt that we are not living a life devoid of morality. We have been developing our appetite for all material objects but had no time to develop the higher things of life—moral and spiritual development. We have become materially affluent but morally and spiritually impoverished. The liberating advantage of science and technology with its corresponding fear of enslaving, degrading and destroying man’s most cherished values has given rise to a never silenced anguish in human kind. Unless people foresee the danger, and redirect the course of development, there will inevitably be the rise and swell of the “Technocratic Society”¹, which will be an outstretched period of what we are seeing at present.

**Expansion of Higher Education**

India is witnessing unprecedented expansion of higher education and mushroom growth of colleges and universities. (Please refer Appendix I & II, page nos. 315 to 317). There is admittedly a state of near anarchy even in the administration of existing facilities leading to social tensions and mediocrity of output. Much of this confusion is traceable to ethical, moral and social values being divorced from the educational process. This has far reaching consequences on the quality of manpower which holds the key to our country’s progress. Higher education has expanded quantitatively over the years. Regardless of political system, level of economic development, or educational...
ideology, the expansion of higher education has been the most important single post war trend worldwide. Higher education expanded dramatically first in U.S.A., then in Europe, currently the main focus of expansion is in the Third World.

**Role of Higher Education in National Development**

The benefits of higher education accrue primarily to the recipient, and by implication, that the benefit to the nation is not much, suggests a lack of appreciation of the role of higher education in national development. In fact there is universal appreciation of the fact that higher education provides the competencies that are required in different spheres of human activity ranging from administration to agriculture, business, industry, health, communication, and extending to the arts and culture. In fact the *World Bank* document itself states: "Higher education is of paramount importance for economic and social development. Institutions for higher education have the main responsibility for equipping individuals with the advanced knowledge and skills required for positions of responsibility in government, business and the professions.. Estimated social rates of return of 10 percent or more in many developing countries also indicate that investments in higher education contribute to increases in labour productivity and to higher long term economic growth, which are essential for poverty alleviation." (World Bank, 1994). It goes on to add: "Higher education investments are important for economic
growth. They increase individual's productivity and incomes, as indicated by rate-of-return analysis, and they also produce significant external benefits not captured by such analysis, such as long term returns to basic research and to technology development and transfer." (World Bank, 1994) In a follow up document, 'Perspectives and Strategies for Education', the World Bank concludes "Higher education also contributes to self sustaining growth through the impact of graduates on the spread of knowledge." (World Bank, 1995). More importantly this second World Bank document admits that "Not all the external effects of higher education - such as the benefits from basic research and from technology development and transfer-are fully reflected in the earnings used in calculating those rates of return."

UNESCO in a policy paper 'Document of Policies for the Change and Development of Higher Education'(UNESCO, 1995) maintains that there is a well established correlation between investment in higher education and the level of social, economic and cultural development of a country. It expresses concern over the observed trend towards a reduction in State contribution for higher education and its reallocation to earlier educational levels. It maintains "State and society must perceive higher education not as a burden on federal budgets but as a long term domestic investment, in order to increase economic competitiveness, cultural development and social cohesion. As
a conclusion one could say that the public support to higher education is still essential in order to ensure its educational, social and institutional mission. (UNESCO, 1995)

**Higher Education as Investment**

Higher education is both: a consumption good and an investment input. It is a good of immediate consumption as well as a consumer durable; and it is investment in the sense that it creates employability and leads to better earnings for its recipient. The returns to higher education are not only of private nature, but what is more significant is that there are social and national returns to higher education and its benefits are widespread and far reaching. *Alfred Marshall* ^6^ regarded higher education as national investment and keeping this value in mind. *Musgrave* ^7^ regarded it as a merit good of great social significance. *Myrdal* ^8^ says that development in developing countries is basically an educational process and educational expenditure is of 'instrumental value'.

Owing to the inseparability of consumption and investment aspects of educational expenditure, returns on any incremental expenditure to either the individual or the society are not computable. *Robbins Committee* ^9^ on Higher Education in UK (1961-63) had noted that spill over effects of higher education were so far reaching that it was difficult to identify them leave alone their measurement. It is, therefore, total educational expenditure which will have to be taken as investment and not any part of it.
The same argument has also been advanced by the *National Commission on Teachers - 1983-85 of the Government of India*\(^9\) which has observed that since the various levels of education are interdependent, it is not possible to say that one level is more important than the other. It is the view of the Commission that inadequacy of funds provided for education as a whole quite often leads to the claim that higher education with a greater per capita expenditure is depriving elementary education of what is its due. *(GOI : 1986).* \(^{11}\)

The Commission has very rightly noted that, of course, realising the importance of higher education in world competitive industrial and technological development, sometimes international agencies tend to reinforce doubts about higher education and counterpose, priority-wise, against elementary education. The Commission has cautioned in this respect and reaffirmed that there ought to be a proportionate and harmonious development of the various levels of education so as to optimise education's role in ensuring social change. There can be no, a priori, formula for sharing of resources between these levels but what proportions have come to be established in the developed countries could be a general guide to us. A study of this kind could show that we have to go a long way in providing adequate funds for higher education.

Turning to wider considerations, it may be pointed out that higher education ensures not only economic growth
by increasing productivity and efficiency through inventions and innovations, it also lies at the root of national development which goes far beyond economic growth. It concerns with creating a cohesive and vibrant nation out of people speaking different languages, professing different religions and possessing a wide variety of cultures.

These goals of economic, social and cultural development at once require provision of education. Without education they cannot be achieved; with inadequate education the period of economic disabilities, regional imbalances and social injustice will be prolonged leading to possible build up of disintegrative tensions. Through proper education, the achievement of economic and social development can be facilitated and expedited. The (well educated) human resource would have a multiplier effect on the utilisation of other resources. That is why the concept of education as an investment in developing countries has been increasingly accepted and that is why the Report of the Education Commission\(^{12}\) (1964-66) spoke of education as the only instrument of peaceful social change.

**Funding Pattern**

A global review clearly shows that in most countries of the world education is almost exclusively financed by the government. In countries of the OECD public source of funding was, in 1991, as high as 99% in Denmark, 98% in the Netherlands and 90% in Canada. Even in the United States
it was as high as 78%. In India it was 89% in Indonesia 62.8% and in Kenya 62.2% (World Bank, 1995). Cost sharing between government and beneficiaries is a relatively new suggestion, and has not really been put into practice. Tilak (1997) points out than in most societies government is the most important financier of (higher) education. According to the data given by him in the last decade state finances for the higher education sector in the OECD countries were high. It was 88% in Australia (1988), 89.5% in France (1984), 68.5% in Germany (1986), and 90% in Norway (1987). The contribution was relatively lower in the United States (59.3%) and the United Kingdom (55%). Tilak believes that government financing “is held not only to be necessary for the development of education, but also as a desirable form of providing education, because markets cannot provide the socially optimum quantities and qualities of education, as markets do not capture externalities.”

In most countries there has been a rethinking on the role of government in financing higher education following the transition of education systems from elite systems to mass systems. Ziderman and Albrecht (1995) point out that as long as education was reserved for elite groups governments were able to meet the full costs without much budgetary strain. With the ‘massification’ of education governments of most countries find it difficult to spare the required additional resources for education, and hence the proposal for cost recovery. However, it is significant that many Latin American countries increased their expenditure on higher education
during the late eighties. Between 1985 and 1990 government financing of higher education, in terms of GDP, has increased from 1.5% to 3.1% in Argentina, from 2.1% to 2.7% in Bolivia, and from 3.8% to 4.6% in Brazil. In Mexico there has been an increase from 3.9% to 5.2% between 1985 and 1992 Mungaray and Lopez (1996).

In India, education being on the concurrent list, the expenditure on education is shared by the Central and State Governments. The budgeted expenditures, for education (all sectors) and for higher education, for the years 1993-94 to 1995-96, are shown in Table 5.1 and illustrated in Graph 5.1. It may be noted that during 1995-96 the budgeted expenditure for education (all sectors), for the entire country, was Rs.36175.66 crore. Out of this Rs.7951.93 crore was for plan expenditure and Rs.28223.73 crore was for non-plan expenditure Govt. of India (1997b). The corresponding allotments for higher education were Rs.3648.60 crore, Rs.475.67 crore and Rs.3172.93 crore. In the case of plan expenditure the share of higher education, with respect to total expenditure on education, is approximately 6%. In the case of non-plan expenditure it is about 11.5%, while for plan and non-plan, both taken together it is about 10%. The Centre’s contribution to plan expenditure on higher education during these three years has been a little over 50%. However, its contribution to non-plan expenditure on higher education has decreased from 12.79% to 11.46%. Considering the fact that education is on the concurrent list it is reasonable to expect that the Central
government should contribute a larger share. However, compared to 1994-95, the centre’s contribution has decreased in 1995-96 by 4.66% in the case of plan expenditure, and by 4.11% in the case of non-plan expenditure.

**Expenditure on Education (All sectors) and Higher Education, 1993-94 to 1995-96**

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<tr>
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<tbody>
<tr>
<td><strong>Education (All sectors) : Plan</strong></td>
<td></td>
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</tr>
<tr>
<td>States</td>
<td>2941.60</td>
<td>4261.99</td>
<td>5068.09</td>
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<tr>
<td>Centre</td>
<td>(56.78)</td>
<td>(60.48)</td>
<td>(63.73)</td>
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<tr>
<td>Total</td>
<td>2239.41</td>
<td>2784.44</td>
<td>2883.84</td>
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<td></td>
<td>(43.22)</td>
<td>(39.52)</td>
<td>(36.27)</td>
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<tr>
<td><strong>Education (All sectors) : Non-Plan</strong></td>
<td></td>
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<tr>
<td>States</td>
<td>21727.20</td>
<td>24818.82</td>
<td>26759.84</td>
</tr>
<tr>
<td>Centre</td>
<td>(94.06)</td>
<td>(94.38)</td>
<td>(94.81)</td>
</tr>
<tr>
<td>Total</td>
<td>1371.42</td>
<td>1478.19</td>
<td>1463.89</td>
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<td>(5.94)</td>
<td>(5.62)</td>
<td>(5.19)</td>
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<tr>
<td><strong>Grand Total (P &amp; NP)</strong></td>
<td>28279.69</td>
<td>33343.44</td>
<td>36175.66</td>
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<tr>
<td><strong>Higher Education : Plan</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>States</td>
<td>155.69</td>
<td>234.89</td>
<td>230.62</td>
</tr>
<tr>
<td>Centre</td>
<td>(49.77)</td>
<td>(47.75)</td>
<td>(48.49)</td>
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<tr>
<td>Total</td>
<td>157.76</td>
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<td></td>
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<td>(51.51)</td>
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<tr>
<td><strong>Higher Education : Non-Plan</strong></td>
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<tr>
<td>States</td>
<td>2433.66</td>
<td>2676.12</td>
<td>2809.02</td>
</tr>
<tr>
<td>Centre</td>
<td>(87.21)</td>
<td>(87.55)</td>
<td>(88.54)</td>
</tr>
<tr>
<td>Total</td>
<td>357.12</td>
<td>380.70</td>
<td>363.91</td>
</tr>
<tr>
<td></td>
<td>(12.79)</td>
<td>(12.45)</td>
<td>(11.46)</td>
</tr>
<tr>
<td><strong>Grand Total (P &amp; NP)</strong></td>
<td>3190.77</td>
<td>3056.82</td>
<td>3172.93</td>
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</tbody>
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Note:  

i) Expenditure is in crores of rupees.  
ii) Figures in parenthesis indicate percentage.

**Table 5.1**  
Source: *Analysis of Budgeted Expenditure on Education*, 1993-94 to 1995-96 (Govt. of India, 1997b)
The plan expenditure on different sectors of education, since the First Five Year Plan beginning 1951 is given in Table 5.2, and the sector wise expenditure illustrated in Graph 5.2. It is seen that amongst the different sectors of education the share of higher education was highest at 25% during the Fourth Five Year Plan (1969-74), remained stable at 22% during the Fifth and Sixth Five Year Plans but declined to only 8% in the Eighth Five Year Plan (1992-97). The share of technical education has been relatively constant being 14% in the Eighth Five Year Plan. The total for all university level education is thus about 22%. During 1994-95 it was 22.52%.
Plan Expenditure on Different Sectors of Education (in %)

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<tr>
<td>Elementary Education</td>
<td>56</td>
<td>35</td>
<td>34</td>
<td>24</td>
<td>30</td>
<td>35</td>
<td>33</td>
<td>37</td>
<td>37</td>
<td>47</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>13</td>
<td>19</td>
<td>18</td>
<td>16</td>
<td>18</td>
<td>17</td>
<td>21</td>
<td>24</td>
<td>22</td>
<td>18</td>
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<tr>
<td>(200)</td>
<td>(510)</td>
<td>(1030)</td>
<td>(530)</td>
<td>(1400)</td>
<td>(1560)</td>
<td>(5300)</td>
<td>(18320)</td>
<td>(10530)</td>
<td>(34980)</td>
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<tr>
<td>Adult Education</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9</td>
<td>6</td>
<td>9</td>
<td>9</td>
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</tr>
<tr>
<td>Higher Education</td>
<td>9</td>
<td>18</td>
<td>15</td>
<td>24</td>
<td>25</td>
<td>22</td>
<td>22</td>
<td>16</td>
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<td>8</td>
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<tr>
<td>(140)</td>
<td>(480)</td>
<td>(870)</td>
<td>(770)</td>
<td>(1950)</td>
<td>(2050)</td>
<td>(5590)</td>
<td>(12010)</td>
<td>(5880)</td>
<td>(15160)</td>
<td></td>
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<tr>
<td>Technical Education</td>
<td>13</td>
<td>18</td>
<td>21</td>
<td>25</td>
<td>13</td>
<td>12</td>
<td>11</td>
<td>14</td>
<td>17</td>
<td>14</td>
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<tr>
<td>(200)</td>
<td>(490)</td>
<td>(1250)</td>
<td>(810)</td>
<td>(1060)</td>
<td>(1070)</td>
<td>(2730)</td>
<td>(10830)</td>
<td>(8230)</td>
<td>(27860)</td>
<td></td>
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<tr>
<td>Others</td>
<td>9</td>
<td>10</td>
<td>12</td>
<td>11</td>
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<td>14</td>
<td>4</td>
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<tr>
<td>(140)</td>
<td>(300)</td>
<td>(730)</td>
<td>(370)</td>
<td>(1060)</td>
<td>(1070)</td>
<td>(2730)</td>
<td>(10830)</td>
<td>(8230)</td>
<td>(27860)</td>
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<tr>
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<td>100</td>
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<tr>
<td>(1530)</td>
<td>(2730)</td>
<td>(5890)</td>
<td>(3230)</td>
<td>(7860)</td>
<td>(9120)</td>
<td>(25300)</td>
<td>(76330)</td>
<td>(47270)</td>
<td>(196000)</td>
<td></td>
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<tr>
<th>Note</th>
<th>Figures in parenthesis in millions of rupees.</th>
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</table>
Way back in 1968 the Kothari Commission had recommended, that 6% of the GNP be spend on Education (Govt. of India, 1968). This is the figure that has been promised for over a decade now (since the adoption on the National Policy on Education 18, 1986), but unfortunately continues to be a mirage. In fact the allotment to education, as a percentage of DNP, has declined slightly in recent years and today stand at 3.5%. The share of higher education has been falling steadily. It was nearly 1% in 1980-81, declined to nearly half by the early nineties and less than 0.4% of the DNP in the mid-nineties. Tilak19, (1997) . Hopefully, education will be given its rightful share of 6% by the end of the Ninth Five Year
Plan as promised. It is necessary that with this the share of higher education be raised to at least 1%. This would still be less than the share received by higher education in the OECD countries like U.S.A. (1.16%), U.K.(1.04%), Japan (1.04%), The Netherlands, (1.79%), Canada (1.98%), and New Zealand (2.53%). The figures in the developing countries of Latin America, as mentioned earlier, are much higher being in the range of 2.7% to 5.2%.

**Higher Education : Science & Technology Base**

In the fifty years since independence India has developed a science and technology base of which it can be proud. Following the break-up of the Soviet Union it has the second largest science and technological manpower though this is only about 0.27 per thousand population (compared to about 5 per thousand obtained in the developed countries). It spends about 0.9% of its GDP on science and technology. In the 1997-98 budget the allotment for science and technology was Rs. 8171 crore. The achievements in the fields of agriculture, space technology, atomic energy, electronics and communication and even in the basic sciences have been noteworthy. This has been possible because the universities have provided the much needed scientific manpower. However, the situation appears to be changing. Not only is the demand increasing but the source of competent personnel seems to be drying up. It is
well known that research projects awarded to teachers in the universities often remain incomplete because suitable (NET qualified) scholars are not available or because there is not enough money for purchase and upkeep of essential equipment. A recent study Kumar\textsuperscript{20},(1998) reveals that there is declining interest amongst graduates for research in different areas of science and technology. This is in contradiction of the assessment, made by Maddox\textsuperscript{21} (1993), who writes: “India’s science has a great and probably unique asset: the enthusiasm of young people for science and technology”. Kumar\textsuperscript{22} point out that between 1991 and 1996 there was only a 0.4% increase in enrolment rate for doctoral and post doctoral programmes in contrast to the 2.1% increase in population and 5% increase in enrolment to tertiary education. They attribute this is to the lack of job opportunities in the academic institutions and brighter avenues in other fields such as marketing. Added reasons are inadequate facilities, in terms of equipment and library, in the universities, and lack of proper environment. This is a disheartening development because skilled scientific and technological manpower will be required, in increasingly larger numbers, in the fields of agriculture, industry, communications and medicine. As Kasturirangan\textsuperscript{23}(1998) points out “Manpower resources constitute a primary and essential input for a country’s socio-economic development process. The goal of economic and social development can only be achieved if there exist adequate supplies of manpower with
requisite education and skills.” One may add that this manpower has to be of high quality capable of working in the frontier areas. Neglect of the universities will only make the problem worse. It is necessary to not only enlarge our tertiary education base but also to ensure that the education imparted is of high quality. A few privileged institutions like the IITs, IIMs, IIsc and central universities alone cannot fulfil this task. Unless we support a much larger number of universities, and the colleges affiliated to them in substantial measure, our hopes of developing into a major economic power cannot be fulfilled.

Today there is a realisation that the health of our scientific research is not very good, partly because of the neglect of research in the universities that followed the establishment of a chain of national laboratories and research centres. It has to be borne in mind that field of science and technology is a dynamic one in which obsolescence, both in terms of ideas and equipment, are measured in short periods, often of less than a decade. Freshness of mind, a desire to succeed, vitality and enthusiasm are great assets in this field, and these are qualities to be found largely in the youth. Our largest investments should, therefore, be in the universities that have a regular stream of bright students in need of mature guidance. As Bhide 24 (1990) states: “To my mind one of the greatest mistakes in our planning process has been the neglect and impoverishment of our universities. In the absence
of wherewithal the productivity of the research activity in university system is low and understandably the universities are unable to promote meaningful industrial and economic growth”. Pleading for a return of the centre of gravity of research activity to the university system he adds; “we must realise that when resources are meagre it is prudent to plough them in the universities which have an inherent multiplier effect.”

It is evident that to maintain and develop a research base, that can adequately serve the growing demands of society, the country will have to depend to a very great extent on our universities. These must be adequately supported, and the support cannot be restricted to the funding of some elite institutions. Universities all over the country, and especially those in our mofussil areas, must be supported by the government.

**Higher Education for Social Development**

As mentioned earlier the National Policy on Education, 1986, visualises education to be a process of empowerment through the development of knowledge, skills and values. Primary and secondary education can fulfil this objective through the creation of awareness and the generation of employment at the lower levels. However, for meaningful contributions that would lead to economic development it is tertiary education that holds promise of substantial contribution. Internationally, in the years between the two World Wars,
the concept of elite universities for the privileged was slowly replaced by the concept of egalitarian universities responsible to society and committed to its needs. Dailland (1990) believes that the vigorous growth of socially committed universities reflects a confidence in higher education as a major instrument of social and economic progress.

In the years following Independence, and especially in the late sixties and the seventies, Indian Higher education underwent rapid growth with the conversion of the elite systems of pre-Independence days to a mass system. In consonance with this change the University Grants Commission, in 1977, adopted 'extension' as the third dimension of higher education. The policy statement issued at that time stated: "The university system also has a great responsibility to the society as a whole. All universities and colleges should develop close relationships of mutual service and support with their local communities, and all students and teachers must be involved in such programmes as an integral part of their education"


Admittedly, not all universities have given due importance to extension work in their communities. However, many of them have been active and a few have made outstanding contributions towards generating awareness and assisting in development activities. Work relating to adult literacy, population control, village uplift, prohibition, environmental awareness and
a number of other subjects have been undertaken by the universities through the National Service Scheme (NSS). Though the government has been utilising this scheme to push through a number of their socially relevant programmes the colleges and universities through the National Service Scheme (NSS). Though the government has been utilising this scheme to push through a number of their socially relevant programmes the colleges and universities have not been given due credit. Planners and economists must appreciate the fact that the universities have been contributing to community development by acting as critic, advisor and helper Powar 27, (1990). As critics their function has been to analyse the economic, social, political and cultural developments of the nation, and particularly of their own region. As advisors they have been conducting research on various social problems, and problems relating to agriculture, industry and management, and rendering advice. And as helpers they have undertaken tasks related to various socio-economic programmes through the extension activities described earlier.

Ills of Higher Education

Of all the levels of education, higher education has the most important role to play, yet it is this stage of education that is most beset with serious problems. Various evils have vitiated higher education and made it meaningless and irrelevant. No country in the world is satisfied with the educational system.
On the other hand, there is 'decay' of higher education system in most advanced countries as in India. Lot of turmoil in our colleges and universities reflects the turmoil in the society at large. The past decade has not been an especially favourable one for higher education in the world. Maintaining autonomy, academic freedom and a commitment to the traditional goals of the university are posing a serious challenge to higher education.

Higher Education in India has expanded quantitatively but qualitatively it could not improve over the years. There are now over 200 universities and more than 7000 degree colleges with over 2,50,000 teachers and 54 lakh degree and post degree students. It is estimated that the total enrolment of degree students will increase to 74 lakhs in 2000 A.D. and to 134 lakhs by 2020 A.D. Mushroom growth of institutions, over production of educated persons, increased educated unemployment, weakening of student's motivation, increasing unrest and indiscipline on the campuses, frequent collapse of administrations, deterioration of standards and above all the demoralising effect of irreverence and purposelessness of what is being done, are some of the serious ills of higher education. Universities and colleges have now been inflicted by anxiety and perplexity, discontent and indiscipline, irreverence and futility, goallessness and disobedience, violence and perversion, etc. In terms of efficiency, productivity, and utilisation
of resources, the university system has completely broken down. Insensitive to the changing context of contemporary life, and unresponsive to the changes of today and tomorrow, higher education in India is dubbed as an 'Immobile Colossus'. It is so completely absorbed in trying to preserve its structural form that it does not have the time to consider its own larger purposes.

In addition to the above, there are certain inherent problems for the healthy growth and development of higher education in India. For example, the absence of a single machinery to look after planning of higher education and also centre state relations on the basis of co-operative federalism i.e. diarchy in higher education. There is no viable alternative to prevent the unplanned and haphazard growth of the institutions. Further what we see is that the information regarding the anticipated manpower needs of economic development not being available, spurt in the social demand for higher education or its socio economic impact; undue emphasis on examinations, deplorable infra-structural facilities i.e. 30% of the colleges in our country are nonviable; syllabi and curricula being irrelevant, obsolete or of dubious value. Thus a vicious cycle of mediocrity has come to prevail in higher education. Poor quality of higher education has a multiplier effect and puts the whole system beyond redemption. As rightly observed by K.Hanumantappa\(^28\), the main challenges and issues of concern in the coming Decade and Beyond are -
1. **Access and Adaptation**

There will be heightened demand for access and thus expansion of enrolments in many universities. Limited funds and desire for efficient allocation of scarce resources will come into direct conflict with demands for access. UGC has now advised all the universities to generate their own funds as it is not in a position to meet the growing demands of higher education. The budgetary appropriations proposed by government for education are inadequate and there seems to have been an insufficient appreciation of the need to gear the educational system to the requirements of the country. The outlay at the national level on education has been reduced from 7.9% of the total outlay in the I Five Plan to 3.6% in the VII plan and further reduced to 2.5% in the VIII Five year plan.

2. **Administration, Accountability and Governance**

Academic institutions will in future become large and more complex. There will be increasing pressure for a greater degree of professional administration. Therefore, administration of higher education in India should become more and more professional as in U.S.A., and other developed countries and the country should be well prepared to meet such a challenge.

3. **Knowledge Creation and Dissemination**

Research and publication of journals and books is an important issue now. Issues of access, communication, control and technology are intertwined which would gain lot of importance in the years to come.
4. The Academic Profession

The teaching profession has found itself under increasing strain in recent years in most countries including India. Demands for accountability, increased bureaucratisation of institutions, fiscal constraints and increasingly diverse student body have all challenged the teaching profession. Traditions of selfless service in the teaching profession also have suffered, and they have given way to self-interest pursued through political patronage. In the coming years also they face severe challenges as academic institutions. Maintaining autonomy, academic freedom and a commitment to the traditional goals of the university will provide a serious challenge.

5. Private Resources and Public Responsibility

In almost every country there has been growing emphasis on increasing the role of the private sector in higher education. Privatisation has been the means of achieving the broad policy goals. There are, of course, important implications of these trends. But the problem is as to whether private interests will support the traditional function of universities including academic freedom, fundamental research and pattern of governance. Recent Supreme Court Judgement on the admission of students to professional colleges in India is a big challenge to private managements of professional institutions. But privatisation of higher education is a global phenomena and in recent years China, Vietnam and Hungary have privatised higher education. In a poor country like ours where the state
is not able to do enough for mass education, higher education deserves not public but private support. Since education is a social service, extreme in this regard cannot be permitted. Education is essentially a cooperative venture in which guided freedom and participatory approach is to be encouraged. But complementary role of private management and the government will also pose a serious problem in the years to come.

6. **Diversification and Stratification**

Diversification is taking place to meet the new needs. Number of specialised institutions have come up to meet the specialised needs of specific population. This is because of expansion of student population. At the same time academic system has become more stratified - once individuals are within a segment of the system, it is difficult to move to a different segment. Therefore, diversification will also be an important challenge in the coming decades.

7. **Economic disparities**

There are substantial inequalities among the world's universities and also in India and it is likely that these inequalities will grow in future. For example, in India and Third World countries with dramatic budget cuts, the universities find it difficult to function, not to mention of improving quality and competing in the international knowledge system. This will be a real challenge ahead for higher education.

8. **Political and Academic Forces**

Unanticipated developments are also possible. In the Third World, student's movements will continue to be an
important political and academic force. The past decade therefore was not favourable for higher education. The same trend is likely to continue and may pose a serious challenge in the years to come.

9. **Resource Crunch and Societal Needs**

Universities will very likely grow more slowly in less successful economies in future. Therefore, resource crunch on the one hand and growing needs of the society for higher education on the other will pose critical problem to a developing country like ours.

10. **Vocationalisation**

Vocationalisation will be an important trend in higher education. Consequently university industry relations will have significant implications for higher education in future. Further, management of vocational education will be a complex issue, because it has to be implemented at various levels. This also poses a serious problem to educational planners of our country.

To improve higher education as stated earlier expert committees recommended number of measures. For example, as far back as in 1966, *Kothari* Commission setforth 8 conditions for improving the quality of higher education. Most important of them are -

1) Strong central and state governments that would be committed to educational development;
2) Stable political conditions in the country;
3) Declining birth rate of population in the country;
4) A growth rate of national income of 6% per annum;
5) A lessening of social tensions due to effective developments;
6) A strengthened and revitalised bureaucracy;
7) A committed and competent body of teachers; and
8) A community of students dedicated to the pursuit of learning.

The above promises could not be implemented effectively due to some unknown reasons. Then came the National Education Policy - 1986 document, which made following important recommendations to improve the higher education system and to make it more relevant to meet the societal needs of the country:

1) Delinking of degree from jobs,
2) Diversification of courses,
3) To stop expansion of conventional pattern of colleges and universities;
4) Selective admission to higher education;
5) Establishment of new centres of excellence;
6) Decentralisation of educational planning, administration and monitoring; and
7) Depoliticalisation of academia.
But these recommendations also could not be implemented successfully.

The recommendations of National Policy on Education - 1986, were again reviewed by two expert committees namely - Acharya Ramamurti Committee and Shri Janardhana Reddy Committee. Recently steps have been taken through UGC to implement the recommendations of these Review Committees by a Programme of Action (POA). UGC which is an apex body has been trying hard to promote higher education and to maintain high academic standards by organising a number of programmes for promoting excellence in teaching and research in various universities, but not with much success. Therefore, higher education in India stands at the cross roads today.

**Higher Education : Constraints and Strains**

The system of higher education in India is one of the biggest man making enterprises in the world. We have now around 200 universities, both statutory and deemed, and about 7000 colleges of all sizes and shapes. A student population of nearly four million is being groomed into adulthood by about 250,000 teachers. And the per capita investment in higher education ranges between Rs.1500 and Rs.5500 depending upon the type of course pursued by the student and the institution at which he studies. The expansion of the system after Independence has been almost astronomical.
Of course, the system has grown by way of an answer to the rise in demand, which by itself is the consequence of escalation of expectations on the part of the people. It indicates the faith that the people have come to repose in education as an instrument of change. Perceived thus, the increase in the demand for education, particularly higher education, is an indicator of a healthy civic attitude on the part of the citizens of the democracy, and therefore, deserving all the possible encouragement by the State. And happily, the State has tried to do this remarkably well over the years. Of course, by doing so, the State has incurred the charge which is not wholly unquestionable that, in the process, the primary education sector has received less attention than it ought to have.

In any social system, higher education has to have its due place inasmuch as it provides valuable inputs for intellectual excellence, innovation and leadership which are the basic ingredients for the advancement of society in the modern world. Since 1947, India's higher education has had this agenda to carry out. It indeed has been a stupendous task given the strains and constraints that have been squeezing the system relentlessly. In fact, all through the four and a half decades of India’s independence, it has been a virtual struggle of survival as well as growth by the system with the squeeze hamstringing its endeavours on one hand, and the demands of development firing its imagination on the other.
One need not indulge in an evaluative exercise of determining which side won; rather one should make an objective survey of the operation of the twin forces of constraints and strains that results in the squeeze leading to a severe handicap on the process of healthy development of the system of higher education in the country.

**The Constraints**

There are five major constraints on the system:

(i) Philosophical constraints;

(ii) Cultural constraints;

(iii) Economic constraints;

(iv) Operational Constraints; and

(v) Managerial constraints.

This philosophical constraint underlies the psychomoral-intellectual vacuum the Indian higher educational scenario suffers from. The agonising part is its manifestation in the meaninglessness of the pursuit in the classrooms and on the campuses. This gets reflected in symptoms like agitations, strikes, work to rule movements, boycotts of examinations etc.

The cultural constraints are too obvious as witnessed in the people’s attitudes to each other and towards their work. Anthropologically culture is a very powerful determinant of
a person’s perceptions of his roles as a member of society
and the quality of the acquittal of his role.

We have a cultural heritage of at least five millenia
which is both composite and particularistic at the same time.
The secular and the sacred are intimately woven in our cultural
fabric. The peaceable and violent both strands run through
its texture. We have been susceptible to appeals ranging from
savage to divine. The former has been more pronounced in
our independent era leading to even acts of massacre perpetrated
on weaker sections.

Education has been recognised as a potent acculturating
force the world over. It is also recognized as liberating and
empowering force. But, in order that it fulfils these missions,
it must be allowed to operate in a cultural environment of
freedom, fairness, and encouragement.

Unfortunately, we are a fractured society with innumerable
inhibitions of caste, creed, region, language, gender and vested
interests. Not a few decisions pertaining to higher education
therefore, are influenced by non academic considerations. They
may be regarding the opening of a new university or a college,
or instituting a new faculty or a branch of study, appointing
a functionary or nominating a member on a body of a university,
prescribing a course of study or recommending a text book,
and the list of such acts can be endless. It is these acts
which vitiate our decisions and lead to academic miscarriages.
Take our attitude to work, the standards of performance that we have pursued so far, be they in classrooms, laboratories, examination halls on playfields and even in private academic pursuits have been in the neighbourhood of mediocrity, if not outright poor. The target of excellence has been a far cry in almost all departments of our academic life. The work culture that prevails in our academic world bears no relevance to the looming challenges of globalisation and market friendly economy that are sought to be introduced in Indian life.

It is these cultural constraints that have dealt a crippling blow to the movement for injecting twin elements of autonomy of action and accountability for results in the system of our higher education. One observable consequence of this is the tardy pace of the implementation of the NEP (1986).

Our economic constraints are too well known to need elaboration, for they affect all our development plans. Ours is a developing economy, still very largely dependent upon labour intensive primitive methods of production in millions of units scattered all over the country. New technologies are a recent entrant into the field. The productivity of the average Indian worker is much below his potential thanks to multiple causes like poor training, low motivation and lack of appropriate technology.

Consequently, there is a low per capita income leaving little for saving and resultant investment. Whatever little
surplus we produce is eaten up by soaring inflation, teeming population and increasing servicing charges of our foreign debt that has accumulated into billions. Social services, including education, have been the first victim of the economy drive in every budgeting exercise of the country.

We vividly remember the panic the recent cut imposed on the UGC grants to the central universities caused. We also know how the late release of even the partial grants to universities and colleges under the eighth plan has dislocated that process of development of higher education projects in them.

Resource crunch is not merely a piece of an economic jargon but it is a terrorising virus that can deliver a mortal blow to any working system of higher education very largely depending upon the state funds for its survival, let alone its development.

It is these economic constraints, among others, that have slowed down the process of qualitative improvement in areas of curriculum reconstruction, examination reform, teacher training, enrichment of infra-structural facilities, student services programme, open learning system, and R & D in higher education. It's a matter of grave concern for us to how 40% of our colleges that are non viable will ever acquire a modicum of resources that should justify existence as modest centres of higher learning. It's also a matter of equally serious concern
how long the meritorious students from poorer sections will continue to be denied their fundamental right to education by being asked to pay capitation fees for admission and for subsequent continuance in the courses they are admitted to. Indeed, the curse of resource crunch is more devastating than even the divine curse for the gods above are more susceptible to human entreaties and prayers, and they have more bounties at their disposal than the state exchequers have!

The operational constraints are the products of human inadequacies. Students and their teachers constitute the core human resource of our tertiary system. They must operate effectively in their respective capacities in order that the primary aims of teaching and learning are realised.

The academic calendar, the courses of study, the programmes of activities, the schedules of examinations and convocation, and the entire interactive gamut of socio academic life on and off the campus have to be operationalized at the maximum of the installed commitment. This is the minimum rule of the game.

All the participants in the game have to help the operative process to function at the peak of its health and productivity. But, this does not happen. Breakdowns, showdowns, failures and sabotage are not uncommon, leading to tremendous wastage of time, energy and resources.
The reasons are many, in fact too many. Overcrowding of classrooms, admission of the unfit to colleges and universities, apathetic work force of teachers and para professionals, lack of communication among participants, vagaries of rules and arbitrary fiats, impersonal touch to the whole process of transactions in the classrooms and outside, are but a few glaring contributory factors that build up the operational constraints.

The managerial constraints that plague the system of higher education are a legacy of our colonial past that is ill at ease with the democratic present. For more than a century we have administered education through a culture of command and control at all levels. Participative management as a modern strategy adopted in industry and business is a recent arrival in the field of education. Its induction has been marked by a apathy and reluctance, if not outright hostility.

The colonial system of administration generates mind sets that bank upon bureaucratic methods of running an organisation, be it a classroom, a team on the playground, a college faculty or a university body making decisions in respect of personnel, curriculum, examination, materials or finance. These minds sets die hard. They linger on the part of all, those that govern and those that are governed. One typical hang over of this mentality is the craving for a hero, one who takes decisions on behalf of all, executes, evaluates and rewards or punishes.
Modern management science values goals and objectives, plans programmes and strategies on them through participatory techniques, implements them through horizontal and vertical interaction, does collaborative evaluation and leads on to better corporate plans. It is this proactive management that is mostly missing from the system of resources on one hand and non-fulfillment of goals on the other, leaving in the trail a discontented, and frustrated human mass.

Unfortunately, these constraints persist in the system in one form or another and in varying degrees, setting at nought our plans like the NEP (1986) at the macro level and institutional plans for improvement and excellence at the micro level.

The Strains

While the system works under the five-fold constraints, it is also subjected to five-fold strains that further diminish its capability as an instrument of development of the youthful human resource of the country. The strains are

(i) Systemic strains,

(ii) Demographic strains,

(iii) Developmental strains,

(iv) Political strains, and

(v) Ethical strains.

These strains exert pressure on the already fragile system and threaten its very existence. Among these the
systemic strains are built in the structural organisation of our higher education, which is characterised by the affiliating mode bequeathed by the British. It is strictly hierarchical and therefore, dependent upon a bureaucracy whose work style harks back to the colonial past.

When such a string of structure is exposed to democratic pressures, it generates forces of conflict and repression. Its built in inflexibility makes it irresponsible to contemporary concerns. The result is either a breakdown or a total failure.

Many a college and university in India has been experiencing these systemic strains and their first victim is the rule of law that must interrelate various subsystems into a cohesive organism. This does not happen very often, and so we witness the phenomenon of disintegration of the structure. One example of this is the cross purposes at which various constituents of a university or a college work.

The demographic strains are simply frightening, both quantitatively and qualitatively. Institutions and classrooms are bursting at the seams. The result is proliferation of number. It seems the rising tide is unpreventible because the population of the country is multiplying and newer sections of population are entering the precincts of higher education. And recently the Supreme Court of India having declared education of all levels a fundamental right of the citizen, the trend is likely to increase in the years to come.
Qualitatively the first generation learners are increasingly swelling the ranks of college-going population. Gender wise women's participation is increasing at a greater pace. Region wise, the hitherto unserved areas are establishing new universities and colleges in a large number. Specialized higher education institutions are also added to the fraternity.

This flood in number and diversity has put to considerable strain the age old mechanism, its facilities and offerings. The first casualty of this demographic deluge is the quality of life on the campuses and the quality of education imparted there.

This leads us to the developmental strains of the system. Higher education is an organic system comprising several subsystems all of which are supposed to be welded into a coherent whole. This can happen only if the developmental process that goes on constantly is a healthy, multi dimensional process of unfolding and, thereby, of growing healthily.

Because of the five-fold constraints described earlier, and the strains caused by the systemic mal-adjustments and consequent disorientation, the developmental process comes under severe strain. Take the chief task of teaching and learning which should, ideally, be a joyous experience of "being" overflowing into "becoming". It is virtually limited to a unilinear activity of coaching for passing a test and, thereby, earning a degree without undergoing a rigorous experience of intellectual renewal, of emotional fulfillment and of creative reinterpretation of self.
The development of the self of the youthful learner is perceived in a narrow mould of rote learning, thereby, ambushing the exciting adventure of his learning into a wasteland of truncated experience euphemistically called education.

Neither the teacher nor the student who is in a hurry to pass through the assembly line is concerned with this developmental tragedy he is passing through. Perhaps it is safe for both to maintain the status quo in order that they are spared from the sacrifices they would have to make for transforming the process of education into a rigorous encounter with one's self as well as with the environment of learning.

The political strains of a public system of education are unavoidable, for such education is both a product and a producer of political consciousness of democratic polity. All policy decisions pertaining to education have to be politically debated and derived. The implementation, monitoring and evaluation of these decisions also require people's involvement, and that also is the result of a vigorous political process of public discussion, dissent, decision and mobilisation.

However, it is the negative power centered, manipulative politics that has exerted incalculable pressure on higher education. Such politics has brought in its wake elements of horse-trading, corruption and distortion of the normal process of law. Consequently, sources of political power and
authority have been polluted. Quality of decisions in all matters, be they of appointment of personnel, nomination of functionaries, running of routine administration, organisation of instructional programmes, maintenance of discipline, placement of orders for goods and services, etc. has been adversely affected.

Naturally, politics devoid of values is a lethal agent for an organism like a university. Strains generated by such politics eat into the vitals of the system. The spectacle of the anaemic system of many a university and college in our country is an evidence of this lingering morbidity.

Lastly, the system of our higher education is facing numerous ethical strains generated by the social environment of contemporary India. The situation gets aggravated when crass self interest of individuals as well as of pressure groups supervenes all considerations of law, decency and ethics,

Education is anti-social if it is unethical in conception, in planning and in execution. Students, teachers, managers of education and the community are bound together by certain unwritten codes of ethics. These codes have to be observed under a conscious, moral covenant entered into by various participants in the enterprise of education.

It is our experience since Independence that this covenant is observed increasingly in its breach. It is an impenetrable moral insensitivity that has come to mark our
thinking and behaving with respect to higher education. This
deliberate attitude strains the system at all levels, leading
to an outright compromise on moral issues, whether they be
of appointments, curriculum, teaching, discipline or examination.

Squeeze

Higher education in India is, thus, subjected to pulls
and pressures of various constraints and strains. They apply
a relentless squeeze on the system leading to deleterious
consequences like the following:

(i) Immobilisation

The squeeze results in immobilisation of thinking as
well as acting especially in critical moments. People prefer
to be at a standstill rather than on the move, for it is safer
to be static than take decisions, and act and undertake risk.

(ii) Stagnation

The result of immobilisation is stagnation. The system
loses its steam and its joints get stiffened. It begins to
accumulate dust and dirt metaphorically, and moves towards
pathological state of pre-decay.

(iii) Routinisation

The system functions at only a survival level, ruling
out initiative and innovation, and manages to carry on at a
poor level of efficiency. There is an all round diminution of
role and performance of excellence on the part of all.
(iv) Ad hocisation

Under a multifold squeeze the system makes do with ad hoc measures to meet with exigencies as and when they arise. There is very little of pre-planned crisis management mechanism which is not possible under multiple constraints and strains. An air of laissez faire, therefore, pervades in all respects, which if not managed properly, tends to degenerate into semianarchy.

(v) Bureaucratisation

Education under constraints and strains ceases to be a professionalised system. Instead, bureaucratisation of all its modes of thinking and acting takes place, leading to impersonalisation, rigidity and dehumanisation.

Thus, the state of squeeze devitalises the organism, and at the same time gives it a false sense of survival. We cannot afford to keep our system of higher education in such a state especially when the demands on higher education for tomorrow’s India are changing fast in their range and quality.

Remedies

The Indian socio cultural system has proved its resilience and capacity to renew time and again. There is no reason why our higher education system should not show the same response in moments of crisis. We need to muster our moral, spiritual and material strength to manage the crisis of squeeze in our higher education of today. Steps like the following can provide remedies to the ailments caused by the squeeze-
(i) Moratoria

Strains are caused by systemic disorders. We therefore, need a whole range of moratoria on the factors and forces that cause strains. These moratoria should be declared for a reasonably long period of time. They will cover all areas like expansion of number and size of institutions, proliferation of substandard institutions, agitations of all sorts, etc. There must be a will to exercise self abnegation when the national interests are at stake.

(ii) Prioritization

Once moratoria assure peace and orderlines, we should evolve a feasible and realizable scale of priorities for a reasonable period, say till the end of the 20th century. These should again cover all the vital areas of system like goals of higher education, appropriate curricular inputs, teacher learner participation, research and development. Area wise targets be also defined and strategies of implementation be laid down.

(iii) Selective excellence

Let's not aim at the sun, but keep our targets sufficiently high to motivate us to strive more persistently to seek and scale our appropriate peaks. Let's get out of the cocoons of mediocrity and realize standards of achievement comparable to those found elsewhere in our thoughts, ideas, decisions, actions and even in failures.

(iv) Alternative modalisation

We have tried out for long just one mode of higher education, that of formal face to face teaching. There are other
alternative modes of non formal and open varieties, that address both teaching and learning. They offer more promises if tried out honestly and perseveringly.

(v) Social insurance

All educational endeavours need social support including political support. We need not fight shy of influencing the quality of political decision making in the country, for the direction, vitality and health of education depend, among other things, on those decisions. Let's welcome a rigorous, objective and very close social auditing in return of an enduring and effective social insurance for education. This would provide considerable protection against the strains that the system is undergoing and the constraints that tie down its manoeuvrability.
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