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**STUDIES RELATING TO HIGHER EDUCATION  
IN MAHARASHTRA**

**STUDY NO. 1**

**THE SYSTEM ANALYSIS  
(A Diagnostic Study of the Incoming Crisis)**

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**GOKHALE INSTITUTE OF POLITICS AND ECONOMICS  
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(1960-1970)**

**Study No. 1**

**THE SYSTEM ANALYSIS  
(A Diagnostic Study of the  
Incoming Crisis )**

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## PREFACE

"The system analysis a diagnostic study of the incoming crisis" is the study No. 1 in the series of studies relating to higher education in Maharashtra. The other proposed studies are: (a) the study regarding the problems involved in the promotional stages of (private) new colleges, (b) the financial management of private colleges, (c) regional distribution of higher educational facilities in the State, (d) the organizational set up of management and finally (e) the role of the college in the educational planning. This is a study sponsored by the Education Ministry of Maharashtra Government. Author shall always remain grateful to the (Education) Ministry for the opportunity given to him to undertake this comprehensive project. This study is conducted at the Gokhale Institute of Politics and Economics, Poona 4. Author takes herewith the liberty of putting on record his heartfelt thanks for all the valuable guidance and help which he received from the Director of the Institute and the staff working under the leadership of the Director. The study relates to the period from 1960 to 1970.

On the assumption that higher education is primarily a developmental activity relating to the development of human capital in the state, an analysis regarding the economic aspect of this bigger<sup>est</sup> industry in the State, is presented

herein. This is followed by an analysis of characteristic economic features, that are at the foundational level of the emerging crisis. Subsequent to this, a comprehensive system analysis of this human capital creating industry in our State is presented, together with it an analysis of external and internal aspects, inputs, process and output. This is followed by a statement regarding the challenge before the higher educational system of the State. An attempt is subsequently made to evaluate objectively the trends in the growth of higher educational during 1960-1970 and to examine future trends that threaten us with the deepening of the crisis which is very likely to lead to a "state of anarchy" in higher education in the State. It is on the background of these aspects, that the approach and the strategy that is to be adopted in squarely meeting with the situation, are presented. Together with this, issues regarding research, planning strengthening of finance, modernization of management, development of educational leadership, modernization of teaching and learning, improvement in communication and information system and the implementation of the programme through pilot project experiments and extension have been presented.

While being apologetical for the size, little bit of repetition done for re-emphasising and the delay, which was due to situations beyond control of one individual working over five projects at a time, following aspects are to be specifically submitted.

(a) Any presentation of report of this type is inevitably circumscribed by the limits of knowledge, experience, capacity for imaginative thinking and bold presentation of one man. In view of the realization of these limitations, an educationalist would, with all modesty, submit that the fact finding and the recommendation cannot be claimed to be last, best and the final word on the issues.

(b) Proposals regarding research, planning, strengthening of finance, modernization of management, teaching and the learning process, development of leadership, improvement in information system, pilot projects and extension would require not much of a preliminary investigation, but mainly the development of these approaches and proposals into concrete "action projects" together with the implementation, follow up and evaluation details.

(c) It is also not for the author to say as to what extent, the submission of the report would actually initiate thinking and action in the process of reconstruction of our higher educational system.

(d) It is however assumed that this note will certainly provide a logical basis for objective thinking and a sound framework for taking immediate steps towards bringing about a basic revolution in the higher educational system of this progressive State.

It must be mentioned that there are certain things regarding which there is absolutely neither any doubt nor

any hesitation. (a) Our higher educational system is rapidly leading towards a crisis. (b) The other side of the problem is that, against the background of this deepening crisis, our higher educational system is to play a very vital role in our collective efforts of all round development through a process of creating appropriated and effective human capital. (c) Higher educational reconstruction and national reconstruction are ultimately inter-related. The most effective way of breaking the vicious circle in which we find ourselves at present, is through a big way reconstruction of higher educational system. (d) Then time is the essence of the problem, as the reconstruction must be at the latest completed within the life span of a generation and it is obvious that the future of our states is much dependent largely upon what is done about higher education during next ten years. (e) There is no doubt that although theoretically the universities, and the academic community is to do quite a lot, as the matters stand at present, state government shall have to take a lead in initiating this process of reconstruction and revolution. If the government, basically the state government in partnership with the Union Government as a representative of the community is not accepting this responsibility, no one else will or can. Finally the stakes being too high to be taken lightly, it is hoped that to this tremendous challenge, there will be an adequate and effective response.

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S. S. Kale

Anant Chaturdeshi  
September 22, 1972.

## BRIEF SYNOPSIS

1. Introduction
  - 1.1 Main purpose of the diagnostic study
  - 1.2 Higher Education system a part of Educational system
  - 1.3 Higher Education not a welfare but developmental subject hence the need to study Economics of Higher Education.
  
2. Important Concepts issues and problems in the Economics of (Higher) Education
  - 2.1 Silent revolution in the thinking on Economics of (Higher) Education
  - 2.2 Main issues and problem areas in Economics of (Higher) Education
  - 2.3 Present Study is limited to the study of important problems relating to the internal efficiency of (Higher) Educational System
  - 2.4 Study of Higher Education as an economic activity
  - 2.5 Characteristic features of Higher Educational industry
  - 2.6 Analysis of typical features of the higher educational industry that are at the basis of crisis - (a) Attitude of the community (b) Consumers who are not buyers (c) Producers who are not sellers and financiers who are not controllers of the industry
  - 2.7 Attitude of the community
  - 2.8 Consumers (students) who are not buyers
  - 2.9 Producers (Mostly teachers and administrators) who are not sellers
  - 2.10 Financiers (Tax payers) who do not control.

**3. System analysis of the Higher Educational Industry in Maharashtra**

**(A) The Frame Work**

- 3.1 Objectives and limitations**
- 3.2 Deep concern regarding impending crises and optimism**
- 3.3 Diagnostic conceptual model of higher educational system**
- 3.4 Concept of the "System"**
- 3.5 Internal and External Components**
- 3.6 Internal aspects**
- 3.7 External aspects**
- 3.8 Environmental components and other aspects, though identified are not analysed in the note**
- 3.9 More significant aspects - Relationship between internal and external components**
- 3.10 Salient features of Higher Educational system in Maharashtra**

**(B) System Analysis**

- 3.11 Inputs process and output of the higher educational system**
- 3.12 Three types of inputs (a) Philosophical (b) Demographic and (c) Economic inputs**
- 3.13 Philosophical inputs (a) Existing knowledge (b) Values and (c) Goals**
- 3.14 Demographic inputs, (a) Students and (b) Teachers**
- 3.15 Economic inputs, mainly financial**
- 3.16 The process**
- 3.17 Management that directs and coordinates the system**
- 3.18 Structure and time schedules**
- 3.19 Contents and the quality of the system**



- 3.20 Methods and technology of teaching
- 3.21 Quality control
- 3.22 Research
- 3.23 Cost and efficiency of the system
- 3.24 Output.
- 3.25 *Conclusions regarding system analysis*
- 4. Main challenges before the higher educational system of Maharashtra State
  - 4.1 Assumptions
  - 4.2 Significance of Higher Educational system
  - 4.3 Main challenge. Creating right type of men increasing and improving the quality and character of human capital
- 5. Progress of Higher Education during last decade in Maharashtra - an objective evaluation
  - 5.1 A Decade of revolutionary developments
  - 5.2 Growth and development - a broad outline sketch
  - 5.3 Disappointments and inadequacies.
- 6. Diagnosis of the present day conditions - a situation of impending crises in Maharashtra
  - 6.1 Multi-factoral causes
  - 6.2 Historical factors and legacies
  - 6.3 Failure of the system to adapt to the rapidly changing environment
  - 6.4 Half hearted attitudes
  - 6.5 Absence of adequate understanding of the present day challenges
  - 6.6 Lack of the sense of commitment
  - 6.7 Absence of dynamic effective leadership
  - 6.8 Psychological resistance built up of management and administration

- 6.9 Absence of an integration of social economics and higher educational policies
  - 6.10 Tendency towards piecemeal planning
  - 6.11 Fluctuations in policies
  - 6.12 Organizational deficiencies still continuing
  - 6.13 Weak educational administration
  - 6.14 Scarce and uncertain resources
  - 6.15 Underdeveloped information system.
7. Inadequacies of the past actions
- 7.1 Broad analysis of inadequacies
  - 7.2 Needed an analysis of the future trends.
8. Future Trends
- 8.1 Trends towards rise in the social demand for higher education
  - 8.2 Explosion in knowledge
  - 8.3 Acute resource scarcity - rising costs, increasing stringency of resources - Economic financial squeeze
  - 8.4 Irrelevant product-mix and growing maladjustment between the higher educational system and environment
  - 8.5 Growing graduate unemployment
  - 8.6 Growing discontent in the youth
  - 8.7 Inertia of our traditional higher educational efforts
  - 8.8 Deep crisis and likely deepening crisis
  - 8.9 Other aspects regarding deepening crisis

9. An Approach to Action
  - 9.1 Preliminary observations
  - 9.2 No simple solutions
  - 9.3 Main anchor sheet of hope the state level strategy
  - 9.4 A flexible framework of operations with a definiteness of direction and continuity of action
  - 9.5 Broad consciousness of the community needed
  - 9.6 Development of strategy at various levels
  - 9.7 Constant watch and attention towards internal and external aspects output and constant stress on innovations and modernization
  - 9.8 Priority to development and modernization process
  - 9.9
  
10. Main line of action - initiating a sweeping revolution and adaptation with the national needs - Adoption for this purpose a state level strategy.
  - 10.1 Pressing need to initiate a sweeping revolution
  - 10.2 Revolution through innovations and modernization
  - 10.3 Research planning and planned development
  - 10.4 Research
  - 10.5 Planning
  - 10.6 Strengthening finance
  - 10.7 The third line of strategy improving efficiency
  - 10.8 Initiating transformation through a process of developing - educational leadership in different levels and sectors
  - 10.9 Development of a 'core' programme of organization and training scheme

- 10.10 Modernization of teaching process
  - 10.11 Modernization in learning process
  - 10.12 Information system
  - 10.13 Extension, experiment and the process of introduction of innovations.
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- 11. Concluding observations: Needed immediate thinking and more specifically immediate action
    - 11.1 Needed immediate reconstruction of higher educational industry in the state
    - 11.2 Needed dedicated determined work
    - 11.3 Needed immediate consideration of the note.
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- 12. Recapitulation of findings and recommendations.

## 1. Introduction

1.1 Main objective to diagnose: This note intends to present only those salient features of the higher educational system that is operating at present in the state of Maharashtra, which helps us in diagnosing the present crisis and in finding out remedies that would lead to further development and improvement of the system.

1.2 Higher Educational System is a part of educational system: Higher educational system, (though due to administrative set up and its distinct operations indicating isolation from general educational system) is necessarily a part of the total educational system of the state. Formerly education was taken to be component part of the social welfare efforts and activities of the community.

1.3 Higher education now is taken not a welfare but a developmental subject. Hence the need to study Economics of higher education:

In recent thinking, particularly after 1967, education is very much viewed as an important instrument of economic and social transformation. As such, instead of a welfare it is treated herein as - "the developmental subject". It is really now necessary to appreciate fully economic and social developmental aspect of education. Hence in subsequent paragraphs an attempt is made to present ~~in the beginning~~ contemporary issues in Economics of Education.

## 2. Important concepts and problems in Economics of Education

2.1 Silent revolution in thinking on Economics of Education:

Ten to twelve years ago there was hardly any subject as

the economics of education and now together with the health, economics of education has come to develop as a core of the economics of human resources. This field of enquiry namely the Economics of education is now silently revolutionizing thinking in the economics of growth, labour international trade and public finance. Till very recent times entire discussion on educational planning was mostly confined to the sources and methods of financing education. Today this seems to be outdated and old fashioned. It is now well realized that improvement in the quality of labour force can have almost dramatic and revolutionary effect on the economics of growth. It is also being appreciated that planned expansion of education should be collectively provided for, and be ultimately related to the specific economic objectives and targets. Thus Economics of Education with his core concept of investment in human capital, is not only transforming significant areas of orthodox economics, it is now very much likely that economics of education may really develop into a distinct discipline itself. <sup>①</sup>

## 2.2 Main issues and problem areas in Economics of Education:

In this economics of education with special reference to higher education, the type of enquiries that seem to be emerging are (a) How much the state should spend on education and

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1 Economics of Education with its concept of human investment has rapidly transformed large areas of orthodox Economics to emerge in 1960's as a full blown discipline in its own right Economics of Education. Selected Readings I, Edited M. Blaug Penguin Book, 1968, p. 7 and M.J. Bowman, The human investment revolution in Economic Thought 1966, New Economics of Education, International Journal of the Educational Survey Vol. I, No. 1, p. 29-46.

more particularly higher education? (b) How expenditure on education in general and higher education in particular should be financed? (c) If it is investment, how large is its yield and how does it compare with other forms of investment both in the people and the material?<sup>1</sup> If it is mainly consumption then what are the determinants of private demand for more and better higher education.<sup>2</sup> (d) What is the optimum combination of students time, teachers, building equipment embodied in the system. (e) What is the optimum structure of the higher educational pyramid i.e. the number in different levels and channels of higher educational system. (f) What is the optimum product-mix of formal and informal higher education as well as from the macro point of view of humanities, social and physical sciences etc. and finally, (g) What contribution does higher education make to the overall development of the state and how far economic development of the state can be accelerated particularly in the low income areas, by regulating higher educational system? Consideration of these issues really falls within two broad categories.<sup>3</sup> (a) Analysis of economic value of higher education and (b) analysis of the economic aspects of higher educational system. While the first category concerns mainly with the impact of higher education on labour productivity, occupational mobility and ultimately with the distribution of income, the second category mainly deals with the internal

1 T.W. Shults.

2 Vaisey - The Economics of Education Faber. Faber 1962.

3 Harris, S. (Ed.) Economics aspects of Higher Education, Paris, O.E.C.D. (1964).

efficiency of the higher educational system - in relation to costs efficiency etc.<sup>1</sup>

**2.3 Present effort is an attempt to study main problems relating to the internal efficiency of the higher educational system:**

Present attempt is mainly a part of the second category of enquiry. There again, where as totality of issues cannot be tackled within a short time, the entire enquiry is confined to certain limited selected issues, which are basically of a micro character the bases of analysis mainly being the private aided college. These issues are (a) A study into the initial promotional stages of private aided colleges, (b) A broad study of organization and management of private aided colleges, (c) A broad study into the finance of these colleges and finally, (d) the role of these colleges in the educational system.

Before any attempt is made to take up these issues, it is necessary to appreciate the framework. It is in this connection that it is suggested that thought is to be given to the (a) nature and significance of higher education. (b) Higher educational system of our state and (c) trends and challenges. It is only when these framework issues are cleared up that it would be meaningful to take the specific issues. In this note it is mainly this framework of the system what is being presented.

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<sup>1</sup> Muskin, S. (Ed.) Economics of Higher Education, Washington Printing Press, 1962.



## 2.4 Higher Education as an Economic Activity

(a) Higher Education as an Industry: According to older concept education was a process of distribution in which parents and people were consumers, teachers and administration <sup>oys</sup> salesmen and sales managers and the content of education a commodity. Now the recent concept is that education is viewed as a process of production. Here pupils are raw materials to be developed into a different kind of finished product as required by the suppliers of raw materials namely the parents in our country. The College or the University there becomes the factory in which teachers and administration are industrial workers the curriculum text books teaching material the tools and techniques of production. Most of the formulation in economics of education starts by conceiving education as an industry. Adopting this very approach, higher education in our state is to be <sup>conceived</sup> concerned as an industry.

(b) Inputs Process and Outputs of the Industry: Like any other industry - absorbing material human resources this industry has got (a) inputs from the society, (b) the process - and (c) the output to the society.

(I) Inputs: Inputs from society in educational industry differ a little bit from those in other industries.<sup>1</sup> These inputs can be grouped under three categories.<sup>2</sup> (a) Philoso-

1 Banghari, F.W., Educational System Analysis, London Macmillan, 1969.

2 Coombe, P.H. The world Educational Crisis - A system Analysis. NY Oxford University Press, 1968.

phical inputs in the form of (1) Existing knowledge (2) Values and (3) goals of the higher educational system. These inputs provide to the higher educational industry its educational aims and contents. (b) The second input is demographic in character and is really an input from the population and qualified man power stock as indicated by (1) students and (2) teachers etc. (c) The third input from the society can be described as an economic and income input and this mainly assumed<sup>s</sup> the form of (1) finance and (2) physical material items that go into the higher educational system.

(II) Process: Higher educational process is in many respects similar to that of any other industrial process Theoratically, There<sup>are</sup> (a) aims and priorities that guide the higher educational industrial activity. (b) students whose learning is the main aim of the system. (c) Management that is expected to coordinate direct and evaluate the working of the industry. (d) Structure and time schedules that deploy time and students flows in different channels, aiming at achieving different purposes. (e) contents representing the essence what the students are expected to acquire. (f) teachers, who provide the essence and orchestrate learning process (g) Learning aids in the form of books, libraries, maps, blackboards, laboratories etc. (h) facilities in the form of building etc. to house the process. (i) technology representing all techniques used in making the industry work (j) quality control - expressed by eligibility regulations at the time of admission, marking examination and other

standards. (k) Research to improve knowledge and the industry performance and (L) costs as one of the indications of efficiency.

(III)Output: As regards output to the society it is very much difficult to state in precise terms as to what it is. Output is to be identified in relation to what an individual really gets when he completely goes through the higher educational process. Finished product of this industry represents a person who finds himself much more improved. He gets improved in (a) basic knowledge, in (b) intellectual and manual skill in (c) power of reasoning and criticism in (d) system of values, motivation in (e) power of creatibility and innovation, in (f) cultural appreciation and in (g) a sense of responsibility. In fact it would be correct to say that the output of the higher educational industry to the society is the provision of better equipped persons who can serve better (a) themselves and their family members (b) serve 'economy' as "workers" (c) serve the community as "innovator" as "workers" (d) ~~serve-th~~ contribute better not only to their culture but even to world culture as a better local and "World Citizen". Whereas the product of other industries are valued for their usefulness either in the final consumption process or further production the product of the higher educational industry is valued for the productivity even in the production process and hence Marx has rightly called educational institutions as "teaching factories".

The chief function of this industry is not merely to preserve and diffuse existing stock of knowledge, skills - and values, but also to increase this stock. Higher educational level in general and educated man power in particular, seems to be output of the industry. It is obvious that the economic effects of higher education are so thoroughly interwoven with the social cultural and even political consequences<sup>1</sup> that any notion to separate these effects would be impossible.

### 2.5 Characteristic factors of (higher) educational industry:

Having noted the general similarity of higher education to industry, it is also necessary to grasp salient features - peculiar of higher educational activity as an economic activity. Important peculiar features are as mentioned hereunder.<sup>2</sup>

(a) In most countries the whole industry is collectively provided and financed.

(b) Although inputs of the industry are typically bought into the market, outputs are not sold in that manner. In a peculiar way those who produce namely the teachers and staff members, do not sell their service, those who consume do not have to buy it.

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✓ 1 Economic and social aspects of Educational Planning  
UNESCO, 1964.

2 Higher Education as a productive activity has got four salient features. (a) It is both an item of consumption as well as a factor of production as it produces skills, ability attitudes on which technology and Organisation depends. (b) It yields product returns as it modifies men rather than materials. (c) It has a highly differential cost yielding according to the country's general level of socio-economic development and (d) It is marked by non-logical tensions as value judgement are involved. Decisions

(c) This industry consumes a relatively large portion of its own output.

(d) Higher educational industry is a stable business. It is not subject to uncertainties and vagaries of time. Educational industry is not subject to such variation. It grows continuously without any disturbance. This is due to a number of reasons the main being that (1) Although effective demand for product is not clearly identifiable and measurable, yet this effective demand grows continuously. There is the constant addition of students body. With the expansion of economy there is the greater demand for education. Then there is the "option effect" for still higher education as well as "Demonstration effect" the result being that there is an undisturbed continuous growth in the rapid demand for education. Therefore investment and employment in education grows steadily. (2) Stability in educational structure continues because the basic technology in education does not change frequently and therefore education is a stable sector in the economy.

(e) Production cycle of the industry is longer than most of the other industries.

(f) This is a service industry which is really not aiming at profit or surplus maximization. While objective of self-sufficiency cannot be ruled out, a college is not a profit making institution. There is no commercial motive of profit maximization. It is sometimes said that higher educational

industry is not engaged even in production maximisation activity. In fact it is really not self-evident as to what (higher) educational industry maximises. This is particularly so because the main activity is that of diffusion of existing knowledge, preservation of existing stock of knowledge and increasing the existing stock.<sup>1</sup>

(g) Efficiency in the commercial enterprises is measured by the rate of profit it earns but there is no such efficiency measure available in our (higher) educational industry.

Measurement of productivity in the educational industry therefore hinges on the problem of measurement of output in relation to input. Here the difficulty is that the output in the higher educational industry is not easily definable and therefore measurable. It is intangible and multi-dimensional. There are innumerable socio-economic factors that abound these inputs and outputs.

(h) Mathematical formulation of the production function is complicated as there are "identification and measurement difficulties."

(i) Higher educational industry uses human capital much extensively to produce human capital. It is an industry which is broadly described as an "industry engaged in the production of human capital by human capital." The industry uses largest number of skilled man power - this being mostly used in the form of teachers, administrators etc. While the percentage of educated employed in this industry approximates to 91.5%, in manufacturing industries such as percentage is

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<sup>1</sup> R.K.Hall and J.A.Lauwery's "Education and Economics" The Year Book of Education 1956, London, Evans Bros. 1956 and the World Year Book of "Educational Planning" 1967, Edit Lauwery J.A., Heredy G.Z. and Blauch.

usually around 12.1%.<sup>1</sup> As a manufacturing industry progresses, it becomes more and more capital intensive. The usual pattern is that machines and tools replace and take over the work of man. In fact progress of non-educational industries is measured by the degree with which such replacement takes place. This marked tendency in other growing industries of replacement of man by machines, is not present in higher educational industry. In fact conventionally the progress in the higher educational industry is measured by means of teachers student ratio - (high ratio representing personal attention being paid to the student).<sup>2</sup>

(j) Elasticity of different factors of production in (higher) educational industry is very much low. Building cannot be substituted for teacher and the students efforts and time cannot be substituted by teachers efforts and time.<sup>3</sup> Although substitution of teachers by introduction of modern methods

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1 Census 1961 and Manpower studies, 1971 data not yet available. P. Sitapati, Employment, underemployment and full employment. Commerce pamphlet No. 51 and the Report of the Committee of Experts on unemployment estimates. Planning Com. Govt. of India, 1970 may be seen.

2 The ratio of various educational facilities equipment etc. for student are other conventional measures.

3 Although due to the executive obsession of outdated examination system new trend in student's expectation is that this should happen.

of teaching is said to be possible, particularly at the higher educational stage, this possibility would always remain marginal. Complete mechanization of higher educational process is a remote possibility.

(k) Higher educational industry is not making any specific demand on scarce resources of the economy except trained manpower and money. As regards the first, namely the trained manpower, this includes mainly teachers and administration. In the short run the supply of teachers and administration may be scarce but the nature of the industry is such that with a planned approach and a proper organization of production the higher educational industry, itself may eliminate scarcity (however effective factors affecting scarcity are wages and salary structure but these are beyond the scope of industry.) Other demands which the industry makes in the economy are in regarding to the supply of building and equipment and these can certainly be created with the indigenous material. There is the question of equipment. However equipment used in the educational industry is comparatively not very much costly, as it is in the manufacturing industry. Foreign exchange component in higher educational industry, consists of (a) foreign experts, i.e. teachers, (b) text books and (c) scientific equipment. It is calculated that this does not even constitute 5% of the total direct cost. With a planned approach there is a definite possibility of completely eliminating foreign dependency.



(L) Reward to strategic factors in manufacturing and commercial industries paid are higher rewards (salaries of administration, managers, engineers etc.) However, compared to these, rewards that are paid to the most important strategic factor in the higher educational industry are low. This is really mainly due to the general neglect of the long term value of the output of this industry.<sup>1</sup>

(m) Size and cost relationship in the higher educational industry is comparable with commercial firms. Firms have U shaped cost curves indicating falling unit costs up to a certain level of output - (optimum) and a rising unit cost after that level. Measurement of cost productivity and efficiency support this observation that per student recurring and instructional expenditure generally vary inversely with the size of the educational institution. (However, this evidence does not indicate rising average expenditure for increasing size after reaching optimum. This may perhaps be due to the fact that the educational firm might not have reached the optimum.) All this suggests that economies of large scale production is at work in this industry.<sup>2</sup>

(n) Another important aspect is that outlays in this industry are less liquid than in other forms of investment. Liquidity is an attribute or a quality of investment representing its capacity to get itself converted into hard cash that can be used in any other alternative manner. Investment in

1 Works of Shri. P.K.Panchamukhi Tables 2, p. 218 and 243, Measurement of Cost, Productivity Efficiency, NCERT 1969.

2 Malchup, F., Production and Distribution of knowledge in United States, Princeton, may be seen.

education is less liquid in the sense that if educational firm cannot work successfully then the funds invested in education remain frozen. They cannot either be withdrawn or put to alternative uses.

(o) Output of this industry is highly differentiated as the substitutability of one technical graduate with another is highly limited. Thus there are differentiation and gradations in quality.

(p) Specificity of the industry with regard to some of its factors is very great. Higher educational institutions may accept and retain for transformation only those who would satisfy certain minimum pre-requisites with regard to ability and aptitudes.

(q) Main feature of commercial industries namely that of having a tendency towards location and concentration in urban centres is <sup>also</sup> present in higher educational industry as well. Major higher educational institutions are situated at urban centres. This trend of pull to urban centres may be due to the fact that these institutions provide man power to non-agriculture enterprises and the concentration may be mainly due to this demand factor.

(r) Higher educational industry is to have a very close relationship between firms operating within the general educational industry. This industry depends for its student input mostly on the secondary educational institutions. This clearly indicates that the planning of any sector of this industry depends on the planning of such systems.

<sup>1</sup> Chesswas, J.D., Methodology for Educational Planning in Developing Countries, Paris, UNESCO, 1961 may be seen

(s) Higher educational industry has a very close relationship with the employment. Although a detailed analysis provides an independent theme for study, some major aspects are to be briefly mentioned.

(1) Education provides employment to more persons than manufacturing transport or public utilities in developing countries. In our country education is employing half the number of persons employed in all manufacturing industries. In our state even if merely the number of teachers is taken for consideration it would be obvious that quite a large number is employed. Detailed studies of formal educational employments in relation to other sectors have to be worked out.

(2) Higher educational certainly eases the problem of unemployment in one respect. This industry takes away at least for a short period, a sizable population within the age group of 15 to 25 away from the labour market. In the absence of higher educational industry, they might have glutted the market.

(3) Higher educational sector provides increasing employment. Due to the labour intensive character of the industry employment opportunities in this industry go on increasing.

(4) Job creation capacity of any industry can be known by expenditure-employment ratios. It has been estimated that the expenditure required for employing one person in education as seen is much less as compared the expenditure necessity for employing one person in manufacturing industry.

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1 Manpower and Utilization Studies may be seen.

(5) Education creates new employment through its (a) multiplier effect operating through employment in the industries producing and supplying material for education, and through its (b) linkage effect on the employment in other industries (c) through its demonstration effect with respect to consumption of education and other goods, and finally through its (d) option effect for more education. However, inspite of all these aspects, higher education is not able to solve employment problem especially because the higher educational system is not geared to national needs. Higher educational system by itself cannot correct the lack of effective demand for educated persons.

(t) Planning and development within the higher educational industry has got a strong bearing on the economic development and social transformation of the state as a whole. It is through the effect through labour productivity that contribution of higher education to economic development can be observed.

Having so far discussed the characteristic features of the (higher) education industry, it is necessary to grasp clearly those typical features that lead to a crisis situation in the industry.

**2.6 Typical features of the Higher Educational industry that are at the base of the present day crisis of (1) attitude of the community (2) consumers who do not buy (3) producers who do not sell and (4) finance<sup>ers</sup> who do not control :**

Having considered typical features of higher educational industry is now necessary to examine certain critical salient features of the industry as these have a direct bearing on the present crisis in higher education. These features can be summed up as (1) Attitude of the community (2) In this industry those who produce do not sell their services (3) those who consume do not buy and (4) those who finance it do not control. Each aspect requires an elaboration.

**2.7 Attitude of the Community ; The Setting of the Framework (1) Student should get free education. If this is not possible student should pay as little as possible**

The attitude of the society is that consumers of higher education namely the students should get higher education free or if this ideal is not possible, then alternatively the student should pay as little as possible. The conviction behind this attitude seems to be that if the consumer is required to pay full costs, the consumer, of his own, may not purchase socially preferred amount of higher education. Another conviction seems to be that asking the consumer to pay full costs, would lead to reenforcing and permeating fundamental inequality. Based on these convictions is the act of the community, in which predominant share of the higher educational costs is borne in one form or the other by the tax payer. Even in the case of a private college the student or his family

pays merely a conventional total the remaining balance being paid by the tax payer.

(2) Even with the rise in demand or costs - price of fees are not to be raised:

Whereas society's attitude is that the student should pay a conventional fraction of total costs, <sup>mis</sup> affects the demand which goes on increasing. While demand exceeds supply, prices (namely the tuition fees,) for higher educational services are not allowed to increase, as this would mean a departure from the ideal of free higher education.

(3) Higher education cannot be a free service: Higher education is neither a free good nor a free service. In fact it is a very much expensive service. Not only that there is a scarcity value attached to it, the resources that go in the higher educational industry as inputs, are scarce, and these expensive resources having alternative uses. It is for this reason <sup>that</sup> ~~of~~ the demand and supply aspects cannot be ignored or neglected. As regards this expensive service the <sup>experience</sup> expense is that while more and more of it is being produced more and more is wanted. Adequate supplies to this ever increasing demand are not available <sup>o</sup> even in Government funds that operate as a subsidy in this industry are not unlimited. Government is forced to impose constraints.

(4) Limited resources of government Inadequacy and scarcity:

Scarcity of funds from the government results in an inadequacy of supplies to meet the demand, and although at the other end there <sup>is</sup> an ever increasing unsatisfied demand.

(5) Alternatives open: Potential demanders are not expected to pay the full cost price, Rationing does not take place. Against the pressures of ever increasing demand on limited supply there are two alternatives open (a) Allowing existing facilities to be congested to the maximum possible level or (b) rationing by restricting the number rather than by allowing the quality to deteriorate. The first alternative as is being tried at certain quarters, has its own limitations. Situation is immediately reached after which any further congestion is really not possible then there remains no alternative but to adopt rationing. This <sup>is a</sup> "non-price" rationing in which suppliers are in a despotic position. This creates a number of additional problems a satisfactory solution of what is really a difficult proposition.

(6) Absence of cost price consideration takes away all incentives:

Having survived the first selection in rationing, a student is offered practically a free service, "something for practically nothing." Absence of any cost and price consideration takes away from the student all incentive to avoid waste. And optimum utilization as there are no cost sacrifices involved

(7) No feed back on consumers preferences or any normal market regulation:

Teachers and administrators who produce do not sell their services directly to the consumer. There are very few attempts made to satisfy demand directly. There is no feed back

F207

either from the consumer or to the tax payer, supplier or producer to regulate their behaviour through a system of consumers preferences. There are no standard tests, that are usually available in a free normal market. The result is that the teaching community and the administrator (producer) may even produce any product which may not at all meet the need and the desire for whom it is meant.

(8) Economic essence of product absent. This is indicated by <sup>institutional</sup> instalment pattern, staff salary and administration

attitudes: Suppliers and demanders deny the economic essence of the product. This is evidenced through (a) Institutional patterns which just remain static and indifferent to change (b) Teachers and staff pays that are fixed and applied uniformly without any differentiation between the inferior and superior quality staff - (superior quality generally leaves higher education and seek employment outside.) Superior staff takes very little interest in the day to day administration, they being interested either in research or work outside the day to day operations including rationing being usually left to the inferior staff. (c) Teaching community and the administrators produce what they please. Observations are that they go on producing (a) conventional offerings, (they) being not required to meet the desire and needs of those for whom offerings are produced.

(9) Finally the framework of the basic crisis becomes complete when the attitude of those who provide the major financial support and thus really finance the output, is taken into consideration.



Actual complexity and the depth of the crisis is not likely to be vivid till certain details are presented. These details are being presented here-after under the main captions of (a) The consumer - who do not buy - (b) the produce who do not sell and the (c) financier who do not control

### 2.8 Consumers of higher education (students) who do not buy

(1) Consumer is mainly the student: Consumer of higher education <sup>is</sup> are mainly the student.

(2) what is consumed in education: The problem arises as to what the student consumes and what he gets in return. Here it is to be remembered that higher education is conceived as both, the investment as well as consumption. Confusion and chaos arises mainly because higher education is something more than investment and consumption, something which at the same time both as well as neither. It is process <sup>a</sup> representing <sup>Psychic</sup> psychic transformation - a process through which student assumes that he will become and remain sensory different from what he was. Before receiving education, student migrates to an undiscovered country from which no traveller returns. Problem is now can the rational choice be exercised over such a process - who can logically evaluate results? If the student knows the result, there is no problem. Except in the case of professional training, the student knows what he is able to do only when he completes the course. Because a germinic higher education does not merely train, it transforms the student providing him with different and new way of 'looking at the world - a conversion

that is akin religious conversion or "LSD trip." Here the trouble is that the student is both - he having foot in both the worlds. Because of all this the outcome remains unknown. An unpredictable element of game is involved a game against or with life. Curious situation that requires attention is that the consumers are committed to a product which they really do not know. It is a blind date. The consumer even in the case of higher education is a child man - as he is not a man who makes a choice but one for whom choice is to be made. In all circumstances parents, whose wisdom is taken to be sufficient are made to choose <sup>and</sup> create an accepted pattern. Parents and tax payers are assumed to know what they want and are taken to be capable of evaluating and alternating process of getting what they want through higher education. However, even admitting that parents have gone through the process of higher education and therefore are enlightened, the fact is that the majority of the parents, especially in our state, do not know. They have neither past experience nor knowledge of relevant mysteries in higher education to make a rational choice. The result is the higher educational child man or the student is launched in a world which he does not know, a world which in its intricacies is strange, enchanted, forbidden, bidding, challenges and a world that is accepted as absolutely necessary. The childman or the student is expected to choose <sup>his</sup> option in the process of transformation that embodies almost uncertainty. Most of the students who pass S.S.C. feel that they must go to higher

education and inspite of their inadequate knowledge there is a tendency to take a leap. Any thought to any goodness of any course is not only underputted, Any thought to any other alternative course of action is not to be given. It is undesirable. The worth of joining a college cannot be questioned. The pursuit is sacred and therefore anything need <sup>else</sup> not be thought.

(3) Rapid "irrational growth" in the consumers demand: The result of a blind choice is the tremendous growth in the consumers' demand for higher education: The transfer rate from secondary school certificate examination stage to the college level itself was 46.2% in 1965-66, and it is said to <sup>1</sup> nearabout 47.9% now. With a rapid growth in the number of students appearing and passing S.S.C. this demand really means quite a substantial pressure.

(4) Rise in demand is not to result in rise in price:

Increase in demand normally creates a pressure on prices. Price rises to limit demand to available supplies. Normally price rise is a balancing device bringing about an equality in demand and supply. However, in the higher educational industry inspite of increased demand, prices are not allowed to rise - the ideal being that higher education is to be as far as possible free. This thus while the consumer student pays something, each potential demander expects to satisfy his demand without paying explicitly for the cost or its rise.

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1 Report: Table in the appendix.

(5) Rationing and students choice: Adequate supplies to meet the demand for higher education at zero price are not available. Thus the seats and facilities to meet ever growing demand fall short. Now only two courses are open (a) Allowing existing facilities to be congested, or (b) rationing by restricting the number rather than allowing the quality to deteriorate. While the first alternative is tried for some time, there being the limit to that, the second alternative is necessarily to be followed. This rationing process exhausts all the discretionary power of those who are responsible for choosing. Then again students being not required to pay, the service that is maintained does not really reflect the students choice.

(6) Subsidy to higher education consumer and a number of complicated issues: Although higher education is not a free goods or service and it is indeed a very much expensive service yet the consumer is not paying its full price. This results in introducing an element of public subsidy. This subsidy creates a number of questions. For example: (a) why a particular group of youths alone, is to be subsidized? (b) How the group that is to be subsidized is to be selected and singled out? Any subjective apparatus of selection is defective and self-imposed selectivity is suspicious. Defects in the selection system are unavoidable. These defects raise a number of questions, namely (c) are all the students to be subsidized in the same manner? (d) In view of the

best utilization of available resource consideration, are the selections to be made on the basis of performance, behaviour, or personal and family situation? (e) Why not the students expenses other than the tuition, fee be subsidized? (f) Why subsidization should necessarily take the form of "support to the college." Is it not possible to make a direct financial grant to the student?

(7) Subsidy and wealth transfers: An important consideration regarding the subsidy is its perverse result in wealth transfer. It is not possible, through the subsidy to the college, to distinguish between wealth and current earnings. Measured in terms of current earnings all higher educational students are poor. Measured in terms of wealth the present value of future earnings then all the students become rich - relatively to those who do not qualify themselves for admission. Subsidization of higher education amounts to a transfer of wealth at the expense of a tax payer from the poor to the rich. Even at broadest level of analysis, free tuition fee makes a final distribution of income and wealth more unequal. Tuition fee subsidization results in giving an advantage to young with wealthy parents at the expense of tax payer in general. Free tuition fees redistribute wealth from poor to rich because lower income group students provide a smaller proportion of students than the proportion of this tax.

Usually a poor man's student cannot meet the academic criteria based on cumulative record card. Thus any method of subsidizing students outright has a perverse distribution effect.<sup>1</sup>

<sup>1</sup> In spite of the government's policy regarding payment

(8) Subsidy and attitude of (Consumers) Students:

Subsidized tuition fee has another important effect and that is in relation to the students attitude. Having survived the first selection rationing, the student is offered a service for which he is to pay a conventional amount that is not covering full costs. This takes away all incentive from the students to avoid waste of resources. The concept of <sup>Cost</sup> cost is no where involved when something is available below cost, service is bound to be used uneffectively (e.g. as reported, bread being given to cattle in Russia).

(9) Subsidy an obstacle to progress: Finally free tuition or subsidized tuitions are an obstacle to progress.

By turning student consumers who do not buy an inter-institutional competition cannot develop. Allocation of resources is less efficient. There is no accountability or answerability to the needs and tastes either of the consumer or tax-payer. High <sup>level</sup> cost continues, there being the commitment at the government to finance, so expensive a good from general revenue tax and bias in favour of nominal tuition fee. Thus there is no incentive to increase internal operational efficiency.

Footnote continued:

of fees etc. of students coming from economically and socially backward communities; These students are estimated to be not more than 20% of the student population.

source

**2.9 Producers (Mostly teachers and administrators) who do not sell:**

**(1) Characteristic features of producers in higher education industry: Background framework:**

While these characteristics are to be studied in relation to the quality of product and how ~~is~~ it affected by the consumers choice, competition as well as the tenure and decision making process in this industry, it is necessary to bear in mind the background framework. Here (a) Teachers and educational managers and administrators are <sup>conceived</sup> ~~conveived~~ as producer in this industry. (b) In view of the "general demographic and expectation explosion" as well as the attitude of the community to provide "as far as possible free education or at a conventional price" that has no organic relationship with actual costs, there is an inexhaustible, ever increasing demand. (c) In view of financial constraints and institutional constraints, full satisfaction of the demand is not possible and whatever may be the policy adopted in the earlier period, in the subsequent stage, there is no escape from the adoption of a system of rationing. (d) Peculiar feature of the higher education industry is that this rationing is not through either market or price mechanism or through any social consideration (such as from each family one must get higher education etc., or consideration similar to one adopted in food rationing) but it is done by the producer of this service - the producer selecting his demanders. (e) Main consideration in the process of rationing

are not so much the consideration of (1) whether the output is below the maximum and whether there is any scope for further expansion in the production, ways and means of increasing the output at a particular cost or the delivery rate of output, but other non-economic factors such as the academic performance of the demander, his family background his aptitude etc. and in spite of all efforts to make selection academically sound and socially impartial, there remains an inescapable element of arbitrariness specially when the consumers are being selected by producers. It is on this background of basic selection that these aspects, namely, the quality of the product is to be studied. It is in this context that issues like of producers' or teachers' tenure and their decision making process, are also to be examined.

(2) Quality of service or the quality of education provided by academicians in higher education: Here facts peculiar to this industry are (a) the quality of product is almost chosen exclusively by those who produce and supply it, rather than by those who consume it. (b) As compared to goods in other industries, consumers preferences are less relevant. (c) There is no feed back either from the consumers or even from the tax payers. (d) In the absence of any consumer control, the quality mix is to be examined regardless of what may be preferred as a service device. Curriculum, organization, structure operational procedures, processes, all are almost immune from any variations in the consumer's (students) taste. (e) Quality standards are



defined as "customary ways of doing traditional things. These are said to be well developed and as such are to be preserved. So long this pleases the existing establishment (which usually it does), no pressure for any change whatsoever can be developed. The result is that (f) Academicians continue teaching what they were taught. Once a particular programme of educational offering is established, no necessity whatsoever is felt, either to discontinue or improve it. There is this defence of an "established order." There are very few new offerings as there are very few off setting benefits. (g) As there is no intersubject competition, no effort is made to make a particular academic programme relating to certain subjects, more attractive than the other and thus there is no competition. There is also neither any effort to make curriculum more relevant to the consumers (students needs) nor any effort to adopt effective and advanced instructional methods in educational technology. The matter of great concern is that all this conservatism is not stemming from any ideological considerations but this inertia stems from the very organizational base and operational structure of the industry of higher education.

(3) Procedure of selection, retention, promotion and academic tenure: Next consideration is about the procedure of selecting, retaining and promoting academic personnel. This aspect has an important bearing on the quality of what the higher educational industry offers. It is therefore necessary to consider academic tenure.

Academic tenure: In an ideally conceived situation academic tenure should result in isolating scholars and academicians from the pressures that economic nexus imposes on an ordinary man. Here the assumption is that when a man is freed from such economic pressures, then alone the academician can follow regardless of consequences the truth. However, it must be emphasized that it is one thing to defend tenure as the means of ensuring that the scholars and academicians should follow truth and it is altogether another thing to extend this defence to protect such intellectuals who desire to propagate their own cult of inaction. Considered economically, tenure breaks the nexus and in doing so it reduces the penalty which external forces can impose on scholars.

The next consideration is about negotiation. While options and job security is needed for employee, employers are not interested in either of these and hence negotiations become necessary. In the academic world, (except for very temporary and fewer appointments) there are no negotiations. Financial remuneration of academic members is earned on the basis of an academic year. However, in this "time scale" method there is neither the punching card by time clocks nor any reporting of attendance. Even if students go on strike teaching staff members are to be paid their salary. There is no clearly specified "task or job load" to be completed within a specific period. Academicians are completely left free to organize their own work of instruction. Thus the system of remuneration is a typical variety of time scale with no

specified job performance standard. In fact one almost feels like suggesting that as a pilot projection<sup>on</sup>, an experimental basis, academic members be paid strictly on the basis of students class hours, instructions, library work, etc. This may result in changing attitude and actual performance.

(4) Merit rating and the development of quality: There is another important problem. Observation indicates that our academic community consists of genuine as well as "so-called" scholars. In the absence of any "merit rating" both are treated alike. Actually further observation is that it is the "so-called" scholar who wants to defend the tenure. <sup>It</sup> ~~His~~ costs nothing to him but certainly a lot to the community - a substantial part of the cost being intangible. To the "so-called" scholar while it costs nothing, it means an easy life, secure position, with no incentive for standing up for internal revolutionary improvements and developing pressures. Here nothing is threatened or threatening - neither the students unrest or strike - nor any revolutionary change in the structure. From within and without it is because of such a system of remuneration, that all the dynamism and courage of our academic community is lost.

Conclusion is obvious. The procedure of selecting, retaining and promoting academic personnel are such that they not only not encourage but actually obstruct any development of quality of the product.

It now remains to be seen as to how decision making procedures affect the quality production in higher educational industry.

(5) Decision making in the higher educational industry:

Academic community in the institutions of higher education, does not act as a monolithic unit but group of men. Important decisions are said to be reached democratically and within the framework of an academic community control. However, it is a common knowledge that this principle is honoured more in breach than in observ<sup>y</sup>ance. It is the administrative sector than academic group, that determines the policy, decisions often being made in authoritarian rather than in a democratic way.

(6) Protecting the interest of student and tax payer:

However, leaving for the time being, aside this actual fact regarding the so-called democracy in the operations of higher educational industry, there is another important issue that deserves attention. Democracy means a method of reaching a decision in which all the members of the participating group - actively participate in the process of decision making. When in the past a small group of scholars ~~this logic/relevance~~ <sup>was</sup> constituted an institution of higher education this logic was relevant. The question is that whether this logic can be extended to decision making where the decision has a much more major and long term impact on those who are not members of the participating group. There seems to be no rational or logical basis either in economics or in ethics for ignoring the fact that in the higher educational industry, it is not so much the academic members in the participating group as much the student and the tax payer - (who are not members of the "participating group")

are involved and who in a profound manner are affected by the decisions and have no participation in decision making.

Another aspect is that usually academic democracy means government by the committee. Here the question that arises, is about the staffing of these committees. Members to these committees are selected in a peculiar way - usually there being the system of selecting new members by the existing members. There is no election or a nomination of the member by general academic community. Those who volunteer are usually those persons who are not engaged in research or ~~writing~~ writing and those have nothing else important to do. Usual experience is that under these circumstances committees are staffed by less imaginative members of the academic community. All members do not participate. Many are really inactive. In these committee proceedings, there is really very little expression of the preferences of top quality scholars.

(7) Attitude regarding innovation: This accounts for the inability to appreciate in the decision making process in the higher educational industry - new concepts and methods and resistance to innovations. Certainly all this has a bearing on the quality of the service offered by the producers.

The fourth important aspect having a bearing on the quality of higher education is the attitude of the tax payer and its impact on the institutional structure of higher education and quality of its product.

2.10 financers (tax payer) who do not control:

( Institutional structure and quality of the product of higher educational industry and the tax payer:

(1) Appreciation of basic facts necessary to understand

crisis: Before the above mentioned aspects are analysed it is necessary to appreciate certain background factors. Such an analysis of a factual background is all the while necessary as certain fundamental facts seem to be completely ignored. There are certain simple, naked truths that are completely ignored in the behaviour of those who are financing, producing and consuming higher education. Observation is that neither the tax payer <sup>nor</sup> neither the academician nor even the student behaves in a way, which expresses an awareness of this basic fact.

(2) Modern college is not a monastic community. It is not a self-sufficient, self-dependent community of scholars: ✓

The fundamental basic fact is that modern college or an institution of higher education is not an isolated monastic community which in centuries past provided the origin of the institutions of learning as well as the origin of many of the present day features in the organization and structure of higher educational institutions. At present higher educational industry is certainly not self-sufficient. Institutions within this industry draw their subsistence from the community. This industry depends for its very life, on this community support. Major support to the institutions of higher education - even to private institutions, come from

the representatives of the community - namely the government. This support comes either in the form of a direct grant or in the form of a massive indirect support. It is obvious that the moment this community support is withdrawn, the entire system of higher education and more particularly the system of private institutions would quite immediately collapse. The behaviour of those involved in producing, consuming and financing higher education reflects very clearly the fact that this naked truth is completely ignored. Neither the tax payer nor the government, neither the academic community of teachers nor the student behaves as if they are aware of the fact that these institutions are dependent on public support. In fact institutions of higher education behave as if they are "a self-supporting community of scholars". Their deliberate efforts seem to be to stabilize and strengthen this myth, namely that they are a self-supporting community of scholars. This is perhaps for indicating and impressing upon those upon whom they depend for their support, the independence of the academic community from. Historically, in their early phases of development, institutions of higher education were arms of the church, power and therefore they were held to be outside the realm of State or Government power. However, it appears that the institutions of higher education were mainly subject to the canons of laws and not to canons of the state. Now institutions of higher education are no longer self-sufficient monasteries of the past which were depending on the charity of the community <sup>and</sup> its religious sentiments.

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Relevant fact for us is that in our state Maharashtra government is financing higher education on a very large scale,<sup>1</sup> . However, the earlier heritage seems to be still continuing. In spite of the state government taking a major responsibility of financially supporting the institutions of higher education the tradition of the independence from popular or political control is still being sacramentally preserved. It appears that even in modern times, the entire institutional complex of higher educational system is still treated as an equivalent to church whose pursuits are sacrosanct. The tax payer is to be just like a poor person who is to sacrifice his bread in support of the church establishment and who still is to accept the proposition that higher educational academicians are to act according to their own (moral) law. Attitude seems to be that the institutions of higher education are answerable only to those laws that are internally derived and internally enforced.

(3) Independence of academic community from popular control cannot be justified:

Historically, the release of the academician in subsequent period from the church or hierarchy of the monastery facilitated technical progress. In the face of a massive public aid government investment in these institutions, today's independence of the academic community can hardly be justified.

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1 Table is in the appendix.

(4) Divorce of ownership from control:

Another aspect deserves attention. In case of commercial corporations there is the divorce of ownership from control - or the power to make decisions. The same situation seems to be existing in the case of our higher academic world. There are no shares floated for mobilizing funds. There is no market of shares for the institution of higher education that would facilitate a change or replacement mechanism, permitting the outsiders and insiders to purchase rights entitling them to participate in the management replacement or taking over.

Another aspect is that the academic licence is mostly exercised by the mediocres who carry institutional duties. This cannot be justified. It is one thing to protect genuine production of scholars and scientists from the influence of political ~~demagogues~~ <sup>demagogue.</sup> and it is altogether thing to erect and preserve barriers to popular control.

(5) Remote and indirect control on inefficient management:

The result is that the restrictions on inefficient and indifferent management are notoriously indirect and remote. Size of group which is both (a) the representative of the tax payer as well as the (b) a group that is aware and capable of understanding higher educational problems is very small. Then there is no initiative for individual citizens to initiate private or voluntary group action aimed at controlling even commonly owned institutions. It seems that at the most the community or citizens can exercise some remote influence only through a circuitous process through (a) filing

complaints to political leaders (b) affecting changes in the inactive cumbersome board of trustees or finally, (c) operating through students organization. All these methods are either ineffective or undesirable.

(b) Attitude of the tax payer:

Attention is also to be paid to the attitude of the community, the tax payer particularly at a stage at which budget for the institutions of higher education is sanctioned.

It is said that <sup>there are</sup> (a) Alternative choice and competitive class<sup>claims</sup>

representatives of the tax-payers have a choice in financing more police, more parks or more professors in the colleges.

It is to be assumed that the tax payer thinks in terms of returns. Here arises a real difficulty. It is very much different to define and evaluate the product of outlay on higher education. It seems to be usually conceived that higher education is a scarce and valuable economic and time consuming process through which a young person is to pass for becoming intellectually, economically and culturally a better person. The difficulty is in quantifying characteristics of an educated person. (b) Although social and economic value is attached to higher education it is difficult to quantify and measure. It is also conceived that there is some social and community value attached to higher education.

There also exists investment in human capital approach which has a vague bearing that the income earning capacity<sup>is</sup> increased by higher education. However, looking to the way in which the tax payer and his representative acts, it appears that the

above stated considerations provides a smaller basis. They indeed lend very little support, psychological and philosophical for the massive financing of higher education. Admitted that there are difficulties in quantifying benefits of higher education also admitted that these cannot be reasonably accurately quantified, yet one cannot explain the absence of alertness on the part of the tax-payer and his representative, in not comparing analytically the benefits of the support of higher education to the community and the cost which the community incurs for providing higher education to the community.

(c) Massive financial support motivated by charity considerations religious duty: The massive support that is given by the tax-payer is to be explained by something else. Here it appears that the educational support is treated by the tax payer and the community as "an act of charity." One can appreciate the fact that in the past, education and charity were related to each other. One can also take cognizance of the fact that even in modern times, income tax authorities allow deduction of contribution made to higher educational institutions as "acts of charity." In the same manner it must be appreciated that the individual tax payer as well as his representative primarily values higher education not mainly as a product or the service - it is not mainly valued for the result which the higher education produces in the state. Value is placed on input, outlay or investment - rather than on output or product. Financing of higher education is

valued as a moral act. It is a duty which yields value directly. Thus tax payer and his representative approve of the act not because it produces results but because the act itself is good and desirable. Support to higher education stems from these very motives. Logical chain is whether the giver is a private donor or the public tax payer, that what is valued is an act of giving. They have really very little interest in the ultimate product it generates, owners and donors, public or private, value - merely the act of financing higher education, as opposed to what is financed. Their own interest being <sup>efficiently</sup> effectively and effectively discharged when once the act of financing is done and completed. Like a gift to religious institutions or <sup>to</sup> the church when once an expenditure or grant is sanctioned the religious duty is done. For such owners and donors even if it would be possible to measure efficiency of education the difference between efficient or inefficient operations of a given institutions of higher education or of the entire higher educational system is nil or negligible. Substantial supporting evidence is available to substantiate above stated attitude. Throughout the country and even in our state higher educational achievements are compared not in terms of quantity or quality of the product but in terms of rupees spent on higher education. Arguments for additional finance for higher education are based on comparisons in money spent and expenditures incurred. All this goes to explain the psychology of the tax payer and his representative.

(a) Charity consideration breeds inefficiency: Gordon Tullock has rightly said that it is this charity approach which make the operations of higher educational system most inefficient as compared to the operations in a profit making enterprise. This approach explains the basic element of peculiar vulnerability existing in the operational structure of the higher educational system of our state.

(e) Community attitude that the student should get free education: There is another aspect of the community-attitude. Attitude of the society seems to be that the student in higher education should either get free education or if this is not possible alternatively he should be expected to pay as little as possible. The predominant share in the cost is to be borne by the tax payer. Even in the case of private colleges the student or his family pays a conventional total the remainder being paid by the tax payer.

(f) Although supported by tax money tax payer has no control: The obvious consequence is that in actual effect the main financial supporter of higher education in our state (namely the tax payer), exercises practically no control. In our community life, tax payer is represented by educated political leaders but these also do not exercise any effective control. When this is the case with reference to community owned and managed government colleges and government institutions of higher education, it really cannot be a surprise that in the case of privately owned institutions, the control is still further remote and ineffective. A medieval heritage of

church institutions isolated from political and popular control is carried in fact to modern times. In the absence of any "church" or external control and the remote ineffective control of financier, namely the tax payer the real practical question that emerges is that are the higher educational institutions controlled at all?

(g) Financial control and pattern of internal management:

This obviously brings us to two issues namely (a) financiers<sup>ial</sup> control over internal management and (b) the pattern of and practices in internal management.

As regards the first issue it has already been seen that just as in business companies even in the case of institution of higher education, there is the divorce between ownership financial supporting and control - that is to say the power to make decisions. Here, there is neither share floatations for mobilizing funds nor a market for shares which would facilitate change or replacement - <sup>enabling</sup> probably the outsiders to become insiders by purchasing rights entitling them to participate in the management or initiating replacement and even taking over management control.

Here observation and analysis of present day system make us believe that the organisational system of the institutions of higher education is such as prevents the tax payer citizen from controlling or influencing higher educational institutional operations. It appears that for avoiding subjecting<sup>ion</sup> higher educational institutions to the control of the citizens' representatives or financiers, governing boards are

established. Governing boards act as buffers between the academicians on one hand and representatives of citizen and financiers on the other. All external influences are channalized through governing board who nominally control (if not own) institutions of higher education.

(h) Common features in a variety of management patterns:

Organizational and financial details of various boards connected with the institutions of higher education differ from place to place and institution to institution. There are differences in the degrees of power exercised by the Board. However, there seems to be few but important common characteristics and these can be enumerated as (1) All boards have an element of laymen who have an established prominence in the field like business profession and who have demonstrated some interest in higher education by being associated with some institution. (2) Board members do not have their own staff. (3) Terms of these members are extended over several years. (4) These board members have a full time position in their own profession and their functioning in relation to the institutions of higher education is not supposed to be time consuming. (5) These members are therefore are not expected to do anything more than attending meetings and or participating in a formal way in the discussions or to putting a rubber stamp of approval to the policy actions initiated by the principal or the life members board. Constitutionally they really cannot do anything more or better. (6) Constraints imposed on the external management



are not sufficient or effective enough to modify the behaviour of those who determine the policy the academic and administrative members of the institution. (7) One is therefore forced to suspect that these boards are created and operated for the purpose of providing a show that effective control is exercised. Governing boards seem to be more concerned about their primary function namely that of warding off external control and not about imposing any popular control. (8) Finally in the past equilibrium could be established or maintained as the entire system was a "slowly moving affair." There used to be few policy changes indicating slow evolution. There was nothing drastic or dramatic in these changes therefore the governing boards ensuring continuity of things. Institutional conservatism and actual apathy to change could continue. Thus the institutional structure in the higher educational system as it is operating at present in our Maharashtra State <sup>is</sup> like a free floating island that is neither moored on the demand of consumer nor to the controls of financier or owner. This free floating island remains where it is representing practically no dynamism or flexibility to adapt to new demands and new challenges arising out of new situation. This free floating island remains idyllic until foul, <sup>with</sup> winds blow when some harbour some fixity would be needed. The existing arrangement of board fails to provide this fixity.

(7) Fundamental issue regarding ownership and control;

The crux of the problem is that of hard realities in ownership and control of the institutions of higher education. In the case of a private college it is said that it is owned by a society registered either under trust or society's Acts or both. Argument is that because the "society" brings into existence the college because the property representing physical facilities, assets are owned by this body, the college is owned by the society. However, the fact as to from where the money comes or in its ultimate analysis for whom this feudalistic hangover is being operated, <sup>are made to remain</sup> an "unimportant" issues. They are unanswered questions. The basic issue which arises here is whether the college should any more continue to be assumed to belong to private societies and the tax payer, with whose money and for whom the show is being run should be altogether excluded? This raises several important issues namely what exactly the right of ownership implies and how does this right emerge. <sup>Does the college</sup> ~~Is it~~ emerge merely because of original imagination - initiative and enterprise of the promotion. <sup>ors</sup> Is it still to continue in its uncontrolled unregulated free form especially in the face of the facts that major part of finance now comes from the community through her representative? The government, and that ultimately the entire system is to be operated not for the promotion <sup>ors</sup> or owners but for the community?

If the present context one is to remain contented by mere posing in sharp focus than these problems.

(8) Conclusion:

Typical features of the higher educational industry and Crisis: The general attitude of the community toward low price higher education, the facts that the consumer in this industry is not the buyer the producer not a seller and finally the charity approach of the tax payer resulting into an absence of control by financier or the community creates and maintains a permanent crisis situations. Having so far studied the foundational framework - which basically has become outdated and as such is the basic cause of the permanent crisis situation, ~~It~~ is now necessary to study internal operations of the higher educational industry in Maharashtra State.

3.0 The System Analysis of Higher Educational Industry in Maharashtra(a) Introduction - The Framework:

3.1 Objective and Limitations: No proud and bold claim is being made about the analysis that is presented hereunder. There is a high degree of awareness regarding limitations in the facts and tools that are available in presenting a framework of the higher educational system operating at present in Maharashtra State. Educational statistics that are available specially the statistics on transfer rate enrolment expenditure etc. are to be taken with a grain of salt. <sup>1</sup> This is nobody's fault not even that of the government. It is really

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<sup>1</sup> Combe, p. 15. The World Educational Crisis.

the "state of the Art" and the fact that statistical raw material is available in the form of bits and pieces that is responsible for this situation. It is the mosaic generalization formed out of such material <sup>that</sup> has its limitations. It is possible that it may be subsequently revealed that the generalizations formed out of such material are far from truth and they cover merely exceptional cases. However, it is believed that higher educational planning and development of our state is not to be left to accidents. Therefore an effort is to be done to present herewith just some sort of a rationally conceived "Road Map", that may lead us in planning future progress.

### 3.2 Deep concern regarding impending crises and optimism:

This system analysis is not conveying a rosy picture and therefore may be misunderstood or even misrepresented as a laxent regarding impending doom. However, alternative to this is really to corrupt the integrity of words by affirming contrary to the reality that all is well with the higher educational system of our state. It is claimed herewith that the presentation of this note is an act of optimism that emerges out of a conviction that the crisis in the higher education in our state can be certainly successfully overcome if all those who are concerned with the higher education in the state candidly, systematically and objectively diagnose the problems and then plan and operate the future higher educational strategies of progress. However, many times the observation is that it is not the lack of knowledge

but a lack of willingness to make a break with the past.\*  
 However, it is hoped that our state would not be suffering  
 from want of willingness.

### 3.3 Diagnostic conceptual<sup>u</sup> model of higher educational industry: The System:

Analysis of the present day higher educational system  
 as it is operating in our state is to begin with a conceptual  
model. Here the proposed model is not intended to be mathe-  
<sup>2</sup>matical one but a functional one. This model aims at  
 explaining the relationships that exists between the various  
 parts, organism and the environment of higher education.  
 Presentation of such a system analysis is similar to a  
 doctors' act when he examines human system. It is neither  
 possible nor necessary for the doctor to examine and acquire  
 a complete knowledge of every detail of either human beings'  
 system or its functional process. Strategy of diagnosis is  
 that of concentrating upon (a) selected critical indications  
 and on (b) the relationships within the system and between  
 the system and the environment. It is in this very way that  
 a modern management analyst works. Therefore under our  
 analysis, an attempt is to be made <sup>to</sup> concentrate on the selected  
 critical indicators and on the relationship <sup>^</sup> within the system  
 and the system and the environment. In the analysis the  
 objective is to understand the organized process through

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\* Amriksingh

<sup>2</sup> O.E.C.D. Mathematical Models for Educational Planning,  
 Paris, 1967 gives mathematical models.

which our Maharashtra State pursues higher education and to enquire whether within the context of our society, the process and the existing results can be made more relevant, efficient and effective.

3.4 The concept of the system: At the very outset special features of educational system are to be noted. An educational system differs from that of a human system. In a fact it is in fact some time wondered whether one could conceive anything as fantastic as educational system. In every system there are several parts that have a closer relationship with one another. Applying this basic test it is some times said that the higher educational system has very few attributes of what can be called as a system<sup>3</sup> higher educational system differs greatly from a human body or a departmental store in

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1 Banhart, F.W. Educational system analysis, London, Macmillan, 1969. ✓

2 U.E.C.D. System analysis for Educational Planning may be seen - Selected Annotated Bibliography, Paris, 1969. ✓

3 Harold Howe II Indian Education in 1970, Ford Foundation, August 1970.

4 Bowless: Planning Educational system for Economic Growth, Cambridge, Mass. Harvard, 1969.

Kershaw, J.A. and McKean, R.H. System analysis and Education Santa Monica California, Rand Corp. 1959 may be seen. Whereas the chart is ~~concerned~~<sup>concerned</sup> mainly with the external components of the system it is somewhat detached from the environment. However, it is the community or the society that supplies to the higher educational system its means and it is to the community or the society that the higher educational system is to contribute something. In view of the abovesaid reality there is certainly the need to study educational inputs and outputs in an external relationship with the society yet however as indicated above our main concern is to concentrate on the main internal components and the process. ✓

**ENVIRONMENT**

Inputs  
(resources)

Output to Society

(a) Physical  
Inputs

Better equipped to serve themselves and the society as:

- Individuals and family members
- Workers in the economy
- Leaders and innovations
- Local and world citizenship
- Contribution to Culture

(b) **FED**  
**DEALS**  
Inputs  
(  
a  
b

Because education improved their:

- Basic knowledge
- Intellectual and manual skill
- Power of reasoning criterion
- Value attitude motivation
- Power of creativity and innovation

(c)

- Cultural appreciation
- Sense of responsibility to society

CHART NO. 1

MAJOR COMPONENTS OF THE EDUCATIONAL SYSTEM AND INTERRELATIONSHIP BETWEEN EDUCATIONAL SYSTEM AND ENVIRONMENT

<u>Inputs from the Society</u> <u>(Resource Inputs)</u>		<u>Educational Process</u>	<u>Educational Output</u>	<u>Output to Society</u>
(a) Philosophical Input	existing knowledge	1. AIMS AND PRIORITIES (To guide systems activities)	EDUCATED INDIVIDUALS	Better equipped to serve themselves and the society as:
	Values	2. STUDENTS (whose learning is the main aim of the system; approx. 3.5 lakhs in the state)		- Individuals and family members
	Goals	3. MANAGEMENT (To coordinate, direct and evaluate the system)		- Workers in the economy
(b) Demographic Inputs (Population and qualified manpower stock)	Teachers	4. STRUCTURE AND TIME SCHEDULE (To deploy time and student flows amongst different purposes)		- Leaders and innovations
		5. CONTENTS (essence of what the students are expected to acquire)		- Local and world citizenship
		6. TEACHERS (To help, provide the essence and Orchestrate learning process; approx. 14,000 in the State)		- Contribution to Culture
(c) Economic Inputs (from Society's income)	Students	7. LEARNING AIDS (Books, blackboard, map, films, laboratory, etc.)		Because education improved their:
	Finance	8. FACILITIES (To house the process)		- Basic knowledge
	Physical Items	9. TECHNOLOGY (All techniques used in doing systems work)		- Intellectual and manual skill
		10. QUALITY CONTROL (Admission rules, marks grading examination standards)		- Power of reasoning criterion
		11. RESEARCH (To improve knowledge and systems performance)		- Value attitude motivation
		12. COSTS (Indicator of efficiency of the system)		- Power of creativity and innovation
			- Cultural appreciation	
			- Sense of responsibility to society	

Source : Based on Coomb's The World Educational Crisis, pp. 11-13.



**MAJOR COMPONENTS OF THE EDUCATIONAL SYSTEM AND INTERACTI**

Inputs from the Society  
(Resource Inputs)

Educational Process

(a) Philosophical  
Input

Existing Knowledge  
Values  
Goals

(b) Demographic  
Inputs  
(Population  
and Qualified  
manpower stock)

Teachers  
  
Students

(c) Economic Inputs  
(From Society's  
income)

Finance  
  
Physical Items

1. AIMS AND PRIORITIES  
(To guide systems activities)
2. STUDENTS  
(Whose learning is the main system; approx. 3.5 lakhs)
3. MANAGEMENT  
(To coordinate, direct and control)
4. STRUCTURE AND TIME SCHEDULE  
(To deploy time and student for different purposes)
5. CONTENTS  
(Essence of what the student has to acquire)
6. TEACHERS  
(To help, provide the essential learning process; approx. 10 lakhs)
7. LEARNING AIDS  
(Books, blackboard, map, film, etc.)
8. FACILITIES  
(To house the process)
9. TECHNOLOGY  
(All techniques used in doing the process)
10. QUALITY CONTROL  
(Admission rules, marks and standards)
11. RESEARCH  
(To improve knowledge and process)
12. COSTS  
(Indicator of efficiency of the process)

terms of objectives operations and practices. Yet there are certain common features. For example the higher educational system has certain sets of inputs - that are subject to a process and the result is certain sets of output that are designed to be attained. In fact these outputs operate as objectives of the systems. Thus <sup>(a)</sup> "Inputs", (b) "process" inside the system and (c) "Outputs" form a dynamic organic whole. It is the organic dynamic whole that is to be conveyed as to the system.

The attached chart is an attempt to show in a simplified brief manner some of the important components of the higher educational system of our State.

### 3.5 Internal, External Components:

A clear concept of various component parts is all the while necessary. It would be obvious from the chart that basically there are two aspects. (i) the internal and (ii) the external one.

3.6 Internal aspects: Internal aspects deals with (a) the aims of higher education, its contents and priorities (b) the students, whose learning is the main object of the system (c) the management which is needed to direct, coordinate and evaluate the system (d) the structure and the time schedules to deploy time and students flows amongst different purposes (e) contents i.e. the essence of what the students are expected to acquire (f) the teachers to help the learning process (g) the facilities (h) the technique and technology adopted in operating the system (i) quality control - incorporating the-system rules of admission, marketing and

examination standards (j) research, to improve the knowledge and system performance and (k) costs that are indications of the efficiency of the system.

**3.7 External Aspects:** External aspects of the system are mainly concerned with two aspects (a) Input from the or community<sup>of</sup> society and (b) output to the society or community. In (a) ~~the~~ inputs from the society or the community are to be included mainly (i) knowledge and philosophical input of values and goals. Existing knowledge values and goals that go to determine higher educational aims and its contents (ii) Human input: Population and the qualified man-power input in the form of (a) students and (b) teachers and (iii) the economic input in the form of finance and material. In (b) outputs there is the output to the society in terms of the supply of better qualified, equipped persons who can better serve themselves as well as the society.

**3.8 Environmental components though identified are not analysed in details:** The chart does not show the whole of what is normally looked in the system analysis. It is mainly confined to the internal components and as such is somewhat detached from the environment yet <sup>to</sup> it is the community that supplies to the higher educational system the means, with which to function. The system in turn is expected to make a contribution to the society. Higher educational inputs and outputs are therefore to be studied in an external relationship with the society or the community. Such a study reveals both resource constraints that limit the system and

determine the productivity of the system. It is therefore necessary to study the multiple components of inputs from the society into the educational system and the multiple output from the system <sup>which</sup> ~~that~~ flow back to the society.

3.9 More important aspect inter-relationship between internal external components there interactions: It is quite important to appreciate as to how internal and external components act and react. To illustrate it may be assumed that the system is called upon to produce more scientists and technologists. For this the system may require more teachers. Being underproduced in the earlier period, they may be in scarce supply, relative to the market demand. To raise its teachers' production the system must go back to its limited output of such people, getting enough of them to serve as inputs. To serve this end the system shall have to offer comparative emoluments and this may necessitate reconsideration of teachers salaries. Another example is in relation to the change in inputs.

In case the inputs decline the result would be the ~~decline the result would be~~ in the size, merit, quantity and quality of output. An input stringency may initiate a change in the technology and in the use of resources so as to avert in any such decline in the output or its quality. However, there need not be any set pattern of responses. The system is in a position to choose its responses. However, any choice is bound to have its own impact on the quality and quantity ~~and~~ of output as well as the internal efficiency and external productivity of the system.

### 3.10 Salient features of higher educational system in

Maharashtra: Having broadly indicated the broad outline of a higher educational system it is now necessary to appreciate firstly the salient features of our system and subsequently a general outline. Typical features of our system can be mentioned as mentioned hereunder:

#### (1) Non-systematic character and diversity of the system:

Our higher educational system has a "non-systematic" character. In every system several component <sup>facets</sup> facts have a close relationship with one another. This is reflected in the operational process of change in the system. Normally a change can be introduced in the system in an orderly manner by making the interlocking relationship to produce the desired result. In fact "the system is purposefully created for establishing relationship and for producing results."

However, due to past history and the current state of higher educational institutions at various levels, our system gives a cloudy resemblance to the system. The sources from <sup>which</sup> ~~what~~ decision making emanates or planning initiates or control is exercised are in a loose series of inter-relationship in the forms of Union and State, Education Ministries, the University Grants Commission, the University Directorate of higher education, Planning authorities in the universities, district level and local authorities and the private sector which is controlled by a variety of institutions. Higher education in our country and in the State also has impacts of local, state and national policies which inject in the system both "life and the politics."

The non-systematic character of the structure of the system, also evidenced by the observed fact of difficulties experienced in introducing any change. The peculiarity is that not only there are very loose inter-relationships, there is also the absence of an organic cooperation between various constituent elements.<sup>1</sup> Education Commission report can be cited as an example of planning a change without such significant consequences. The fate of the report exemplifies a hazard that lies in wait for any programme of change and improvement. Inaction and ineffective action of those carefully thought of recommendations indicate the weakness not so much in the planning process but particularly the weakness in the links at various sectors and levels of action between planning and political decision making.

(2) Diversity of institutes within the system: The next characteristic is the "diversity of the institutions" within the system. Diversities in the origin explain diversity in decision making system, policy formulation process, control practices the diversities in institutional structures, operations of the universities private and public affiliated colleges and the special caste class and the communal groupings. Further our higher educational system is fragmented and even at the state level placed under the control of various government departments such as Education, Health, Agriculture, Labour, Commerce, Industry, Defence. Even

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1 Even in higher education is quite marked. Eg. Crisis in Indian universities

Science

bifurcation between scarce technology and general education is taking place. Coordinating machinery is non-existing or most ineffective. Existence of diversities in origin, structure motivation and operation is so much that sometimes one wonders that with all these diversities <sup>how can</sup> one can conceptually conceive a system and really study system operation. All the above mentioned observations indicate that the system presents a cloudy resemblance to a system and explain its 'non-systematic character'.<sup>1</sup>

(3) Large size of the system and tendency to rapidly in size:

Important characteristics of our higher educational system is its large size. Existence and enlargement of the higher educational enterprises since 1947 and more particularly since 1960 in the state reflect that the system by itself has a large size.<sup>1</sup>

The third characteristics is that even though the size itself is very large. There is the tendency the system towards an expansion of a very rapid rate in recent times.<sup>2</sup>

<sup>1</sup> Our higher educational system includes 8 universities, 515 higher educational institutions 3.30 lakh students population and 1.4949 teachers and an expenditure of 2.220 crores of rupees. Page 2, 4 and 14 Higher Education A Retrospect and prospect. The Directorate of Education, M.S. Poona 1, 1971.

<sup>2</sup> Rates of growth. Institution 161.90% Enrolment 540.49% between 1950-51, 1968-69 and expenditure growth rate is more than 400%.

NO

(4) A living system with the dynamism an expanding system not progressing basically conventional static system: The fourth characteristic is that although there is the expansion of a rapid rate of growth, it is in the nature of doing "old things" - on a larger scale but in the very same way. There is uninterrupted an inheritance of the past. Continuation of old influence <sup>is</sup> so much marked that there is no reconstruction or reorganisation in recent times. Our higher educational system in the State is "living but has no dynamism, it is expanding but not progressing". This is the most disturbing characteristics of our higher educational system. In spite of Radhakrishnan <sup>Commission</sup> Committee Report or Kothari Commission Report there has really been very little changes in the system. It appears <sup>that</sup> we have got a great propensity to talk, think, make plans publish <sup>ise</sup> and advertise them and then do nothing about them. To the degree this observation is authentic the static elements obstructing educational change are explained out.

### 3.11 Inputs process and output of the system:

Having explained the (a) salient features of the higher educational system in general and the characteristic features of our higher educational system in particular it is now necessary to analyse in somewhat more details various types of inputs.

3.12 Inputs in the system: Inputs can broadly be classified as (a) philosophical inputs, (b) Demographic inputs and (3) Economic inputs.



Philosophical Input

3.13 The First Input Existing Knowledge:

(1) Philosophical inputs: The first input is a philosophical input and in the philosophical main <sup>inputs the</sup> are (a) existing knowledge (b) values and (c) goals, ~~the existing knowledge values and goals educational aims indicating goals and their priorities.~~

(2) Existing knowledge and the gap: Here the first fact to be acknowledged is that of "Gap". Scientific industrial revolution which developed in the West over last 200 years is almost passing us by. The agro-industrial revolution which is so crucial for us <sup>has</sup> just begun in the State. However, the world is at the beginning of second scientific industrial revolution of automation and cybernetics and this is bound to be in its full swing in the immediate future. Already there is wide gap of knowledge. Already there is an explosion in knowledge. Knowledge is said to be rapidly growing and (the estimates being are that it doubles within five years) this gap still rapidly widening. Again all along we need not always be at the receiving end of the pipe line of the knowledge. Our state is to make her own <sup>also</sup> intellectual and cultural contribution, to the nation and the world. Proper steps therefore are to be taken so that (a) the gap between the advanced industrialised countries and the State and the developing state is not allowed to grow any further, (b) that the existing knowledge stock in the state increases at such a rapid rate, (c) that our knowledge is in a position

to keep pace with the knowledge growth rate and (d) that we contribute to the existing stock of knowledge. These steps demand <sup>an</sup> appropriate a place for a large scale programme for the discovery and the development of talent and the creation of few centres of excellence in the system.

(3) The second input goals and aims: The second philosophical input from the community <sup>is</sup> to the aims and goals which our higher educational system has set before itself. In matters of goals and aims our higher educational system seems to be subjected to strong temptations to bury its real difficulties about its aims, in a compromise amongst rival views, however, this compromise seems to be on the surface, a fine work of group diplomacy ~~by~~ but is in reality, dodging the hard but essential business.

Before important facts regarding the aims and priorities are mentioned, it is necessary to state certain basic facts.

(4) External and internal influences and goals and aims and difficulties in defining them: The working of a higher educational system, that is to say the inner life of the system is shaped by two types of factors (a) external pressures constraints and challenges bearing upon the system from an outside, environment and (b) the internal logic and dynamics and habits. It is therefore necessary to develop a feel of both - the environmental setting and the internal logic and dynamics.

It is an observed fact that while <sup>the</sup> educational system is not rigid and it has its internal flexibility arising out of an internal power of choice amongst alternative responses to external pressures or even creative internal force, yet the fact is that higher educational system is more wrought by external interventions rather than by internal initiations. While the relative position and the strength of internal and external forces can be debated, it appears that internal forces are weak to initiate any change of their own accord, particularly, that is why external forces are dragging the higher educational system kicking and screaming into the 20th century.<sup>1</sup> The inner working of the higher educational system is made up of very complex organism pignantly human and shaped by many hands of and therefore it is weak in initiating any change whatsoever.

It is in this connection that illustration of aims and goals may be taken. One of the important factors that influences the higher educational system is the "Aim and objects" of higher education.<sup>2,3,4,5</sup> Here the one of the very serious difficulties that the community and the higher educational system are facing is the task of (a) setting its aims of higher education (b) setting its priorities and (c) stating them in a clear meaningful and operational terms. Another aspect of

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- 1 Phillips Combe : The World Educational Crisis, p.99.
  - 2 F.B.Pinon. Educational values in the age of technology. Mackmillan Co., N.Y.1964. Ch.4 (pages 81-106) and Part II,p.133-1
  - 3 Sir Ashby Technology and Academicians. Mackmillan Co.,1958.
  - 4 Butterfield Herbert. The Universities and the education today. Ruthledge Kegan Paul. 1962.
  - 5 New Media in Higher Education : Association of Higher Education, Washington, 1963.

the same problem is the difficulty involved in determining how well the system is actually operating, when its actual output is to be weighed against the objectives.

(5) Aims and goals of higher education in our state: Broad review of the higher educational objectives since 1960 in the State indicates <sup>those</sup> that <sup>which</sup> "aims and objectives" <sup>1</sup> have been expanding in a revolutionary manner. The main emphasis had been on liberating knowledge to the whole family of political economic social power so that higher education may not be the monopoly of the few. The usual thinking seems to be that just as there must be the right of access to common property, so also democratization pre-supposes the right of access to progressively higher levels of education. There must be the equal educational opportunity to all. <sup>1</sup> However, all these aims are not self executing and obviously there is a wide gap between rhetoric and actual deeds. For getting a real perspective of higher educational aims it is necessary to look beneath its precepts, to practices because, frequently these two do not coincide.

(6) Assumptions and issues - who to decide objectives and priorities: Here it is necessary to be clear about certain assumptions. These basic assumptions regarding new education

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<sup>1</sup> Assembly Discussions - Presentation of Educational Policy (White popee) draft.

are that (a) There is a cadre of teachers, competent and willing to pursue new aims of higher education. Observed fact is that most of the teachers have no clear orientation regarding these aims of new higher education. (b) The second assumption is that the teachers and educational leaders (who are leading the new paths and parents are following the same path. Observation is that while educational leaders may be leading a new path, the teachers are passive and on the fringe and the apprehension is that students and parents are choosing to head off quite in a different direction. Consequence is that the higher education system comes to be divided, - such a situation raises a number of fundamental questions namely (1) who is to decide higher educational aims, who is to have a final say in setting of higher educational aims? Is it to be educational administration, educationalists and teachers or society? And if the society, what members of the society? Should it be a governing minority? Finally what part students and parents are to play in setting of higher educational aims. Answers to these questions indicate a deep fissure either within the community or society, or within the educational fraternity Elite accepts verbally democratic aims but in practice show a lack of enthusiasm in giving higher education to mass, fearing that this would lead to the dilution of their power. Governing elite is anxious to elicitate social change

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\*An easy effortless degree  
The Indian student Shillers works.

and proceeds bravely, Educational expert is divided from within over the issue that whether higher education is to provide marketable skills or skills required to learn skills or whether mass higher education will stand the test of quality and efficiency. The third assumption is that not only the aims of higher education are to be formally accepted, these aims are not to be torn from within (particularly in operation) by differences and arguments over a number of issues involved in planning, costs resources structure curriculum, quality, methods, facilities, staffing research innovations, in management, language of instructions, teachers and students participation. Differences and arguments over these issues seriously affect prospects of attaining higher educational aims although they have formally agreed upon. The main lament is that the ends are often confused with means.

(7) Differences of opinion regarding the process of achieving aims and goals - Two extremes .. : Another observation is that although educationalists broadly agree on the aims of higher education there exists quite sharp division of opinion on educational practices on the question as to how to give concrete expression to educational aims and practices. Although a very small in size, there is the camp of "modernists" arguing for the wholesale revision of earlier classical concepts of humanism and culture. On the other hand the camp of traditionalist resisting any such effort, and argues<sup>ing</sup> for the maintenance of old concepts and the spirit of humanism. But the modernists and the traditionalists seem to be frozen in

"contents of curricula and structure", which continues for many generations, even against the recent on set of scientific and technological revolutions. With this cross tensions in approaches, how can an operational frame work to be designed?

Next problem is that of setting aims and objects in a clear out operational terms. Here there is a tendency to fit into the existing framework, manifold and enlarged aims and this complicates the situation. ~~Here there is a problem be-~~ The question that arises, "is it really possible to pursue a complex multiplicity of higher educational aims and achieve something concrete? Thus while spreading higher educational opportunities to a large proportion of total population, is it possible to do so without erosion to the quality? Is there no risk in seeking to adjust old aims and priorities to accommodate new ones. In its anxiety to satisfy both would there not be a confusion ?

(8) Compromise in rival views evading confrontation of real issues priorities and confusion: Here the situation seems to be that our higher educational system is at present subjected to strong temptations of burying all real difficulties about its aims in a process of compromise amongst rival views - a compromise that apparently appears to be a fine work of diplomacy but in actual operational process means dodging the hard but essential business of making clear decisions about higher educational priorities. Part of this temptation might even be arising out of an assumption that all higher educational

subjects are of equal importance and that no single subject should be subordinated to another - that all are indispensable components of the higher educational system, that the higher educational system is capable of addition of new subjects and new dimension of operations without cutting into old ones and that therefore all the aims and objectives should be granted equal opportunities equal time and equal resources. In this connection, one line of thinking may be suggested. In medicine a surgeon is many a times forced to choose between sacrificing a limb and saving a life. In the same manner the higher educational system of our state, in place of following a concept of horizontal practices, where equal time and resources are to be allotted to all aims, it is now desirable to choose. However, when such a choosing of priorities is being suggested it is obviously not a topsy turvy choice but a objectively planned choice of priorities in the higher educational aims.

3.11.4 Demographic Input: Next to the existing knowledge, values and goal providing educational aims and contents, important inputs are (a) students and (b) teachers.

(a) Consumption and investment aspect of higher education and consumer (student): Before analysing the facts relating to the quantity and quality of the input i.e. students - in the higher educational system of the state, Certain basic aspects regarding the consumption and investment of higher education must be made clear. When a student enters into the higher educational system, they or the parents, expect that the experience which they get in the institutions



of higher education will give them things which cannot be got elsewhere. The usual expectation is that the experience in higher educational institution will give them "means to live more satisfied full life and would permit them to enjoy" humanist aspect of education. This may be termed as "the consumption aspect of education." It is also expected of higher education that it would endow to its student means to be a better citizen to get better job and contribute more to the society's welfare. This may be termed as the investment aspect of education.

(b) Social demand for higher education and manpower requirements and the absence of identity between the two in the state: The number of students trying to enter into the higher educational system of the state as well as the number of those who stay and go further in the system represent the social demand for higher education. However, this demand must not be confused with the society's requirements of high order manpower for social and economic development purposes. Although these two act and inter-act with each other yet they are quite independent specially in our state. There is a theoretical possibility that provided there is a well conceived and well implemented higher educational plan these may tally. However, the present day problem is one of mal-adjustment<sup>1</sup> between the two. The social demand for higher education in

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1 Analysis regarding social factors and factors relating to manpower approach have been by presented by Alfred Sauvy and George Skorou in the articles in Economic and social aspects of educational planning. UNESCO, 1964, Ch. 1, V and VI.

the state is growing very fast perhaps at an irrational rate and towards completely different direction as compared to the growing man-power requirement of the state.

(c) Manifold reasons "demographic aspirations, development, self freedom demand, repeaters and even technological factory: There are manifold complex reasons for the rapid rise in the growth rate of social demand. (a) population growth rate-of-social at a rapid rate resulting into a population explosion is acting as a quantitative multiplier of the social demand. Due to improved health measures and resulting sharp decline in mortality rates, Youth population is increasing at a much more faster rate than the population. There is the rapid growth in the school population. This results in the big growth of potential clients for higher education. Thus there is rising participation rate of population in the higher educational system of the state. (b) Mounting educational aspirations of their parents and dependent children. (c) New stress on higher educational development, the such a development being conceived as a precondition to national development. It is thought that it is "democratically desirable to have a" higher educational "participation rate" i.e. sending a high proportion of each relevant age group to higher educational institutions and for more years and for longer durations (d) Rising enrolment curves reflect - compound effect of an over all expansion in the higher educational participation rate which has risen sharply in recent years. Higher educational demand is feeding itself and creating its <sup>own</sup> dynamics.

Population that suddenly starts getting higher education wants still more and more of it. Sons of illiterate parents want, not only to go to the secondary but even higher levels and even if he gets at the primary level he insists that his children should do better. Thus the social demand for higher education is compounded, regardless of what happens to the economy or to the resources. The tendency to generate its own demand boosts up, even though the participation rate remains constant. However, in face <sup>of the</sup> pressures of public demand "participation rates" cannot remain constant. The result is that the total enrolment in higher educational system is very rapidly increasing perhaps exceeding the systems capacity to adjust to it. (e) There is a progressively increasing figure of repeaters. (f) There is a vital relationship between education and economic development. Higher participation rates do create a possibility of avoiding the widening of technological or the management gap and as such, in the remote corners of public policy increasing enrolment is treated as a desirable development and therefore supported. The result of actions and reactions of these multiplicity of factors is that Maharashtra State has become an educational society with higher educational system as one of its largest industries.

(d) Rising gap in the developing regions between the demand for higher education and its satisfaction: Relationship between social demand and the capacity of the operating higher educational system to satisfy the same can be said to be the key indicator in diagnosing the higher educational system of

our state. This is the <sup>serious</sup> severe problem which lies at the heart of our higher educational system. People are enthusiastically demanding higher education<sup>on</sup> and if this popular demand is not satisfied, a grave political and social consequences are apprehended. Political Leaders require no statistics to measure this rising demand as they repeatedly sense it through mounting protests which has become an everyday affair for them to face. The basic problem before the system therefore is <sup>as to</sup> how to bridge the gap between rising aspiration of the people for more higher education and the limited ability of the existing system to satisfy the same.

Despite <sup>(of)</sup> the rise in the enrolment since 1960, the fact is that this rise could not keep pace with the ever rising social demand for higher education. The rising gap between the desire for education and the admissions<sup>said to be</sup> is/usually<sup>1</sup> greater in developing countries. This gap is still greater at the secondary and higher education levels as the priority of earlier period to provide primary education & sets in motion, powerful dynamics of higher educational demand, this goes on rapidly feeding itself. In the near future there seems to be no possibility that this boom will subside. In fact due to the progressive rise in youth population the signs are that even if status quo is maintained there still would be a rise in the demand for higher education.

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<sup>1</sup> Ref. Hyden report. Higher Educational Development in South East Asia, Vol. II.

**(a) Timing relative rates of growths and adjustments:**

Another important aspect is about the inter relationship between timings, relative rates and relative rates of growths. Problem of imbalanced growth<sup>is</sup> affecting the higher educational system from all directions. Here the following aspects do require our attention. (a) Higher educational system is growing at a faster rate than the state domestic product. The system will sooner or later will have to have a slow growth till its growth is caught by the economy. (b) when all critical rates of growth in the state namely, economic, agricultural and industrial, demographic, educational and higher educational get seriously out of balance or adjustment, the development process of the state is in trouble. The trouble is not only educational or economic but also social and political. (c) If the youth and the students population increases faster than what the higher educational system in the state can absorb them and give them a decent education, then either there is the over crowding of the educational system and poor quality or there is to be lowering down of the participation rate. (d) If our higher educational system turns out gradually at a faster rate than the rate at which the economy can give jobs, then unemployment of the educated will be on an increase.

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1	Ref. Table (I)	(a) Students enrolment
		(b) Institutes
		(c) Expenditure
	(II)	State domestic income
	(III)	Per Capita Income
	(iv)	State revenue.

(f) Approach and the State (Maharashtra) policy:

As against the above said rapid trends and progress in deepening imbalances it is necessary to know the state policy. In April 1968, Maharashtra Government issued a White Paper<sup>1</sup> on new Educational Policy meant for "reconstructing the entire educational system at all levels." This paper was placed before the members of the State Legislatures as well as before the public. Having taken into consideration reactions expressed by various sections of the community on 23rd February 1970 this was issued as a "policy statement." In the light of this policy statement the main objectives of education are: (a) Pursuit of truth (b) Development of the potential of an individual including his skills, sensitivity and values (c) Operating education as an instrument of national development. It is mentioned that special stress is to be given on the third objective namely the realization of the establishment of democratic socialism secular nationalism, development of national integration and for that "to create in young men and women a consciousness of national responsibility."<sup>2</sup>

As indicated in the policy paper the guiding principle of educational reorganization are to (a) relate educational system to the needs and aspiration of the people (b) to provide necessary increasing facilities at all levels and

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equalization of educational opportunities (c) to develop socially and economically underdeveloped classes and areas (d) to improve standards of education and (e) to discover and develop talent based on the above said considerations programme the policy for higher education includes following:

(a) For providing equal opportunity at the collegiate level especially the rural area, to encourage establishment of colleges within the range of 16 to 24 kilometers and for that 15-year plan of educational development is to be prepared.

(b) Planned provision of post-graduate facilities at colleges and universities according to needs. For this a suitable machinery is to be devised in consultation with the university authorities ultimately resulting into institutional planning.

(c) Establishment of social justice in respect of admission to the students from rural areas.

(d) Expansion of post-graduate education and research and improvement in their standards.

(e) Academic forums.

(f) Institutional planning.

(g) Development of educational complex and state council of education.

(h) As regards the policy statement (including establishment of balance between demand supply and employment market).

While there are a number of aspects where a much more critical objective analysis is necessary <sup>However</sup> yet the very fact that a bold attempt to understand and <sup>attack</sup> ..... the problem itself is a <sup>Step</sup> ...



which deserves congratulation. No other state in the country has done this. Now the usual problem of implementing the policy still remains. However, in the subsequent paragraphs a logically conceived strategy is presented.

What are the approaches and the policies which the system is adopting to meet with the situation, is really not clear as vague, confusing contradictory statements and pronouncements appear all around.

(g) Alternative strategies <sup>THESE</sup> then pros and cons: There are different types of strategies that can possibly be adopted to deal with this situation of demand and supply gap in the system of our higher education:

VISION (1) Open administrative policy: At one extreme, our higher educational system can throw doors open. Let everyone who wishes to come inside the system allow everyone who wishes to stay as long as he likes and allow him to go as far as possible or as far as it pleases him to go. Such a policy (this is really to absence of policy) would immediately lead to further bulging of ~~maxima~~ enrolment crowding of class rooms and a sharp drop in quality. This strategy appears to be satisfying social demand. But the price in the subsequent

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1 (a) Correz A.H. Quantitative Methods of Educational planning. Scranton, Penn. International Text Book Coy. UNFSCO, 1969.

(b) Armentage P. Smith and Alfer P. Decision Models for Educational Planning, London, Allen Law the Penguin LANE Press, 1969, may be referred to.

period is a storm of protests about high drop out rates, growing disparity between the ability certified and ability real, poor quality of high grade human resource and the waste of public resources.

(2) ADMISSION  
Selective Administrative Policy: At the other extreme there is another strategy, under which the policy is that every one is given an access to higher education through severely restrictive process which governs the system. The elementary education and secondary educational institutions serve to screen the academically bright. There is the policy of competitive selectivity and promotion based on individual academic performance. Examinations are accepted as impartial arbitrator of deciding as to who is to proceed to higher education. Accepting the best and rejecting the rest. The size of the higher educational system remains related to a manageable number and the quality<sup>is</sup> preserved. At the face of it the system appears to be fair and democratic. However, this strategy results in producing an educational "elite" which may be expected to provide to the community essential leadership, which is one of the basic objectives of the higher educational system. However, such a strategy (a) ignores social demand (b) <sup>that</sup> in the developing and industrializing communities, secondary education is not enough (c) while selective admission with other competitive examination seems to be democratic in practice, it has all inherent bias. There is the tilting of the scales in favour of those who are the sons and daughters of educated. In practice there is no equality of opportunity. There is the denial of equality to those with

equal intellectual ability but unequal social and economic background. (d) The system results in waste of human efforts particularly in the form of those who are rejected. Rejected are likely to have talents and given relevant opportunity they certainly can develop, and thus benefit themselves and the society. No industrialising developing economy can afford to waste such a human talent (e) Particularly in an economy in its earlier days and phases of economic and educational developments though justified on practical grounds, selective admission system is very different to manage politically.

(3) Compromise between these two policies: Thus it is easy to state problems but it is very much difficult to solve them. As it has been done in some of the African countries and states like Tanzania, one of the approaches that can be adopted, would be to postpone the open admission to higher education system till the day the economy of the state is in a position to afford.

(4) Absence of any clear cut policy and its consequences: What strikes us in our state is the absence of a clear cut well defined policy adopted by those who are at the helm of higher educational system. Avoidance of the formulation of such a policy, its declaration and the postponement of its implementation is perhaps taken to be a politically wise step leading to keeping silence and allowing laisses faire to have its full sway. However, such an approach drags the system into obscure areas. It becomes really very much difficult to strive for the attainment of any objectives. Operational objectives of the system become vague and either inertia or

impulsive actions result. When the society becomes conscious, any further postponement of policy becomes difficult and unwise. What is therefore needed is an immediate formulation and putting into implementation the policy.

(5) Main issues and conclusion regarding students input in the higher educational system in the state: Broad conclusions from the analysis of the students input in the system of our higher education can be stated as (a) students are the most important input (as it is for the student that the system mainly is operated). (b) Due to a multiplicity of reasons there is the tremendous rise in the social demand for higher education. This rise raises the main issue regarding the capacity of the operating higher educational system of our state. (c) There is the gap, widening at alarming rate, between social demand for higher education and capacity of the higher educational system to satisfy the same, not only because of the slower growth rate of the latter but also because of the non-availability of time and opportunity for adjustment. (d) Although there may be a high growth rate in youth population yet educational system of the state cannot continue growing indefinitely at a rate that is higher than the rate of growth of state (domestic) income and state revenue and the rate at which employment opportunities in the state grow. (e) The result is that the entire higher educational system is subjected to severe strain (which as the signs are) in the immediate future is likely to grow more severe. (f) Admittedly it is not easy to select between

extreme strategies namely open system and selective system. It may be that the compromise between these two is to be adopted under which adoption of an open system is to be postponed till the state economic condition can afford. (g) However, what really is needed is an immediate formulation of policy and its bold implementation.

### 3.22 Demographic Input - Members of the academic community The Teachers

(a) Significance of teachers in the higher educational system and crisis: Next to the students, members of the academic community, teachers, i.e. professors, lecturers, etc. are the largest and most important input in our higher educational system. Teachers are at the heart of the higher educational system. However, being at the heart of the system, they are contributing their own part in deepening the crisis in our higher educational system.

(b) Main aspect of the problem and crisis: Here there are two facets of the problem (a) academic and (b) <sup>those</sup> ~~there~~ relating to the supply of teachers etc. For the present academic aspects of the crisis are kept outside. An attempt being made here to consider the problem relating to supply of teachers and various factors that determine and affect this supply like salary status, cost of teachers, the way they spend their time, etc. (b) Supply of Teachers: Problem of teachers supply is not merely one of simple number. It is

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Hugget, Albert J. and Stinnet, T.M. The professional problems of teachers, Macmillan Coy., 3rd print, 1958, Part II & III. Professional personnel policies and developing responsibility, pp. 103-199 and 245-310.

first and foremost the problem of quality. The problem is that of getting enough quantity of a right type of quality.

Important facts regarding the nature of education industry shall have to be recapitulated. (1) Higher education is a mass production industry. Yet it is a labour intensive industry tied to a "handicraft" technology. (2) If higher educational system is to serve all other consumers of high grade man power well and each generation better, it is to be both, producer of trained man power and consumer. (3) In contrast to other industries higher education is both, the consumer and produce of man power. If higher education to serve all the consumers, of man power well as well as if it is to serve subsequent generations well, higher educational system is constantly to recoup enough of <sup>its</sup> the best output to reproduce further better crops. (4) In competition to win back enough of its best produced quality material, higher educational system is at a great disadvantage. It is usually the 2nd choice on which the higher educational system is to keep itself satisfied. Other competitors have larger purses and by using these they always win away the "first choice" candidates. (5) Even in future this situation is to continue and this is so because of the inherent nature of higher educational industry. In capital intensive modern industries adoption of new technology results in the rise of the labour productivity. This permits even without any corresponding rise in the real cost of production. <sup>HIGHER LEVELS OF PAYMENT</sup> Even with utmost growth of higher educational enterprise, its labour intensive character continues.

There exists no possibility of affecting any increase in salaries without experiencing a corresponding increase in the real cost of production. It is estimated that a 10% rise in the salaries result in 70% to 80% increase in the total cost of production. (6) These basic economic facts have a far-reaching impact on the quality social status and the general attractiveness of the teaching profession in labour market. It is progressively difficult for higher educational system to offer competitive salaries, that would be attractive to top ranking quality personnel. In the degree to which higher educational system fails to compete, it sets in a downward spiral of teachers status and further compounds the difficulties it has, in attracting the kind of the people it needs for the improvement of higher educational productivity, efficiency and quality. Educational-Typical variant of the educational Gresham's law is set in motion. Too many poor and inappropriate quality teachers drive away good ones out of market. The accute shortage of qualified teachers initiates a process of accepting adjustment with the inadequately qualified people. This results in the general lowering down of standards.

(c) Supply of teachers in our State: As regards the actual facts observed in our State a number of questions arise. (a) what exactly is happening to the supply of higher educational teachers in the past 10 years i.e. since 1960? (b) what are the prospects for future? (c) Is the potential supply of higher educational teachers likely to improve and if so will there be enough best people willing to teach? (d) Can the present stock of poorly qualified teacher be upgraded and what would be its cost? Can this be effected at all?

**(1) Shortages in specific fields and supply of underqualified :**

As regards the first question, it is an open secret that there has been an acute shortage of well qualified man power. Most of the acute shortages have been experienced in the sphere of English, Science, Mathematics and various other technological fields. In all these fields there has been an overall shortage. As regards the rest of the fields and subjects if proceedings in various universities regarding condoning the qualification deficiency of various staff members working in the newly emerging colleges, especially in the mofusil areas is studied, it would be evident that compromise and adjustment process is operating and resulting into the lowering down of standards and in a widespread decline in teachers qualification.

**(2) Future prospects : (a) Increasing output of the system, (b) Growing educated unemployment and surplus of educated manpower, (c) Salary level structure etc. :** As regards the

future prospects, hope is voiced indicating that in the coming years the supply of teachers would improve. This hope is based on an assumption that higher educational system of the state, will be able to claim for its own needs, a larger share in its output. Argument is that the supply of university products in the state is exceeding the effective market demand for their services (except <sup>IN</sup> certain specialised fields). Then there is the slow rate of economic growth, along with the unsatisfactory structure of employment market and incentives.



(C) Level of Salaries : In Maharashtra there is another important situation. There is educated manpower surplus which is coupled with price inflation. This has a depressing effect on the teachers' salaries. In the progressive inflationary situation, real income of teachers always falls far behind the inflationary prices. Teachers in the higher educational institutions are neither organized nor <sup>do</sup> they operate as effective trade unions. Their salaries are not bound or tied up with the price level. As compared to price rises the salary increases sanctioned from time to time are marginal and they fall far behind. It is observed that for meeting both the ends the tendency to combine other-jobs with teaching is already there and it is growing and spreading quite rapidly. The conclusion therefore is that in the immediate future the prospects for a substantial increase in the teachers "real" income are really very remote. Easing of the manpower market and the financial and budget stringencies are bound to make the things more difficult. Thus in relation to price rises and in relation to the progressive rises in the salaries in non teaching professions the lag, in the rise in the teachers salaries is going to continue to result in getting the poorest pickings from available manpower.

(D) Structure of Teachers Salaries : Next important question is about the structure of salaries. Structure of salary has a close bearing on teachers recruitment, turnover, costs and the cost to the educational system.

(5) Merit rating motivations, incentives and promotion : Present day structure that has been historically based on

(a) automatic increases with some retirement provisions based on year of service<sup>1</sup> and permanent tenure.<sup>2</sup> (b) There is an extensive spread of salaries between the starting level and the final level. (At the starting level there is the under qualified tutor or demonstrator.)

Both from the point of view of recruitment and costs implications of this structure are not many a times adequately appreciated. In relation to recruitment implications are a mixture of good or bad depending upon a variety of qualifying clauses. Based on years of service permanency and some retirement benefits. Provisions of automatic promotions work favourably provided competing employments do not offer still favourable terms. Between different levels of qualification, a wide spread provides incentives for the able and ambitious to work his way up, provided there are chances of promotion from one higher educational echelon to the next, provided the spreads between various levels of salaries are appealing and provided there are provisions for the in-service training programmes. The present day realities in our state appear to be that (a) the teacher rarely breaks the chain which binds him to his colleagues and rarely jumps ahead of them, up in the promotional scales.

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1 Formerly there were wide varieties in the salary-structure and although much is to be as yet done in implementation in recent times. U.G.C. Salary-structure has brought in an element of uniformity.

2 However, even after expiry of probation period the practice of not confirming and not making a staff member permanent is rampant showing disparity between legal provisions and practices.

(b) Special promotions in our higher educational system are likely to come more by leaving teaching and at the same echelon in the system entering into business or administrative services. (c) Third important factor is that while the excellence is not rewarded, mediocre is not discouraged. <sup>1</sup> Those of the similar qualifications who stay behind for educational service in the class room, outstanding and mediocre alike, continue alike to ride at the same speed up the salary scales because they got in it at the same time. Excellence in the teaching or educational work, in our state is neither rewarded nor mediocracy discouraged. The implied assumption is that all teachers are equally there good and will remain equally good (except those who perhaps are more equal than the rest and therefore leave educational service and go to higher paying administrative jobs) is at the base of this thinking. <sup>2</sup> The issue of "Merit rating" has been debated in recent times, <sup>3</sup> There is strong stout opposition. Looking to the reactions of the teachers as reflected through the proceedings and deleberation of various University Teachers Association in recent times, it is now clear that the principle of promotion <sup>on</sup> of merit is and bound to remain in future in minority. There seems to be no

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1 Not necessarily similar academic qualifications but merely similar qualification in relation to the duration of service.

2 Obviously this basic assumption is untrue.

3 Proceedings of various University Teachers Associations in the State in connection with the implementation of U.G.C. scales.

prospects for the introduction of diversified professional ranks. Therefore the plain fact is that howsoever there may be variations in quality and results, as long as teachers are assigned essentially same jobs it is difficult to discriminate in their rewards.<sup>1</sup>

(6) Shortage in specialized fields: Then there are the issues of supply of general teachers and special teachers and the issue of geographical distribution of the supply of teachers. One may be optimistic to assume that the shortage of general teachers is likely to be eased in the near future and the relief may be expected. However, there is the acute shortage of science, mathematics and technical field teachers in the immediate period. Failure to solve this problem of shortage of teachers in the specialized fields at this juncture results in aggravating the problem as this results in retarding the output of students in those fields which would eventually relieve the shortage. This shortage is bound to continue so long as there is the policy of paying uniformly to the teachers, regardless of the subject that he teaches. This policy imposes severe handicap in competition in bidding for these particular categories of teachers who are rewarded much better elsewhere. Two experts who examined the impact of uniform salary policy regarding technical teachers came to the conclusion "We know of no

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1 OFCD Australia. Studies in the demand and supply of teachers, Paris 1968.

other industry that pays so little attention to the market situation while establishing and operating salary schemes.<sup>1</sup>

(7) Geographical distribution shortage in rural areas:

Geographical distribution of the supply of teachers is another important aspect. From the point of locational distribution of institutions and students, the marked fact is that our higher educational system is progressively becoming rural in character. This poses a perennial human problem of getting appropriately qualified enough teachers to staff higher educational institution in the rural areas. Rural life has little attraction to the teachers in higher educational institutions and the result is that the best teachers congregate in cities. The emerging rural youth is often left in the hands of inferior teacher. The salary structure and the status symbols work against the solution of providing highest reward special incentives and status to rural teachers and therefore to rural teaching.

(8) In Service Training and orientation of teachers: As

regards the possibility of improving through a system of training and in-service training, the available category of second choice men to <sup>be trained</sup> appropriately qualified men, it seems that this has practically received no attention particularly at the state level. Some universities are observed to initiate orientation programmes, but they do not represent a comprehensive coordinated effort at the state level. Thus

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<sup>1</sup> J. Kershaw and R. Makeen: System Analysis and Education. Research Memorandum Rand I.N.C. Oct. 1956, p. 59.

although there are some obscure chances of easing the situation through numerical expansion yet the problem of quality still persists. Even if first grade input is available and the existing material continues to be in the higher educational system, <sup>(N)</sup> an isolation from the main stream of life living and aspiration as well as the relevant stream of education results. In spite of the fact that there is the possible danger that the trained may drop out of teaching profession, the need for orientation, refreshing and in-service training cannot be over exaggerated.

(9) Conclusions : Broad conclusions are (a) Teachers are the second important and largest input in the higher educational system of our state. (b) Main problem regarding this input is about the supply in relation to the growing demand, supply not merely numerical supply or in numbers, but of appropriately adequately qualified staff. (c) Conditions of supply of teachers in the higher educational system is very much governed by the salary, its level and structure, its organic relationship with price level as well promotion, merit rating and incentive systems. (d) Observed facts in relation to our state are (1) as compared to other competitive spheres salaries in the teaching profession are lower (2) In view of typical labour intensive character of higher educational industry, there are no prospects for rise in the salary (through increased productivity) without any corresponding increase in costs. Teaching profession is the second and the third and certainly not the first choice of <sup>THE</sup> qualified. The result is that it is category 'C' material that comes and remains retained as an

input in the higher educational system.<sup>1</sup>(3) As regards salaries in relation to price system, they had been always lagging behind rises in price level and the result is that the prospects of increasing real income had always remained obscure.(4) Salary structure consisting of (a) Automatic increase with the passage of time, with some fringe retirement benefits (b) the extreme spread, (c) absence of any merit rating incentives or differential salary system even for scarce supply teachers.(5) All these aspects coupled with the large scale production of university products resulting into the softening of the 'market situation' indicate that while numerically the prospects may appear satisfactorily, yet from the point of view of the supply of appropriately and adequately qualified teachers supply prospects are not really bright. (6) There is already a marked shortage of teachers to English, Mathematics, Geography, technical subjects as well as a marked shortage of appropriately and adequately qualified staff in the rural area. (7) Some improvement in the existing stock is possible through teachers orientation in service training and refresher programmes. <sup>Which</sup> ~~What~~ is one of the neglected subjects<sup>h</sup> in the state policy.

Thus the problems regarding the teachers input in our higher educational system poses a real question namely what our higher educational system is to do about these problems? It should be obvious here that all problems ultimately translate themselves into the more searching question - namely "will our higher educational system be able to afford

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<sup>1</sup> This statement is specifically applied to the non-university academic staff working in affiliated colleges particularly in the moufsil area.

more and at the same time better teachers?" This basically is a financial question, which now needs our attention.

3.15 Economic inputs finance and physical items (Mainly financial input from the community):

(1) Two forms of economic inputs: The next important input in the higher educational system of our state is economic input. This is an input from the economic output of the society i.e. the income of the society or the community. This may be in the two forms. (a) Finance input or (b) Input in the form of physical items. However, financial input is more important. As <sup>it</sup> represents an overall command over rest of economic inputs and input of teachers.

(2) Importance of financial input: Issue of financial input in the higher educational system of our state is quite important. So much so that this issue almost lurks in the background of almost everything. Here one comes to the root questions (a) Is the money, that is to say the lack of it, at the root of our higher educational crises? (b) How much money is really needed? (c) Are there any chances of getting enough? (d) What happens if getting enough for higher educational proves impossible?

(3) Problem of financial input is important yet not all the problem. Shortage of funds is not the only problem:

Although financial problem is "all important" problem yet it must not be misunderstood that it is the only problem. There is a common feeling that there is no wrong in our higher



educational system which money cannot set right.<sup>1</sup> This is a half truth therefore <sup>a</sup> dangerous one and this diverts people from digging <sup>h</sup> deeper into the fundamental sources of problems. It must be made clear that besides finance, there are a number of constraints that limit not only the speed with which higher educational system is to expand and adjust but ~~not only improvement~~ <sup>and</sup> but even <sup>to</sup> the initiation <sup>e</sup> of the process of improvement. Even though financial constraints are there, the crux of the higher educational problem in the state is not the shortage of resources. An overpowering inertia of a traditional higher educational system, fortified by some "interested sector" of public opinion indicating an absence of organic adaptation to environment which makes the higher educational system progressively obsolete and irrelevant is another important constraint. However, it is to be still admitted that money or finance is an absolutely important crucial input, which provides purchasing power with which the higher educational system acquires its human and material resources. Obviously with too little money higher educational system would be in a hopeless condition yet it must be quite clear that even with ample resources although many of the higher educational problems, would be in a manageable stage, they would not disappear.

(4) Higher educational finance and economy Domestic income and state revenue: Question of finance in the higher educational system cannot be posed in isolation. It cannot be

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<sup>1</sup> This is common feeling is expressed by a large majority of the principal secretaries of societies and few vice chancellors in personal discussions with them.

divorced from the environment. Higher education is one of the aspects in the life of the society. At any given point of time, the community and the government of the state which represents the community, has to deploy part of income and make available <sup>the</sup> finance to many sectors and sections and in this that education, and in that higher education is one of the recipient. It is this fact which explains the situation namely that the claims of higher education or education on the state or national level, encounter counter claims of important material needs as investment in agriculture industry, transport, housing, important social needs such as health. It is said that <sup>the</sup> main adversary of education is defence at the union or central level and Police (under Home) at the state level. Education is further divided into various sectors and these sectors again compete for resources with one another. Here at this stage rivals to the higher educational system though belonging to the same family are primary education, secondary education, adult education, teachers education, etc.

(5) Two level competition in claims over finance and priorities: This two level competition (1st level - education in competition to defence production sector composed of agriculture industry tertiary infra-structure sector like transport communication etc. and the second level higher education vis a vis primary secondary education etc.) demands that there should be the formulation of priorities. This formulation may be explicit or implicit. Setting of priorities is a difficult and painful task. It is also a common

experience that while rational conclusions can be arrived by rationally analysed solid facts by the higher educational planner yet, at the end priorities are finally set up not by the planners sliding rule but through a political process marked by the battle between ministers, between ministers and the legislature, or in the legislature itself. As result of these battles what ultimately emerges out is (a) blend of the values of the community and (b) the comparative strength and strategies of various pressure group.

(6) Trend in per student, state product and educational expenditure: In this financial input analysis next important point is to grasp trends<sup>1</sup> in (a) higher educational expenditure and cost per student and (b) trend in over all educational expenditure and higher educational expenditure (c) trend in the total state product and the total public revenue and the public expenditure on higher education.

(a) Trends in expenditure and costs: (1) Higher education is arising cost industry: Evidence regarding the behaviour of higher educational cost per student in our state is scarce. Whatever evidence that is available indicates quite clearly that educational costs per student whether measured in terms of current or constant prices are rising. Higher education is a "rising cost industry". The input costs (at constant prices) for each similar unit of output in the subsequent period follow <sup>an</sup> upward trend line every year. In other words the higher educational system of the state needs more and more finance to accomplish the same result as in the previous year and if the community wants either to do

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1 Tables.

more of it or do it in a better way, the community will need larger and larger budgetary provisions all this completely apart from the inflationary situation.

(b) All efforts towards expenditure and cost reduction have serious limitations as there are no prospects of cost reduction through productivity rises: Available cost data analysis shows nothing to indicate that the upward trend in the unit cost in higher education can be halted. In other industries, there is a possibility that the rising productivity may result in the reduction of the cost.<sup>1</sup> In the higher educational industry there is no evidence to show that the productivity of the teachers is increasing even though teachers salaries are increasing. In fact one of the British study in U.K. indicates that the educational productivity is on decline. While substantial evidence indicates rise in the cost per student in higher education in the state, there is a little scattered and confusing evidence to show a mixed and in fact a confused picture. Evidence taken on the face value indicates at least over a shorter period declining costs <sup>which</sup> ~~what~~ may be traced to following reasons. (a) Lag in the teachers salary quite behind the rampant price inflation. (b) Extensive use <sup>of</sup> under-qualified staff whose salaries are below the mark ~~teacher~~ (c) Increase in student teacher-ratio reflecting over-sized class (d) A shift in the educational mix towards the higher proportion of lower cost type education, Such a combination of Arts, Commerce comes in a multiple

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1 Table - Costs and Expenditure per student.

faculty college or having fewer board students and more day students or progressive offering of courses which would attract masses of students etc. and finally attempts to have (c) double shifts.<sup>21</sup> However, with all the available data regarding apparently/<sup>declining</sup> higher educational costs at some quarters it appears that the decline in the cost is an illusion. Because what is being measured over the period of years is not the same object over years, but the declining quality product and changing educational product mix. Obvious conclusion seems to be that per student unit costs in higher education are rising.

(c) Limitation to cost reduction efforts: It appears that various expedients have been adopted to fight off this rising cost trend. However, the price of all these expediencies is a heavy decline in the quality of educational output. As mentioned above attempts have been made to maintain a high proportion of adequately qualified teachers in lower salary brackets by postponing salary increases. Efforts have been done to reduce the costs by foregoing expenditure on text book, library, laboratory, and other essential learning methods or even by overcrowding class rooms or even by adopting double shift system. Apart from the heavy price paid in terms of sacrifice of quality, it is to be clear that all these efforts aimed at reducing costs have practical limitations. Overcrowding of class room is bound to reach a

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1 There are reported fights over this issue particularly Bombay University.

limit when any further compressing of student in the class is no more possible. Double shift cannot be extended to trible shift. If there are few text books and other facilities, much cannot be saved by merely doubling the number. Keeping under qualified teachers in large numbers would be progressively difficult when our universities in Maharashtra are now turning out better qualified teachers in large numbers. Resisting demands for the revision of salaries, ignoring in the process inflation, of the process of increases granted in other part of public and private sector is now not an easy matter. Inevitable conclusion seems to be that all the conventional escape routes from rising unit costs in the higher educational system of our state have already been exhausted and the incoming subsequent periods unit cost per student are destined to rise. To assume (on the basis of assumption that higher education business as usual and all well) that cost per student can be lowered or held at standstill through the introduction of far-reaching economy producing innovations is to indulge into a dangerous fantasy. A system analyst is to admit boldly the progressive increases in the unit costs when he is thinking in terms of needed financial inputs for reaching future bold targets of higher educational expansion coupled with the objective targets in the improvement of quality.

(d) Trends in domestic income and the state budgets and expenditure on higher education: Likely future trends become clear the movement second and the third indications,

namely trends in the growth of higher educational expenditure in relation to economic output of the state as well as in relation to the state budgets are taken into consideration. Over last 10 years higher educational budgets are rising not only in absolute amounts but also as percentages of gross state product as well as a percentage of state revenue. Maharashtra State is assigning greater value and higher priority to higher education. This is obviously an optimistic situation. Yet it is to be clear that this situation regarding higher educational budgets cannot continue indefinitely. Maharashtra State government is to meet other important needs as well and higher education cannot continue commanding rapidly increasing share of available resources without producing serious stress as well as distortion in the economy and the society.<sup>1</sup> Certainly this is neither the question of philosophy or values but a question of simple arithmetic which says that higher educational budgets must be set more closely in line with the over all rate of growth of state economy and public revenue. As slackening occurs into the growth rate of the state economy and public revenue of the state higher educational budgets will receive smaller annual increments than before. Another fact is that a large

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<sup>1</sup> Table - Domestic income rising at a rate of the state budget - rising at a rate and the expenditure on education more or less constant at 18 - 20%. Part of the higher educational expenditure at of the total public expenditure. Tables.

proportion of the budget on higher education is already committed in advance as to cover indispensable cost increases in on going programmes. Really there is left a very small area for maneuvering or improving higher education as well as redeploing educational resources to improve balance and productivity of the system.

(7) Demographic explosion of youth population: Apart from general financial stringency there are the well known additional omnipresent factors like the effect of the population growth and the rise in the participation rate on higher educational budgets. All developing countries have much more younger population than a developed country and the working age population in these developing countries is proportionately much smaller. This smaller proportion is to support, below working age population. It is stated that while in Germany and France there are 5 working age people for every one in the school age, in India it is only half of the number.

Education commission suggests six fold increase in the total educational by 1985 and five fold increase in the per capita expenditure on the assumption of 6% annual increment per year throughout this period and the educational expenditure expanding from 2.9% of the GNP in 1965 to 6% in 1985.

(8) Specific problems before higher educational authorities in the State: Problem before the state authorities is that they are to operate on rougher and rougher grounds which for some may honestly appear to be impossible. The fact on the one hand is that economic growth rates are depressing and des-



appointing and on the other there is the necessity to increase and improve higher educational performance but the investment in higher education cannot be greatly increased unless economy growth. Leaders in the educational administration in the state are to be aware that here is a formidable task of achieving certain higher educational goals and it is going to take quite some time to achieve this task, more time than what was expected earlier. There is the necessity of an undaunted determination to reach the goals and this really requires a full measure of personal and political bravery for the leaders to speak candidly to the people convincing them that the higher educational aspirations are to be adopted to more realistic levels and to a more realistic time schedule.

(9) Conclusions: Conclusions regarding the input of finance are: (a) Problem of financial input is the most crucial and it lurks in the background of almost every problem in higher education, (b) In the availability of adequate finance for higher education in the state there are two level competitors (1) Competitors at the <sup>first</sup> level are defence law and order, the production sector and the infra-structure in the economy and (2) Competition <sub>at the second level i.e.</sub> At educational level in the education itself i.e. primary, secondary education etc. Here though analysis may be done <sup>by</sup> educational planners <sup>but</sup> decisions are to be taken by the politicians as the representatives of the community. (c) As regards financial input in higher education, there is the marked tendency of rising (the) expenditures and cost per student, there is the

marked trend of a dramatical rise in the over all higher education expenditure as well as a rising trend in the proportion of state product and state revenue developed towards higher education. (d) This trend cannot continue beyond a limit and indefinitely. (e) Even if expenditure on higher education increases, additional is to be spent to carry the same programme and that there is the rising population of young and rising participation rate. (f) A clear cut vigorous perspective state policy is needed. ||

### 3.16 The Process:

Higher educational process consists of (1) aims and priorities to guide the activity of the system, (2) Students whose learning is the main aim, (c) Management which is necessary to coordinate direct and evaluate the system. (d) Structure and time schedules necessary to deploy the time and students flows amongst different purposes. (e) Contents representing the essence of what the students are expected to acquire. (f) Teachers to help and orchestrate learning process. (g) Technology referring to all teachers tech used in making the system work. (h) Quality control expressed in admission standards marking examination system. etc. (i) Research to improve the knowledge and the system performance and (j) Cost as the indication of the efficacy of the system. All aspects are not being discussed in detail. Students and Teachers have been already discussed. Management contents, technology and efficacy are discussed hereafter.

### 3.27 Management (acquired to coordinate and direct the system)

(1) Role of management: Whatever may be the aims and technology adopted, every productive system requires management. In every system there must be the provision for leadership, direction, supervision, coordination, evaluation and constant adjustment.

(2) Problems of management in higher education difficult and complicated - Host of organisations and managers at various levels: In the case of a higher educational system the problems of management are extra ordinarily complicated and difficult. Partly this is due to the fact that the system - its oversee has an oversee and this oversee is divided into small scattered parts (as in the case in agriculture)<sup>1</sup>. A host of organisation and people have a hand in management of some of the aspects or the other of higher educational system. There is the governmental agency at various levels and civil servants, administrators, private bodies many a times led by politicians, heads of universities, professors and teachers - parents, students and endless critics (who of course are remarkably absent in our system).

(3) Basic issues appreciation of challenges, ability orientation of managers and availability of tools and techniques: In the analysis of system of higher education one is not so much concerned with these manifold managers at <sup>n</sup> many levels

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1 A.W.P. Guruge - A survey of modern management techniques. As applicable to Edu Ad. Asian Institute report, P. 168.

but with the management milieu within which they function. Here the main issue <sup>is</sup> of not <sup>of</sup> the individual ability or the moral worth or the devotion to duty or taste for hard work of an individual administrator. <sup>1</sup> It may even be assumed these are of a very high order. The main issue in the analysis of the system is whether the basic managerial arrangements of our higher educational system are adequate to the tasks before us and are managers of higher the educational system properly oriented to these tasks? Do those responsible for major decisions and for the direction of the system get right kind of specialized help and information flow? Do they have appropriate analytical concepts and tools to know clearly what is going on under the system, to assess, the performance of the system both internally and externally in relation to environment - to decide in options, and to plan its future and ~~the~~ to ensure the implementation of such plan. Does the management process of our higher educational system draw on all internal and external available resources for maximizing strength and effectiveness? Are the arrangements for recruitment, career development of managerial personnel well suited for the needs? How are there adequate means for detecting changes that are needed in the system and for determining for the best sort of changes and getting these changes affected?

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<sup>1</sup> However, this assumption is to be taken with a pinch of salt.

(4) Gross inadequacies regarding managerial arrangements and provisions in the state for facing new challenges:

As regards our system of higher education of our state, answers to these questions are obvious. Managerial arrangements of our higher educational system are grossly inadequate specially to deal with the cross ridden sets of new challenges. In fact this inadequacy of managerial arrangements is in itself the crucial part of the present educational crisis. It is wellknown that main foundations and features of our existing arrangements were laid during an era when higher education and the outside world were moving slow when the size was small and the diversity of higher educational task few and simple. Our existing managerial facilities and arrangements are not designed either for planning its implementation, its evaluation or even for promotion of innovations. These managerial arrangements have neither the spirit nor the tools or the personnel for these purposes. Nor they have the necessary means of consultation communication and coordination. Old, colonial type of higher educational administration was mainly meant to serve merely as a "caretaker, regulatory and supervisory body." Then there are the antiquated unimaginative administration procedures that are doing quite a damage. What now really is needed in the managerial and administrative arrangements, is dynamic, development oriented, form of management and administration which is capable of taking initiative, capable of having ingenuity throughout the system and capable of bringing about growth and change. The need for this need not be

overemphasised. The needed revolution in higher education is really to begin with the educational management.

In fairness it must be admitted that <sup>many</sup> ~~may~~ higher educationalists and administrators are acutely aware of these deficiencies, and many times it is claimed that if these educationalists and administrators are given a chance they would readily lead the revolution. However, it appears that these educationalists and administrators, are hard pressed and they are trying and hoping to make the old machinery serve new purposes and carry out new purposes which are of altogether of different dimensions. Observation is that the conservative nature of our existing the system that moves merely by the momentum of its own mass, grinds down and depresses even would be bold and managers, administrators and innovators. They are completely absorbed in a conservative mass and ultimately reflecting completely conservative behaviour. The result is that existing management is a conservative.

Our colleges, research institutions and universities are in an unsatisfactory - administrative shapes - most of them are totally devoid of particularly of managerial machinery needed to plan-<sup>ing</sup> making decisions, ~~making~~ implementing and evaluating. The chronic pre-occupation of universities with safeguarding of the autonomy (as if autonomy is an independent end itself) and the preoccupation of colleges and research institutions to maintain status quo in the managerial authority system is causing them to neglect completely their role of leadership for the entire educational

system (including the higher educational) of the state.

(5) Main areas of action (a) institutional research (b) recruitment orientation and development of personnel: Attention needs to be drawn to two aspects as drawing such a pointed attention may perhaps, lead to positive action in the right direction.

(a) One of the reasons for the above mentioned difficulties is the complete absence of a strong institutional provision for doing creative higher educational research on the problems of higher educational management and an objective continuous effort towards the development of personnel.

(b) The second source of difficulty seems to be emerging from the fact that in selecting developing managerial personnel, most of our higher educational system seems to have adopted are "in breeding process". At the college or universities the top management consists of persons nominated or elected by the teaching community usually serving for a limited time and then getting back to teaching. In such an arrangement top management usually suffers from a relatively close system of ideas and practices. Here the top management really never tries to "manage" the institution. At whatever level, - the in-breeding process cuts the higher educational system completely off from a potential source of creative leadership, executive talent innovation and specialization representing<sup>ed</sup> by people who may not be teachers but know well

as to how to operate and manage the system.<sup>1</sup> It must be clear that a good teacher may not be necessarily a good administrator or a manager. However, it is also to be made clear that the argument, here is not that someone by remaining outside the higher educational enterprise or the system, can manage it well. It is also not the argument that anybody outside the system, without any further preparation, can manage and operate higher educational system. The argument is that a sufficient and clear knowledge of what goes under the higher educational system is essential and indispensable for the educational manager and administrator and such a knowledge and subsequently the capacity to manage cannot normally develop now, through a "process of in breeding". Main reasons for this is that the higher educational system has become quite complex. The system requires well trained managerial personnel in various sectors and branches of administration. What is necessary now is not the administrator or manager in the narrow sense of the term, but a "diversified management team which amongst others includes statistical analyst financial planner, coordinator, implementor, evaluator. Efficient and effective higher educational management requires a wide assortment of knowledge, ability skills and management

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<sup>1</sup> An experiment was done to operate hospitals by trained doctors on the assumption that trained doctors would be good administrators. Actual experience is that this did not work. Specialists were lost to patients, hospitals sank in financial troubles and this system based on false assumption that expert doctors would be good administrators was altogether changed.



instruments. One thinks that these are not likely to be forthcoming through a process of in breeding from the teaching community. The system is now reaching such a stage of growth and development that a broad separation of administration management and teaching is becoming unavoidable.

An awareness is necessary in realizing that the recruitment of such a talent and ability is neither easy nor cheap. Higher educational system is at a disadvantage in competing with other section in the "talent market." However, it also to be remembered that higher education is now a big business looking after society's most precious asset - the emerging youth. For handling such responsibilities logically calls for the best executive ability and therefore rewards commensurate with the responsibilities.

### 3.18 Structure and time schedules:

Analysis of this aspect indicates the efficiency of the system in matters of deployment of time, students and teachers flows and utilization of equipment and facilities amongst various purposes and objectives.

However, Detailed analysis of this aspect is not proposed. However, certain prominent aspect/are to be presented. In the deployment of students flows and preparation of time schedules conventional outdated methods are still quite blindly followed. Broad framework (as regards the number of periods and lectures for a paper of 100 marks etc.) is provided by the university and nowhere a fresh thought is given to the conventional term system. Our academic calendar is different from the rest of

world. Our year comprises <sup>(of)</sup> 8 to 9 months, month of 20 days, week of 4 days and a day of 3 to 4 hours. Even on working days 6 to 7 hours serious and continuous work is quite exceptional. This is partly due to the absence of commitment and partly because there are no attempts towards rationalisation. The result is <sup>a</sup> colossal wastage of youthful time of the students, the build up of an attitude of inertia throughout, ~~irri-~~ <sup>irr-</sup> rational and under-utilization of the educational plant facilities is so such that such a situation might have led to immediate bankruptcy in the business world. A developing country with serious economic and financial constraints really cannot provide such an inefficient approach. <sup>1</sup> Experiments undertaken in Indonesia, Phillipines and Japan are noteworthy in this connection.

3.19. Contents and quality of the system (essence of what the student is expected. <sup>To ACQUIRE HIGHER EDU</sup> Hence educational system is not intended much to produce statistics but education hence "content problem." If higher educational system of our state is to be solely judged by the size of students enrolment, questions regarding the "contents" of the system as well the quality would not arise

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<sup>1</sup> Even with the given rules and regulations rationalisation would lead to the completion of 4 years arts and commerce courses (which are offered by a very large (70%) majority) within 3 years. A note submitted to Reorganization of Commerce Education Committee.

It is obvious that our educational system is not there merely to produce statistics. The system exists primarily to teach students and it is because of this fact that the issue regarding the contents and quality of our higher educational system arises.

(2) Important issues regarding contents what and how well learning?: Immediately a number of questions emerge about the contents and quality of the system. (1) what the students have been actually learning (2) How much have they learnt, how well, how fast? Is there any difference between what and how well students are learning now, as compared to their earlier predecessors?

(3) Extreme contradictory statements regarding relevancy of contents: It appears that there are two contradictory statements coming from higher educational authorities. The first extreme statement is that the present contents of our higher educational system are ~~obsolete~~<sup>out</sup> and irrelevant and these contents do not serve the purpose of 20th century student in higher education. The second extreme statement is the structure methods and contents of the curriculum in higher education have been changed, they have been made up to date and more relevant to the students, his environment. All statements regarding the decline the quality therefore must be received with skepticism. It appears that the truth lies in the combination of these two contradictory statements. ~~An attempt is therefore to be made.~~ Against these two contradictory views, an attempt is therefore to be made to draw closer to common frontiers. It is for this purpose -

necessary that the terms "Quality and Standard" must be clearly unambiguously understood.

(4) Measures for evaluating quality internal and external aspects of performance of the system: International Institute of Educational Planning has given in a seminar, thought to these problems and developed an approach to study and evaluate the qualitative aspect in the educational system. Institute makes a distinction between (a) the quality of internal performance i.e. the quality from within which is mainly based on standard examinations and (b) the quality judged by an external criteria such as the course contents and relevance of the system <sup>relevance of</sup> its contents to the needs of the environment. It may be that these two approaches of evaluating higher educational system need not lead to same but even to quite different conclusions. It is quite possible as in our case, that the quality of the performance judged from the point of view of internal standard namely the examination results, may be very high but the teaching performance, judged by external standard may be obsolete and irrelevant to the needs of the environment in relation to the needs-of-the-- time and place and therefore its quality and efficiency may be poor. External or internal standards are not universal or absolute. It is internationally recognised in the seminar that the standards of an industrially and economically developed state or region are irrelevant to the developing region. If educational standards are to make any sense and serve useful purpose, then they must be judged in relation to the time, purpose place and students,

client etc. The desirable situation is that in which, management and administration are endeavouring to adopt and set standard that are relevant to them and they are further doing efforts to harmonize the internal and external criteria of quality by adopting both the approaches namely that of raising standards of excellence as well as ensuring that the higher education offering is serving the real needs and values currently and perpetually given in the country.

(5) Trends and tendencies regarding contents in our higher educational system: Global observations on the higher educational system of the state indicates that predominantly there appear two types of tendencies (a) Tendency to cling quite dogmatically to yesterday's curriculum and to treat this curriculum as absolute and (b) tendency to borrow almost blindly the curriculum and the standards from countries (in which they have become out modelled) and in spite of the fact that they may be absolutely irrelevant to our needs and conditions, adopt them. This is a tendency of engrafting of educational doctrines, forms, standards, contents, rituals and indicators of quality without any thought being given to their relevancy to our life living aspirations and needs. It is to be submitted that while the first choice is very much likely to result in waste and the second in a disaster. A pointed attention is to be given to the fact that the result of both these tendencies is a complete divorce between the higher educational system and the real needs. Pursuing these courses either due to sheer inertia or indifference or due to dogma is really to waste scarce

resources invested in the higher educational system. Such an abstract pursuance draws away our state from the correct educational strategy and the result is a sabotage of development.

Two situations existing in real life are neither to be ignored nor ruled out. (a) Even in most upto date course as knowledge grows some part continuously goes on becoming absolute. (b) The possibility of having some part of the knowledge to be somewhat absolute (till new facts are known) and therefore to be the content of even the most upto date course as well the fact as regards the second category that there is some internationally standard knowledge (e.g. in solid physics) is not ruled out.

(6) Relevancy of contents to be judged in relation to

students objectives and technology in education: Attention is also to be paid to two other aspects namely (a) changing composition of students body, (b) changing objectives and (c) rapidly growing knowledge as well as (d) changing methods.

(a) Now Homogeneous group of students with manifold objectives

and motivations: In the earlier periods of development of higher education, our system was meant to serve a relatively small minority representing a homogeneous group having more or less homogeneous social economic cultural and educational background. In the pre-independence days the system was meant to provide high quality education and to produce an

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1 There is something like an <sup>internationally</sup> internally standard knowledge.

elite. This very system of "class education" <sup>has</sup> is now been asked to enlarge itself to serve the masses of students who are diversified almost in every respect.<sup>1</sup> In view of the social policy of throwing open the doors of higher education to all those who desire to come, we are having a growing proposition of first <sup>generation</sup> learners. The students body now tend to be heterogenous. This fact has a definite bearing on contents. Unfortunately it appears that this fact is not so far appropriately appreciated. As it is rightly described our speciality shop of the higher educational system of the state that was exclusively meant for serving a well to do class, is now to convert itself in a big departmental store to serve consumer of every type of and description including a thrift basement for those who are in a streitened circumstances. Under such circumstances a small high quality elite oriented higher educational system is not only to expand and democratise itself but also to leave clinging to old logistic curriculum and the monolithic standards.<sup>2</sup>

(b) Expanding frontiers of and channels of knowledge and a required rethinking about objectives in higher education producing "educable" <sup>rather</sup> than educated person: There is

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1 J.P.Naik, Planning of Education.

2 Curriculum and standards of the developed industrialized area are not necessarily 100% relevant to the curriculum and standard needs of the developing rural area. This fact requires attention and a further objective analysis which seems to have not been done so far.

another aspect of the problem. In the background of a very rapidly changing frontiers of knowledge, there is the problem of keeping the class room education upto date. In our higher educational system as it operates at present, it is the class room alone that is providing an access to the ever growing stock pile of human knowledge. Knowledge in the class room comes mainly through three channels (a) the text book (b) the teacher and (c) the student (although many a times the knowledge which the student brings does not necessarily confirm to the official curriculum requirements). When knowledge grows very rapidly, almost doubling in every decade, text books and teachers almost become purveyors of outdated obsolete knowledge. Observation is that the obsolescence continues not only in contents but even in the technology of conveying the same. The fact is that the entire world beyond the higher educational system moves at a very much rapid pace and there are the rapid changes in the knowledge - technology and job requirements. Under such circumstances it is necessary to give a fresh thought to our basic higher educational objectives. The need of the situation seems to be not so much stress is to be given on producing the "educated" but producing an "educable" person who can learn and adapt himself efficiently and effectively to the environment which is continuously and constantly changing. If this view is accepted, it logically follows that the higher educational system of our state shall have to develop a high degree of adaptability as otherwise the system cannot be expected to produce people who are to adapt to changing situations.



(7) Remarkable absence of adaptability of our higher educational system and the resulting absence of relevancy to needs: It is this adaptability that is very much lacking in the higher educational system. If one observes the progress in the establishment of new departments in the universities as well as the institutions of new courses by various faculties and academic councils of all the universities in the state, this point becomes very much clear. The conventionally prestige subject and departments continue to predominate. It is the sociological prestige that draws the best teachers and in the absence of appropriate effective advancement service, attracts the best students to certain selected subjects and courses, although the real needs of the community and the locality may and in fact are completely otherwise.

(8) Existing teaching community of average competence cannot be expected to initiate innovation and change: In this issue of initiating changes and the shifts in emphasises in the contents and quality of education, theoretically a lot would be expected from the teaching community. However, this has something to do with the teachers input in the system. Our higher educational system is not attracting a considerable number of higherly creative adaptive and dedicated teachers. The entire system is attracting an average general competence output of graduates and these can hardly be expected to be creative innovating ingenuous people especially when the nature of their work load seldom gives them any time to reflect, review, evaluate, or experiment the results of their efforts.

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(9) With the given organization and staff no miracles are possible: Looking to the overall organization of the higher educational system of the state one comes to the conclusion that the way <sup>the</sup> system is organized and staffed no miracle can be expected. Looking to this performance record in fact one feels further to emphasize the need to deal with the problem of educational contents posed earlier.

(10) Evaluation of performance of the system indicates that in spite of all considerations of autonomy Government shall have to take initiative: Thus the entire higher educational system of the state is to evaluate itself and undergo a change as far as the basic objectives, courses their contents curriculum syllabus etc. Now the question that arises are (a) How are these changes to be effected, (b) Who are to be effected them and (c) In what form these changes are to be adopted? The need is that cool thought is to be given to all these issues. However, it is prompted out that by taking into consideration the performance of various boards of studies, faculties, other academic bodies teaching professionals and educational managers at higher educated institutions as the guide, one feels that ultimately the representative of the community namely the government shall have to take a lead. It should be clear that it would not be sufficient merely to encourage the "establishment of Subject Associations." As was suggested in some quarters sometime ago the need is that these associations shall have to be given a specific objective and positive programme and it is in this context that the government shall <sup>have to</sup> play a dynamic role.

(11) Broad Conclusions: Conclusions from the above (submitted) analysis are (a) In the operational analysis and evaluation of our higher educational system, attention is to be paid to contents and quality of educational operations, (b) Extreme views are that <sup>1</sup> the quality and contents are obsolete and irrelevant and on the other side there is the statement that "system is upto date in its contents and is relevant to environment. (c) International method of evaluating educational system is on the basis of two standards namely (a) internal and (b) external standards. While internal standards relate to the evaluation of performance through examination results, external standards evaluate the fitness and relevancy of the system, its course contents, curriculum, in relation to the needs of the environment. (d) These standards are not universal. They are to be adopted to the typical conditions and characteristics of the community. (e) Effort is to be done to harmonise both these internal external standards. (g) Observations regarding these standards in relation to our higher educational system are (1) that there are two types of tendencies namely of clinging to old contents and curriculum or that of borrowing blindly contents and curriculum and standards from the developed countries. (h) In this context, attention is to be paid to the fact that the students composition is completely changed and the objective of higher educational system is to be changed from instead of creating and educating person to create educable person. (i) Attention is also to

be paid to the fact that knowledge is growing very rapidly.

(1) Formerly higher educational system was to operate as a "speciality shop meant for the classes", it is to operate now a departmental store for all sorts of customers the masses. The result is (2) now the basic objectives of higher education require a transformation from creating an "educated" person to 'educable'. (j) Analysis of developments of the university and during last 10 years indicate that the needed transformation leading to the development of internal and external efficiency is not likely to be initiated at these centres namely college and university. (k) Existing teaching community of mediocres cannot lead. Hence the conclusion is it is the representatives of the community namely the government which shall have to take a lead in giving objectives and programme schedules to various inter university subject association through whom the process of transformation is to be initiated.

### 3.20 Methods and Technology of Teaching

(1) Challenge cannot be <sup>met</sup> that by merely reconstructing system or pattern of students flows. Need to adopt their new  
technology in Higher Education: Looking to the over all organisation of higher education in the state, one comes to the conclusion that the way the system is organized and staffed no miracle can be expected from the system. One further feels that the need to deal with the problem of higher educational contents and quality as posed by the changing environment cannot be met merely by reconstructing

higher educational system or by merely creating new traffic patterns for students flows or by introducing new branches of learnings and new programmes. There is the equally pressing need of changing and improving 'teachers' and more specifically the methods and technology of teaching. What is needed is that the student must be more effectively guided in the higher educational channel, so that he would have greater promise to himself and better capacity to serve the community. It is this aspect namely the technology of higher education that is proposed to be discussed hereafter. //

(2) Conceptual analysis of Educational Technology:

Theoretically there seems that there are two views about higher educational technology.<sup>1</sup> The Utopian view holds that technology means a machine with a magic power. The view runs that turn on the switch, apply the machine to the student and with a winck of an eye, the student will be infused with knowledge whose quantity and quality will lead to greater marvels. These machines would cost very little for students per capita yet they can do so much on a large scale basis with such a rapidity that there would be a sharp decline in the higher educational costs. As compared to this utopian view, there is the catalysmic one that higher educational technology means a machine but a malign one. Geared to work in a self regulatory way, it completely kills students' initiative, value, judgement, leap of imagination, luminous

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1 SIR ERIC ASHBY Reflections on technology in Education, Joseph Munch Lectures 1966, HAIFA.

questions. It stuffs the student only with facts. There is no dialogue. It denies to the student a special quality of mind which really is to be mainly developed in the higher educational system namely the attitude of mind, style of thinking, depth of appreciation. These can be acquired only by <sup>a</sup> direct and continuous exposure of the student to the teacher.

(3) Narrow and incomplete concepts regarding higher educational technology: These views regarding higher educational technology seem to be narrow and incomplete. Higher educational technology broadly concerns with "different types of methods, materials, equipment and logistic arrangements, employed by educationalist". These range from lecture method or Socratic dialogues to seminars. These include blackboard or desk, text book, student teacher ratio, layout of the class rooms, corridors, the chronological standard system, the academic calendar, college bell that regulates time into activity units, as well as the examination grade that influences the student's future. All these really are the integral part of the system and the process their ultimate object being to induce <sup>and</sup> facilitate learning.<sup>1</sup>

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1 (A) Unwin, D. (Editor) Media and Methods. Instructional technology in higher education gives an excellent treatment particularly articles by Sir Brynmore Jones The Educational Technology, the background and the need and by Derrick Unwin, Educational technology past, present and future. McGraw Hill, London, 1969.

(B) David Layton, University Teaching in transition Oliver Boyd, Edinburg, 1968, Parts I & II.

(C) K.G. Collier, New Dimensions in Higher Education, Longman Greens & Co., London, 1968, Part II, p. 35-115.

(4) Issue regarding relevancy and adequacy of new <sup>media</sup> machines:

From this, it is to be stated that if the dispute over technology of higher education is confined to the question whether or not to use the machine, comprising of new media then it is really a wrongly posed issue. Real question seems to be that whether all ways of doing things, carried over from past till today are sufficient and relevant or otherwise to the higher educational needs or whether additions or subtractions would improve the situation. Essence of the issue is whether is it desirable, necessary, and possible to recast fundamentally the entire higher educational technology, combining the best from the old and the modern and forming an essentially new and integrated teaching and learning system that is relevant to time i.e. needs and a system that yields better results to any given level of effort or given level of inputs.

(5) Educational technology adopted by our higher educational

system is outdated inadequate and irrelevant: Higher educational technology as it operating in our state at present is a product of a historical stress, made up by occasional outbursts of individual ingenuity and of persuasion of a long practice of imitation and sheer habit. An element of sanctity has come to be attached to it. Fantastic developments and revolutions have taken place during last fifty years, in agriculture, industry transportation and communication. Yet it might be because of the long tradition and sanctity attached <sup>that</sup> there is a typical resistance in our world of education to change. It is true that there had been some

addition of new things and some improvement of old, yet these have been mostly in the form of super imposition and fringe improvements. There has not been any fundamental change, neither reshuffling nor reordering of the available higher educational technology <sup>to</sup> to create a new synthesis in the higher educational methods.<sup>1</sup> Triangular disconnection between higher educational technology on one side, the tidal wave of new students on the other i.e. the second side and the shortage of adequately and appropriately qualified teacher on the third side is a deeply disturbing reality.<sup>2</sup> While addressing a conference of educationalists in India on methods of teaching Dr. Malcolm Adiechshish, Deputy General UNESCO observes "Looked at as a business enterprise college presents a Woe begone spectacle. We find in education, in an "Antedeluvian Technology" which would not survive for an instant; in any economic sector. Teaching methods and learning techniques are rusty, cranky and anti-dated. The learning technique remains the same - the rote method - the method and the technique involved in craming and when once an examination menace is passed, of forgetting all these useless impediments. Examination system is not an evaluation of the students personality or of his intellectual equipment or his power of thinking for himself, or of his power of reflection or

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1 Sir Eric Ashby : Reflections on the technology of education, Joseph, Finch Lectures, 1966, HAIFA.

2 J. Beynon : Educational Architect US Educational Change in Educational Costs and Productivity, Paris, UNESCO HEP. Dec. 1967.



reasoning. It is a challenge to resourceful deception and display of superficial ~~Cla~~cleverness<sup>1</sup>.

It is really not very much necessary to go into details. Even if by way of illustrations these ~~different~~ <sup>Some</sup> types of aspects are indicated that would be sufficient. e.g.  
 (a) The research in higher education with special reference to technology, (b) Innovations and attitudes regarding the same and (c) a concrete illustration regarding the architect in buildings in our higher education and point would be clear.

(6) Higher Educational Technology and Educational Research:

Now it requires not much proof to substantiate the statement that in our system educational research is one of the neglected subjects and whatever little educational research is going <sup>it</sup> is mostly in the branch of educational psychology where again, the entire range of research subjects is being restricted to the secondary levels of education. These researches are isolated studies mostly conducted in the library. No study throughout the system could be identified as a collective inter-disciplinary study of higher educational technology, management administrative finance etc. In the progressive countries, substantial money is spent on educational research, <sup>our</sup> flow of funds towards educational research is also very limited.<sup>2</sup>

1 Maccoca Adiseshiah, Education and National Development, UNESCO Chronicle XIII No. 2, Paris, UNESCO, No.V, 1967.

2 Percentage of G.N.P. spend on Educational Research Expenditure, total expenditure: U.S.A. 3.8%, U.K. 2.7% Germany 1.6%, France 1.9%.

Percentage of total expenditure on educational research as representing research performed by Educational Institutes, U.S.A. 11%.

(7) Higher Educational technology and attitudes: While research builds up the actual process of technological change and transformation, it is the attitude of the educational community which really decides whether the probable and desirable technological revolution is going to be accepted by the community or not. Looking to the experience of technological transformation in agriculture one may say that before widely adopting any important innovation there is the need of (a) Creation within the (educational) system, personnel and new institutional means whose prime concern would be to seek improvement and innovations, (b) fostering within the teachers (through teachers training and orientation) of attitudes that would help new and old teachers to become more receptive to innovations, thereby enabling education to engage itself in a vigorous and a continuous process of self renewal and advancement and finally (c) widespread transformation of attitudes of the educator and public, towards, change in education. If one tries to observe and analyse as to what is happening on these fronts in our higher educational world, one gets depressed. So far there seems to have not, been created even small cells either by professional teachers association, principals associations or subject associations or by the department of the government, whose prime concern would be to seek improvement and innovations.

1 Of course there are some formal principal's association (as in Nagpur University area) as well as informal principals association - Poona and Bombay). But the basic objectives of these formal and informal associations seem to be completely different.

No objective effort seems to be being made to foster new attitude of young and old teachers towards innovations and transformation. There seems to have not even felt any necessity to launch a scheme of transformation of the attitude of the public.

(8) Higher Educational Technology and architectural designs in our system: an illustration: It is quite obvious that improvement in the architectural designs cannot bring about any technological transformation, yet. By way of a concrete illustration the case regarding development in architectural designs of our institutional building is to be cited.

Accepted assumption and approach seems to be that "old is gold" and therefore no change or even rethinking regarding the architectural design of the higher educational institutional buildings is necessary. There is no necessity even of thinking any innovations in the architectural concepts.

It is to be made clear here that it is not simply less expensive building that is needed but a building that would be sufficiently flexible so as to permit new ways of teaching and learning to go within, rather than blockade new methods.

It is usually forgotten that firstly we shape the building and subsequently it is the building which shapes us. What is

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<sup>1</sup> Kothari Commission Report discusses this issue generally additionally Leslie Robbins and W. Robert Bokelman - College and university Facility Survey US Department of Health and Education, Washington 1964.

<sup>2</sup> Jones, B. Rork and Leslie F. Robbins, case of campus planning and institutional development, U.S. Deptt of Health and Education, 1962 may be seen.

usually found that the self contained class rooms with still rigid walls - as were then during the "monks period" are still there. Even in new college buildings the approach is to accommodate one teacher - on a table and a chair before a black board a prescribed number of students arranged geometrically at tables facing the teacher, wall space to exhibit few notices still continue. Corridors cost a great deal but are seldom used for a fraction of a time and the same applies to the auditorium. Once the building is built to-fit according to traditional educational technology the same stands firmly for two to three generations - the result is that <sup>ultimately</sup> really no effort undertaken to change the traditional deployment of time and students.

(9) Conclusions: Conclusions are (a) In the internal efficient and effective operations of the higher educational system, technology of higher education has an important part to play (b) Higher educational technology is concerned not so much only with whether or not mechanical devices are to be used but it is mainly concerned with the different types of methods materials and equipment and logistic arrangements employed by the educationalist. (c) The main approach here is to examine constantly whether the methods, materials equipments and building and with them logistic arrangements are sufficiently efficient and relevant to present day needs or not. (d) Our higher educational technology is a product of historical development and the technology seems to be static old, outdated as compared to the operating

technology in other spheres. It represents no signs of synthesis. (e) Technological transformation pre-supposes the existence of "Research Facilities" as well as the awareness and appropriate attitudes of the educationalists. Our higher educational research, our efforts through our professional associations. Subject associations or departmental approaches are quite inadequate and therefore depressing. (f) Even in the case of architectural development of building, where a functional rather than the conventional approach is to be developed the unsatisfactory state of affairs continues.

### 3.21 Quality Control

(a) Traditional methods of Evaluating Educational (performance) output: Traditional Concept regarding quality control in Education: The usual concept and method adopted in the measurement of the quality of the output of educational industry is relating to the percentage of passing, percentage proportion of students getting various grades & etc. Then as per approach developed in the international seminar the external productivity of the product is also to be taken into consideration <sup>which</sup> ~~what~~ is being discussed under cost and efficacy.

(b) Function of Controls: However, in management function of control is mainly concerned with the detection of deviations in the performance commensurate enough with the desired objectives and the implementation of corrective action with the minimum time lag. Here an overall control

of educational system calls for an efficient "feed back process", not so much from various levels of system, but from the society as a whole. The society as the consumer of the product of higher educational industry is to be regularly sounded to ascertain whether the mix of the quality and quantity supplied is in accordance with the desired objectives. However, this is easier said than done. Even the system of appointing commissions followed for the purpose of assessing the public opinion on education results in getting nothing more than the statements of thinkings of prominent citizens with little foundation on tested data.

(3) Objective controls norms setting in higher education:

Higher education needs a system of objective control and this presupposes the establishment of norms or standards against which performance is to be assessed and deviations detected. Thus there is also the need for a simple and a reliable system of measuring the external efficiency.

Closely related to this function of objective control is quality control. In industry and business there is the standard evaluation and the optimization system (EVOP). In higher education there are many points at which multivariate adjustment are to take place (e.g. optimum teacher student ratio II components of curriculum. III Allocation of time amongst them the proportion of practical work to theory etc. IV Range of combination of different skills to be taught are all areas of EVOP.) It is necessary to evaluate the technique final results of these adjustments.

(4) Possibility of Application of Statistical Quality Control Techniques in Higher Education

Statistical quality control is exercised through the application of mathematical statistical and probability techniques. There is the use of sampling method. Accepting sampling procedure helps us in deciding whether a lot of the product is of an acceptable quality or not. Criteria for acceptance are fixed in the form of consumers specifications. On the other hand control charts are used to check up production process. If the process develops any defect, as a result of which items produced are of a doubtful quality it is shown in these charts. Methods similar to statistical quality control techniques are already used in educational evaluations. However, the main feeling regarding this method used in education is still for the most part subjective. It does not take into consideration the influence of psychological, sociological factors on learning or teaching performance of an individual.

(5) Performance control : Market study is a method of calculating a particular firms share in the total sales of a given product. When expressed as a percentage of the whole it expresses the level of acceptability of its product. In higher education, this would be useful information. It would help in determining the level and the type of education which is most acceptable for various forms of employment and also in assessing the relative performance of different institutions producing same kind of graduates. Importance of evolving some measure of quality in relation to consumers satisfaction (i.e. acceptance of the graduates

in the employment structure of the state would be self evident when the objective of fulfilling manpower requirements is accepted as fundamental to development. Another aspect of the control function is the "Performance or Efficiency Control". Its field is two-fold - (a) study of efficiency of system including organization procedures and methods and (b) Efficiency of employees. Here the observation is that all our efforts are seriously hampered by traditional images and the values attached to both institutions and functionaries as well as the absence of a suitable technique to functional efficiency of the system. Here application of organization and methods or system and procedures in application is really overdue. It is felt that every process in higher education is to be subjected to be comprehensive "work study". "Method study" would enable us to develop and apply easier methods and more effective methods and to reduce costs. It would be also useful to study optimum work loads and bench mark jobs. (Selecting jobs which are carefully evaluated. They provide a basis for structuring other jobs.) There is even the need of finding out what is the "break even performance" is for each job so that maximum efficiency be ensured.

(6) In short while the system of quality control needs an application in our higher educational system this is not possible till determined objective collective efforts are undertaken. This has not happened so far in our state.



### 3.22 Research

(a) Research is necessary to improve knowledge and system performance.

(b) Improvement of higher educational yield through increasing external productivity is very closely connected, with the degree of adaptation of the higher educational system (organization, contents, structure of courses - curriculum teaching methods and operations) to the life needs and aspiration of the community. In order to understand the present degree of adaptation of the system, as well as the future desired state or degree of adaptation, what is necessary is (a) collection of data, followed by diagnostic studies in educational, economic, sociological, cultural, technological and scientific and philosophical aspects of life, needs and aspiration of the community. This entire process of drawing up plans, collection of data for diagnostic purposes and forecasting belong to research. Mainly there are three different types of researches (a) fundamental (b) applied and (c) opinion or attitude, research. While all the three types contribute to the modernisation of administration, teaching and learning process, in higher education our main activity is to be applied research, which is to be (i) fact finding, collection of data, (ii) diagnostic studies (iii) Adaptation studies forecasts and developmental studies.

(c) Educational research is one of the seriously neglected aspect in our system. Neither the need is felt nor the

significance understood. Compared with the expenditure on other social science researches even the total amount of expenditure on higher educational research is negligible. Even up till now at no time the need for evaluation was felt. Whatever sporadic and isolated education research is undertaken, it is mostly concerning educational psychology. Aspects regarding planning, administration organization finance, institutional growth and development are completely neglected. All research is mostly isolated library work. This has not much to do with the function and actions.

(d) Obvious result is that normally no efforts are undertaken to know the system as well as to increase its internal and external efficiency.

### 3.23 Cost and Efficiency of the System:

(1) Issue regarding internal efficiency: Earlier discussions especially on teachers and financial inputs and fitness of output indicated the need for our higher educational system to improve in both these internal efficiency and these external productivity i.e. improve to get from available resources better and more useful results. It is this aspect which is the subject matter of analysis hereafter.

(2) Internal efficiency is a relationship between inputs and outputs: Problem of measurement and Cost as an indicator of efficiency: Internal efficiency of the higher educational system can be defined as "the relationship of inputs to outputs". Efficiency increases when any introduced

change causes the ratio between input and output to improve. However, the difficulty here is that of precisely measuring the output of the entire higher educational system. It is easier to measure the efficiency of a particular sub-system whose objectives are much more limited, well defined and amenable to measurement and evaluation. For example in learning mathematics, if some new method of improved learning is introduced which results in more learning without proportional increase in the cost, then the such system has been improved. It is obvious that in the analysis of the above mentioned type cost becomes an important measure - an indicator of efficiency.

(3) Concept of external efficiency - the benefits:

External benefit or result of the higher educational system can be defined as an ultimate benefit that occurs from educational investment or output to the student and the society. For arriving at the net benefit-concept theoretically the benefits that accrue from earlier education are to be subtracted. As compared to the measurement of learning output which the student carries away from the system which he leaves after completion of education, it is much more difficult to measure these benefits; yet the concept of external productivity is a useful concept specially in getting appropriate bearings and direction in the process of improvement of the system. Any change in the course contents or curriculum in which there is a substitution of something relevant in place of something which is irrelevant to the

life of the student or the community, or any effort to incorporate changes resulting making the course contents up-to-date, instead of making it obsolete, has a high probability of raising external standard of the system.

(4) Inter-dependency in internal external efficiency:

There is an essential inter-dependency in internal and external efficiency. While an action taken to improve external efficiency, this may improve external efficiency as well.

(5) Productivity Concept of efficiency and productivity of teacher with better tools: There is another meaning to the productivity concept, which applies to the way in which a particular type of "input" of the system is used, such as teacher, building etc. This analytical approach is similar to the economists' approach, involved in the analysis of factor productivity (e.g. productivity of labour capital etc.) of different factors of production. In this way the productivity of a particular educational output may be defined as total output of the system relative to the amount of a particular factor used. Productivity of various factors combined obviously would determine the efficiency of the system.

Certain examples may clear up this abstraction in this theoretical analysis. For example teachers productivity in the system is likely to improve, in case the members of the staff are given better tools to move with, such as

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1 For simplification in conveying essential concepts of efficiency and productivity to non-economists, question of marginal productivity is not brought in the analysis.

more and better text books and other reading material, clerical and housing facilities audio visual facilities, instructional radio television programmes, then the teachers would be able to teach more students and the students would be able to learn more in the given hours or periods of academic work than under previous combinations. Assumption here is that the teacher may not work hard, but he may enjoy his work more. With better tools his professional capacities would be fully utilized, larger results would be achieved and there would be a greater productivity of the teacher. It is in this very way that the productivity of workers and this professional men has increased permitting them to increase their output per hour and to earn better salaries. Factory worker uses new tools and new methods divides his work, entrusts it to his subordinate and thereby general productivity is raised. Doctor who has a car can see many more patients.

(6) Wide scope for increasing productivity through Modernization: However, such a modernization process has not been gone through our higher educational system and there should not be any two opinions on the issue that there is abundant scope for proving through a process of modernisation efficiency and productivity of our system.

(7) Obstacles in the process of modernisation means Tools Operational routes Attitudes Incentives: Important difficulties in the process of such a modernization should also be well appreciated. With reference to management modernization in higher education, the system lacks means

and modern analytical tools required for identifying areas of potential improvement. Improvements result in changing familiar routes and adopting new techniques new divisions of labour. All modernisation efforts affect almost all participants in the system. Many therefore look towards all these improvement, and innovations as "devices of extracting more and more work from them for the same pay" or these are taken to be "devices making their jobs obsolete". There is no real effective incentive either for change or improvement. In business sector where there is a direct sale of product in the market, Efficiency improvements are immediately identified by checking earnings. There is a strong incentive to introduce changes either in the process or in the product if such a change promises a better "output input ratio". No such direct incentive exists in the educational sector. There is neither a yardstick by which immediately and obviously improvements in efficiency can be measured, nor there is any built-in incentive system to change. Experience indicates that indirect incentives conceived to improve the efficiency and productivity of the system are outweighed by disincentives of sheer inertia e.g. Merit rating system in the teachers pay and promotions aimed at providing individual incentives was opposed tooth and nail by all University Teachers' Association (except by Poona University Teachers' Association) on the flimsy and obviously unreal grounds that there is no objective way of judging teachers merit and further that the system is undemocratic and is likely to be

abused by the administration.<sup>1</sup> (Merit rating system in the teachers pay and promotion that was aimed at providing individual incentives was opposed all over except in Yugoslavia. All over the world teachers organizations have strongly opposed merit rating. Arguments, mostly are that there is no objective way of judging teachers merit). Whatever might be good or bad points in merit rating based pay and promotion system, the fact still remains that in our higher educational system no system of incentives is even thought of. It is believed that teachers organizations in the state would indeed greatly serve the profession and the students if they make an effort to search for ways to create incentives to improve educational efficiency yet protect their legitimate interests without bifercating from the main aims and ideals of the teaching profession. ||  
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what?

(8) Background to rising costs and basic facts: It is against this background of our higher educational crisis that the fact of rising costs is to be studied.

(a) Higher Education, labour intensive industry with and absence of bright prospects for rising productivity:  
Higher education is a labour intensive industry using large amount of high level high cost man power. This industry cannot compete with labour intensive industry whose efficiency and productivity can steadily rise through technological progress. Obviously in education the main way to improve its efficiency is through increasing the productivity of human talent it employs.

(b) Competition in man-power market : If higher education is to maintain its competitive position in the man power market, educational salaries must keep rising - even though higher educational productivity may not be rising.<sup>1</sup> Where due to budgetary positions, education fails to maintain such a competitive position, it is bound to receive poor quality teachers instead of good quality teachers. Educational version of Gresham's law operates, ultimately drawing the entire educational system into a mediocracy. There are other factors as well.

(a) While there is the need to strengthen teachers' training and spend progressively more and more over it, there is the problem of leakage of trained teachers from the system. Both these facts impose high capital costs for each teacher who enters and stays in the teaching profession.

(b) Then in the teachers' salary structure there is the fact about the extreme spread between lower and upper salary scale which is based on formal qualifications and vertical echelon of the system. Whenever a poorly qualified staff is upgraded or replaced by better qualified staff the result is the large 'increases in per student unit costs.

(c) Costs tend to rise : These costs go on increasing with the reduction of class sizes and increase in the employees on scientific and technical side.

(d) Maintenance of new building rising costs : New buildings and their maintenance commit the system to more sustained recurring future costs. It is estimated that the

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<sup>1</sup> Salaries form 70 to 80% of the direct recurring expenditure. Refer table.



cost of running a new building each year itself are 1/6th of the original costs. Thus the new capital investment in education - free or paid, puts a mortgage on the systems' future incomes. This really requires an analysis particularly wherein developing regions where new buildings are emerging fast.

(e) High drop out and repeaters rates and costs: There is a heavy impact of drop outs and repeaters. The average cost per student arrived at by dividing total enrolment into total costs grossly under<sup>states</sup> the actual cost of training out one complete student.

(9) A Major Campaign is needed for raising efficiency and the productivity of the system: All evidence makes it clear that managers in higher education are now required to mount a major campaign aimed at raising higher educational efficiency and productivity.

(10) Two Courses Open Planning and banking upon experience: Mainly two types of approaches that are open (a) To plan on the basis of system analysis and several other basic principles and to (b) Explore and support the wisdom that emerges from experience.

(11) Planning and improving the efficiency of the system - some principles: While it is necessary to develop further the techniques of system analysis to further improvement and sophistication and apply this technique as an aid to develop strategy for action, following principles of economic and educational psychology are to be applied as tools for reshaping and improving the system.

(a) Principle of individual differentiation: Principle of individual differences indicates that the input of student varies enormously in individual aptitudes, <sup>in</sup> ways of learning as well as <sup>in</sup> rates of learning. Each learns best when means and conditions of learning are flexibly adopted to his peculiar pace and style. This consideration is particularly important when, in the students population, we are getting a heterogeneous variety of first generation learning. A lot of wastage ~~def~~ in the form of drop out, and stagnation, resulting into the actual lengthening of process period as well as large scale third grade performance can be reduced substantially, if this point is well appreciated.

(b) Principle of self instruction: Principle of self instruction indicates that every student, whatever may be his aptitude - has an interest, <sup>and</sup> curiously a great deal of capacity, for learning provided he is properly motivated and guided and <sup>is</sup> given recourse or access to the source of knowledge and learning in a digestive and attractive manner.

(c) Principle of regarding combination of energy talent and tools: Principle of combining human energy talent and tools. Principle indicates that work accomplishment can greatly be increased by placing better and more advanced technology and better and more tools at the disposal of the teacher as well as by teaching him as to how to use these. A continuous programmes of "orientation of teachers" as well as conducting "in services and refresher courses" would go a long way to put this principle in action.

(d) Principle of economics of scales: Principle of economics of scale indicates that whatever expensive educational equipment and facilities are used the cost per students likely to decline without any loss of quality and effectiveness, as the things are done on a large scale. This would occur till a point when diseconomies start. Whatever is probably expensive on a small scale, may prove to be economically feasible on a large scale. Doing things on a large scale may be the "low cost approach."<sup>1</sup>

(e) Principle of division of labour/specialization: Principle of division of labour indicates that if persons with different kinds and degrees of specialization break a complex job into component parts and each person handles that job-part which suits (to) his competence, each would perform it with highest productivity and the total result would be a high level of productivity of the entire system.

(f) Principle of critical mass and concentration: Principle of critical mass and concentration suggests that it is wasteful to embark on certain objectives or programmes unless the activities in the programme <sup>are</sup> going to be <sup>below</sup> beyond some minimum point of intensity and continuity - short of such<sup>a</sup> things either effort will not be worthwhile or effects may not be in a position to pay off for themselves.

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1 Appley, A Management in Action, Bombay Times of India Press, 1969. Breach, E.F.L. Management its nature significance, London, ... man, 1967 etc. may be seen. Many more practically useful principles have been evolved.

(g) Principles of optimisation: Principle of optimising indicates that whenever different components are involved in a production system, it is not possible for every component to be used to its theoretical maximum productivity. Optimum results will be achieved when components are combined in such a way and in such a proportion, so as to use the scarcest and more expensive component, more intensively, Optimisation of higher educational efforts as well of higher educational system or sub-system involves a process that is designed to achieve the best combination of good learning results on one side, and tolerable economic costs on the other. Whereas the optimum arrangement from purely economic point of view, rarely coincides with the optimum arrangement from educational point of view, most satisfactory compromise is to be found between the two.

Apparently these principles may appear to be inert and abstract. However, they can be brought to life and given a practical meaning provided attention is paid to the second approach mainly based on experience.

(12) Objective analysis experiences and improvement in efficiency: Objective attempts towards improvement of efficiency and effectiveness of the higher educational system have resulted in the following experiences:

(a) Scope for the reduction of construction costs:

There is a tremendous scope for reduction in the construction costs through the application of modern planning engineering and production methods.<sup>1</sup>

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<sup>1</sup> Work of UNESCO School Construction Centre in Developing Regions.

(b) Intensive utilization of space: More intensive utilization and re-deployment of available space such as an <sup>Programmes</sup> year round academic schedule adopted by some of the U.S. Universities or even adoption of double shift results<sup>ing</sup> in a substantial economy. Although this may not be taken educationally as an ideal or desirable solution, yet it can certainly be adopted as an interim expediency as it has been adopted heavily in USSR.

(c) Communication system: Communication of excellent teaching and new and more upto date subject matter by radio and television would mean an educational service for those who were not already served, and a service at a much more lower cost than conventional means.

(d) Lengthening of effective work period: Lengthening of college hours to provide more time for teaching and learning.

(e) Sharing of facilities <sup>and</sup> personnel costs: Sharing expensive educational facilities and specialized personnel by the neighbouring institutions e.g. laboratory athletic facilities auditorium - the courses of studies, if this is possible without incurring heavy offsetting costs in transportation. Sharing specialized high cost - college-programme also can be experimented.

(f) Increased use of Aids: Use of teaching aids in the class room.

(g) Programme learning, self instructional programmes: Greater emphasis on well planned self instruction - programmes Learning, teaching material, teaching machines languages

laboratory, good books all enable students to move at their own space and teachers to serve more students.

(h) Increased provision for self learning: Increased expenditure on text books and other learning aids so as to help students to learn more on their own and thus to raise teachers productivity thereby protecting students from poorly qualified staff.

(i) Consolidation of undersized institutions: Consolidation of undersized higher educational institutions into large more efficient and better qualified unit.

(j) Nationalization: Nationalization of location and size of college to serve a scatter student population best and at the least cost.<sup>1</sup>

Thus there are many areas of action for achieving improvement in higher educational efficiency. There is no one single panacea. The task is to be attacked from many angles and at many points and with enormous firm determination.

(12) Importance of strategy: It may appear that in these suggestions there is nothing new and that there is no departure from conventional practices. However, what needs to be emphasized is that what is basically needed is a strategy that breaks the shackles of conventionalism and dares to contemplate innovations.

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<sup>1</sup> Neatherland research to apply locational theory to education as well as Higher Education Development in Latin America, Paris, UNESCO, 1960, Pt. 2, page 8.

### 3.24 Output

#### (1) Difficulties in the measurement and judgement of output:

Full and precise judgement on output of the higher educational system is next to impossible. It is practically impossible to measure with the precision, the full and eventual output of the higher educational system. Approach to measurement can be developed when we imagine a college whose output consists of a single student. The day the student graduates he represents a multiplicity of output represented in the facts and the concepts he has learnt, the style of thinking which he has acquired, changes that might have occurred in his outlook, values, personal ambition, personal conduct. Here again still further difficulty in measurement arises, when one attempts to study indirect relationship-effects, of his graduation on his future life, his family, society etc. It is obvious that these matters are complicated. They do not permit to any precise conceptual formulation and measurement. These are infinitely more complicated when the output, that is to be studied and measured "is a multiple stream of individuals flowing through various channels and for different length of time."

Therefore the situation is that appropriate judgements are to be formed and based on imperfect indication<sup>ors</sup> of output through whom the efficiency of <sup>appropriateness</sup> preparation and productivity of the system is to be judged.

(2) Number of students passing out of the system an indicator of finished product: The easy measure of output is the

number of students emerging out of the higher educational system.<sup>1</sup> However, certain aspects require our attention. Some students exit prematurely before completing a standard cycle (these may be drop-out or failures depending upon whether they leave voluntarily or because they are rejected by the examination or the marking mechanism). Others struggle through and complete the cycle and either enter into the real practical world or enter into next advanced educational cycle. It is important to distinguish between finished product and unfinished product. Although non-finished products cannot be termed as a dead loss as they do carry something useful in proportion to the length for which they stayed in the system, yet the system has not given the degree or diploma - all that was <sup>expected</sup> ~~expected~~ from the system. In our society higher educational attainments are symbolised by certificate or degree. It is only one who gets the degree or certificate that has promises to get preference in preferred categories of employment and social status and not one who could not complete his higher education till getting the degree. There has been a marked rise in the finished product output throughout the state and this rise in the output of 'finished' product from our higher educational system has started having its marked impact on the educational profiles of labour force resulting into the rise of considerable productivity. However, it cannot be ignored that during the

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1 Table regarding results of Universities may be seen.



period under review our higher educational system has much larger output of "unfinished product". Whether "wide open system" or highly selective system of students input, The large number of unfinished product has different psychic sociological and economic impacts. Selective system worries less about those who leave prematurely and it stamps large number of failures even before they enter the system, struggle and dropout, keeping the outthrown crippled throughout subsequent period. The open system has far fewer failure than drop outs. Here a conflict between social goals and higher educational realities, emerge out. While the ultimate objective is to have open system that provides opportunity to the youngster to develop to his full potential such a system obviously cannot be built over night and a long term strategy is to be worked out for which obviously the youth and the politician has no patience to wait. The result is that we seem to have adopted a "non-committal" "Laissez-faire" approach, (usually termed as liberal approach) which results in overcrowding of educational institutions, classrooms laboratory and other facilities and ultimately increasing the proportion of non-finishers and also progressively increasing poor quality education. Although complete and full data on drop outs and failures has not been worked out - (in fact they are to be worked out), Yet broadly it may be said that the situation <sup>is</sup> ~~merely~~ <sup>not only</sup> ~~resulting~~ <sup>into</sup> ~~is not a~~ loss and a wastage of higher educational investment, it is also resulting in creating a generation of graduates who represent a wide gap between their certified ability and worth, and the

real ability and worth - in fact creating thereby "a wasted generation". This brings us to another consideration.

(3) Size of graduates turned out through important, is got sufficient or adequate measure : Issue regarding adjustment of product to man power needs

Figures of graduates drop outs failures etc.<sup>1</sup> are no doubt important indicators of the output of the higher educational system yet certainly they do not provide sufficient basis of evaluation of our performance. Next question that arises is as to how does the graduate output of the higher educational system fits in the man power needs of our developing state. How are we to examine the fitness of our higher educational system's output to the man power requirements in the State of Maharashtra?

Starting assumption here is that higher educational expenditure is an investment in the process of development of human capital and the system is therefore expected to produce a kind and amount of human resource required for economic growth and further that the economy will make the best use of it. Here the question of producing a "right" or "a wrong mix" of man power arises. It cannot be ignored that it is quite possible that the higher educational system may produce right mix of man power or a wrong mix. Then another situation is that inspite of the fact that a right mix is

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<sup>1</sup> This is a separate issue for study. Although some work regarding stagnation and wastage is done by Dr. A.R.Kamat the work needs a revision and a comprehensive coverage. Hence the need of a detailed study into the problem.

produced, yet the society or the community might not use it. All these probable situations do create problems, doubts, and difficulties in the process of measuring the productivity and efficiency of the higher educational investment.

(4) Mal-adjustment in graduate product - output and man power needs in our state: In fact this is exactly the thing which is happening in our state. (a) Our higher educational system is falling short of turning out the right number and right combination of man power, really needed for optimum development. (b) To an equal degree, our employment structure and incentive system are poorly geared to make best use of the educated man power and hence to serve real needs of development. It is admitted that the measurement techniques and tools are inexact and inadequate. Man power surveys, and man power requirement projections have their own serious limitations and that there are a number of other aspects associated with uncertainties. It is also admitted that diagnostic studies of man power surveys indicate what the higher educational system is doing wrong rather than what it is doing right. Yet it is possible to find out some practical indicators of disparity. It is also true that a complete correspondence between (1) output of higher educational system and (2) immediate and future needs high grade man power needs of the economy is conceptual and cannot be a reality. Obviously the correspondence need not be and cannot be perfect. It is enough to identify major aspects in which, match between the higher educational system and the economy is very much poor and a likely to be still more so

in future. Assumption here that such an identification is to serve as a practical basis of improving the system so that higher educational system of our state enhances its future contribution to the all round development of our State.

Even apparent studies indicate both the current and prospective large discrepancies in the pattern of our higher educational output and the pattern of man power, needed for economic growth. (a) Abundance of Arts and Commerce graduates: On the long side a relative abundance of "Arts and now Commerce graduates" is revealed. (b) Shortage of middle level technicians: On the short side there is both, in the absolute and relative terms the current and prospective shortage of middle level technicians of various types - relative to the output of top ranking technicians (e.g. engineers, management men etc. medical man etc.) (c) Shortage of specialized man power in health, agriculture etc.: There is the shortage of specialized man power in health, agriculture and in areas like mathematics and science - based fields. All this man power is immediately needed for rapid development.<sup>1</sup> It should be clear that the issue here is not whether graduates of liberal Arts or Commerce are needed or not and <sup>whether</sup> they are important <sup>of</sup> they are not. The issue is about the balance between these fields and other fields.<sup>2</sup> It is

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1 Education (Kothari) Commission. p. 2

2 G. Hunter: High Level man power for development. Higher Education and Development in South East Asia, III, Pt. 1.

therefore not suggested that there should be a too far swing in the other direction.<sup>1</sup> (d) Qualitative mal-adjustments:

There is enough evidence available to indicate that these discrepancies are not merely statistical they are even qualitative. (e) Imbalance between Natural Science, Social Science, Physical Science Graduates: Then there is no

better balance between the students output between engineering natural science and humanities law etc. (Table

(f) Imbalance between sub-professionals and full-professionals:

Another marked imbalance is between the output of sub-professionals and full-professionals in the associated fields.<sup>2</sup>

Although proper relationship might differ from region to region and district to district, yet there is something like a proportion between the two and it is obvious that if a trained professional is to be productive then he must be backed by sufficient number of para professionals and technicians who can perform appropriate supporting function.

(g) Too much focus on urban needs and complete neglect of rural needs: This is due to the usual mistake that the entire focus is exclusively on the high level, modern and urban sector of man power. In doing so the bulk of the labour force is ignored.<sup>3</sup> 80% to 90% of our community lives and work

1 G. Skorov, The Absorbing capacity of the economy in man power aspect of educational planning problems for future, Paris, UNESCO II EP, 1968.

2 R. Poignant.

3 II EP. Quantitative aspects in Educational Planning, UNESCO, 1968.

in the rural agricultural sector and not the glamorous industrial, urban sectors, where development process is to be accelerated. It is in the rural area that the higher education ultimately, in the development efforts, is to make its vital contribution.<sup>1a</sup> The problem is how much our higher educational system is making its needed contribution in bringing about rural and agricultural "take off" in the development process. Unfortunately our higher educational system is almost exclusively oriented towards filling city jobs in the modern sector. However, our modern urban sector absorbs a very small fraction of the total labour force and even if there is <sup>the</sup> ~~to be~~ needed development of middle sector which can at the best provide for 5%, expecting that 4/5 of the labour force including the newly educated would be absorbed, is <sup>1</sup> really expecting too much. Thus our higher educational system and its basic orientation seems to be grossly out of line with the present needs of development of our State and future needs of the students. (h) Needs regarding the creation of modern sector in rural area neglected. Needs regarding technological, social and economic transformation neglected. Integration of the system with socio-economic transformation development process: Through imparting knowledge and skill of the modern world, through its process of established colleges in the remote towns and rural areas, our

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1 F. Harbinson, Critical Man Power Problem, Education World Affairs - N.Y. 1967, May.

corresponding overhaul of attitudes and status symbols on the part of students their families, teachers employees administrators and general public takes place. It is the higher educational system which is to do efforts in these directions. However, there appears to be not even visualisation<sup>s</sup> of these issues and objective not to talk of well planned efforts in this respect in our state.

(1) Paradox of scarcity and abundance : Thus there is the typical mal-adjustment problem. While on one side there is the shortage of specific human skills, so much so that the development efforts are obstructed, on the other hand there is the super abundance of graduates and certain other areas and sectors of higher education.

(5) Responsibility of the higher educational system in finding out solution : It should be clear that it is not merely the economist or the politician but even the educationalist who is concerned with this problem. Higher education is primarily looked as an investment for getting good jobs after the 4 or 6 years study. If finished product fails to get a job, there is the frustration and bitterness. Most of the individuals come to higher education for preventing unemployment and if the higher educational system fails him in this respect the system becomes a target of hostility. The Ministry of Finance is also to give a thought to the situation in which higher educational investment is likely to turn out merely disgranted job seekers.

higher educational system is expected to create "a modern sector in rural area". Here the process needed is that of instead of preparing the <sup>yuvaj</sup> students to go to the urban modern area, <sup>is</sup> to prepare them to bring out the modern sector to their own rural area. This is necessary for correcting the imbalance that exists between our higher educational system and the needs of environment. Here again the issue is not merely that of the suitability of subjects taught but that <sup>also of</sup> ~~of~~ else how are they taught. The issue is as to what attitudes and styles of thinking are installed and kind of perception of the situation is conveyed? Methods of thinking and enquiry of the 18th century can really not do now. <sup>Have the</sup> ~~of~~ Critical observation is that while structural reforms are announced nothing is attained - as the grip of the past is not loosened from administrative and management; forms and styles pedagogic aims, attitudes, <sup>1</sup> from curriculum teaching methods and from the very spirit <sup>1</sup> is not loosened. It must be stated that fitting higher educational system to formal skills-needs is comparatively easy <sup>2</sup> but fitting the system to the full needs of development of the Maharashtra State is much difficult. Even assuming that structure and curriculum are completely changed or overhauled to make a perfect fit in limited manpower requirement terms, this would not be adequate, unless

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1 Georg Skorov - Absorbing aspects of the Economy in manpower aspect of Educational Planning "Problems for future", Paris, UNESCO, II RP. 1968.

2 Italian University Under Fire, Times, London, 18th July 1967.



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(6) Higher educational system and growing unemployment:

It must be clear that higher education and its expansion does not create the problems of unemployment. It merely makes the problem visible and vocal. Hidden unemployment and under employment already exist and higher education merely contributes to the "noise level" and not quantitative levels. Problem, however, is accentuated - because of facts that (a) especially in its initial stages modernization tends to generate more unemployment (b) At the time when the community is endeavouring on the path of growth and development, it is seized in a whirlpool of rapid economic growth and because labour force grows rapidly the employment problem becomes worse. It is because of this situation that many who do not get jobs, come to higher education (c) Due to historical reasons the employment structure of educated man-power and the labour market and the resultant deployment of educated man power are all at odds with the needs of optimum economic growth. (d) Inappropriate wage and salary structure draw scarce man power in wrong direction. (e) There is the traditional - conventional rigid relationship between the type of the job and the official qualification for the same. (f) There is the traditional supervisory and caretaker concept of government that gives over importance to civil service establishment as compared to activist concept. The result that more is paid for administration as compared to what is paid for "doing" a thing.

(7) Existing situation not the result of the failure of higher educational system alone: Many types of reasons are cited out for the apparent paradox. It is said that the higher educational system is growing very much rapidly and growing in wrong directions.<sup>1</sup> Thus it is also sometimes argued that this is not merely the fault of the higher educational system but this is mainly due to the defects in the economic development policies and plans. While one may go on disputing on the relative failure of development plans, this does not relieve the higher educational system of its responsibility of integrating itself even with the imperfectly functioning economy or the educational system or the economic policies as well as imperfect system of administration of development plans. One is therefore to concentrate more on (a) removing the paradox and (b) ensuring that no such paradoxical situation develops further in future.

(8) Approaches in solution findings: Although obviously there are no general solutions, yet an approach may be suggested. (a) Reshaping students choice. Career preferences and motivation and altering the direction of flows of students: The necessity to reshape students choices. Students are given a free choice to select their own educational programme

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<sup>1</sup> Education Commission estimates matriculates and intermediate job seekers of 217000 and graduates 63%. Commission estimates there at 1 million.

Ref. Tables at the end Nos. Unemployment, under-employment and full employment. P. Sitapati, Commerce Pamphlet No. 51, March 1972.

and in such a choice he is strongly influenced by what according to him is going to be of an advantage, economically and socially beneficial in future. Usually estimates future be on the basis of information that is available to him through gossips prejudices and informed advice. He develops a scale of job preferences and also assesses the chances of getting jobs. In all these matters in a state where the number of first generation learners is increasing fast, it is the parents and their images that influence the choice.<sup>1</sup> Many a times there is an absence of any rational motive. Higher education is taken to be an escape from life. Because there is nothing else to be done therefore higher education. Existing choice patterns for whatever reasons, are that humanists subjects are popularly preferred to others. Students are shy to select subjects like mathematics etc. This choice is governed by a multiplicity of factors including (1) the natural aptitude of the student, (2) the choice at the secondary level of education, (3) the competence of teacher etc. The trouble is that there being no organic linkage between the attitude aptitude choice and the economic needs and that is the reason why there is a difficulty in channeling a high proportion to science and technical subjects.

(b) Transformation in attitude : In addition to the above said aspect, of the contribution of higher education to economic growth, there is another one. It is an observed situation that normally higher education takes away in excessive number people from 'handling the soil'. They get themselves deposited against the desk. This being the choice and

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<sup>1</sup> Margaret Corwack. "She who rides the peacock". Ch.

the destiny, higher education cannot really promote economic development. Government offices are loaded with specialists. They are very much needed also. But the trouble is that while man power studies are sounding warnings regarding the shortages of specialised categories, all specialists in the government offices are preoccupied with administration work.<sup>1</sup>

It is within ~~these~~<sup>this</sup> frame work and within these situations that the higher education system is to operate. In fact if the system is really to contribute something externally, then it is very much necessary that attitudes and choices are to be very much altered. It is indeed an enormous task to <sup>instill</sup> ~~instal~~ (this really is to be done at the school level) in the students, new set of attitudes, career preferences, motivation as would have an organic relationship with the life and needs of the community and would promote social and economic development. After all students are not born with any kind of preferences regarding the kind of education or employment. It is an unconscious impression

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1 A dramatic picture is presented in a report in which it is mentioned that out of 2000 agricultural graduates 90% are in the public sector and while agriculture mainly is in private sector. Hardly 10% of agricultural graduates are engaged in farm management and less than 3% in the dairy industry where knowledge can be directly applied. UNESCO Research Centre on social and economic development in South East Asia - Sociological consideration in Educational Planning in Economic Development, New Delhi, Mimeographed.

of traditional prejudices that lead them to make irrational educational and employment choices. There are possibilities that the moment students are made to realize that the society is changing its values, old pattern of incentives, prestiges and rewards, suitably to the interest of the economic development, then alone the change will occur. However, young people cannot be expected to follow preferences presented abstractly by planners or the advices of idealistic teachers. Preferences of market place are bound to be more effective. )

(c) Support of society, its spokesmen and the shift in economic reward and incentive system: During transition it is difficult for the higher educational system to shift and change students flows towards essential fields in the development process. What is needed is the support of the society and its spokesmen in the government, actively supporting such a shift with social and economic incentives. On this matter the college and the higher educational system cannot go far ahead of public attitude. The higher educational system including students cannot be expected to do what the society and the government with its incentives and prestige scales is not prepared to do, in the complimentation of their proclaimed goals. At the most the higher educational system can be asked to refrain reenforcing anti-development attitudes. In this respect, in an effort to accelerate the pace of social and economic change it can also try to keep one step ahead of the society. But under no circumstances higher educational system can undertake the "whole job" of reforming society or the community in its attitude, reward

structure. After all the higher educational system of the state is also the creation of the society. Still within its own limits higher educational system is also its own creation and it can certainly have its own expression and predictions. This becomes clear when one looks to <sup>the</sup> be internal affairs and working of the system.

### 3.25 Concluding observations regarding system analysis

Having examined the economic aspects and characteristic features of the higher educational industry the system incorporating the inputs, process and the outputs, our perspective regarding existing structure and establishment now becomes clear and objective. It is now felt necessary to understand challenges that are before our higher educational system the achievements and failures recorded during the last decade of revolutionary changes in higher educational system. Finally an attempt is to be made to present an analysis of strategy that is to be adopted in putting things right and squarely meeting the challenge.

## 4. Main Challenges

4.1 Assumptions: Before presenting main issues, it is convenient to start with an enumeration of certain assumptions that are basic to the main issue.

4.2 The significance of higher education: The first assumption is that higher education is the most important single

factor in achieving rapid economic development, technological progress and in creating a social order, that is founded on values of freedom, social justice and equality of opportunity.<sup>1</sup> Higher education is the "focal point of all economic development" - it is the "foundation of progress in almost every field including agriculture, industry and even things spiritual".<sup>2</sup>

4.3 Main challenge: Creating right type of men; increasing and improving quality and character of human capital

Arising out of the above mentioned assumption, second assumption, is, that in the country faced with the problem of economic and social reconstruction, our main task is to produce first class technicians, men of science, and leaders in manifold complex fields of corporate human activities, as well as good men and women. The underlying assumption here is, that there is no other way to preserve and enhance all that is good in our culture and civilization, except through the improvement of quality and character of human material and this is the task of higher education. The country is faced with the problem of fighting poverty, unemployment, providing people with food, housing, clothing, education and reasonable comforts for human living. These are all important fronts and for answering challenges on these fronts, first

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1 Education (Kothari) Commission.

2 Hyden Report: Higher educational development in S.E. Asia.



grade technicians are to be created, having the requisite know-how of the process and skills and it is certainly quite important to produce first class scientists in social and physical science and the technicians. However, it must not be lost sight of, that our task is also to train good men and women. Our main assumption here is that an engineer, scientist or a doctor, who can operate his machine, or apparatus and conduct his experiment successfully and efficiently, but who is unable to understand, sympathize and identify with his brother men, who is not responsive to human emotions and ideas, such a person is really a poor human being and therefore a poor technician. The challenge before us therefore is not merely to create first grade technicians and experts, but also to create in them creative citizens, well integrated with human and social order, men desirous to share with the common weals woes burdens and activity, willingly and not selfishly. It is also our business in higher education, to train persons, who are able to think reasonably for themselves and able to understand the outstanding problems of the contemporary world and as citizens, to express their opinions and give votes (an essential pre-condition in a developing democracy). Such persons should neither be indisciplined, nor ease loving, self-centered parasites, and finally such a person <sup>should</sup> have faith in the culture cultivation of social sensitivity of charity

and compassion towards the under privileged sections of the community. Normally such a person endeavours to give institutional forms to these feelings (an obligation emerging out of the concept of social justice in our collective life.) To conclude the challenge before us is that of creating, within the shortest possible time and, with the least possible input in terms of costs, material financial and human resources, practical efficiency, high technical skill, appreciation of dignity of work, clarity of mind, community of interest, purpose and loyalties with fellow citizen and compassion in emerging generations. Our main assumption therefore is that our main task is that of increasing and "improving the quality and character of human capital"<sup>1</sup>. It is on the background of the above stated challenge that the progress of higher education during last revolutionary decade is to be examined.

## 5. Progress of higher education during last decade in Maharashtra

### 5.1 A decade of revolutionary developments:

It is an observed fact, that the decade that has just passed away, is a decade of world wide revolutionary developments, specially in the field of higher education. There is the extra ordinarily rapid advancement of science and technology. There is the demographic explosion of population in the areas of higher education. Then emerging out of the declaration of human rights, including the right to educate, there

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1 Shultz.

is the explosion of rising expectations that has fired masses everywhere. There is also the quickening of social mobility, making a headway against age old barriers. It is in the context of this world wide development, that the progress of higher education in the State of Maharashtra is to be studied.

## 5.2 Growth and Development - A Broad outline:

(1) Growth: In the past decade, the newly created State of Maharashtra has experienced a spectacular growth and development. The statistical data presented in the appendix is very much indicative of this growth. In the main following aspects of growth are quite significant.

(a) Enrolment: There has been an almost explosion in the students population. During this decade, enrolment is more than doubled (from 1.12 lakh to 3.00 lakhs) increasing at an annual rate of 10.78%.

(b) Institutions: Number of institutions increased sharply from 210 in 1960-61 to 450 in 1969-70 - the rate of increment being 11.43% annually. Obviously the supply of class rooms, libraries, laboratories, books etc. increased considerably.

(c) Higher educational expenditure: Expenditure on higher education also grew quite fast. In 1960-61 total expenditure on education was Rs. 23.4 crores. This has risen to Rs. 65.55 crores in 1969-70. The proportion of direct expenditure on higher education remained more or less constant around 20% of the total expenditure on education.

(d) educational profiles: There is a considerable improvement in the profiles of higher education.

(e) Equalisation and balancing of regional inequalities:

A good deal of equalisation of educational opportunities and balancing of regional inequalities has taken place. This is the result of the policy of the deliberate development and expansion of higher educational facilities in the under-developed region (e.g. Marathwada).

(2) Development: In addition to the above mentioned developments in enrolment, institutions, teachers and expenditure and the development towards regional equalisation of opportunities, there are a number of developments in the policy and organizational matters. More significant developments in this respect are as mentioned hereunder:-

(a) Need for educational planning accepted everywhere: It is during this last decade that the comprehensive concept of educational planning assumed more attention, more clearer shape and a definite form. At least theoretically, educational planning came to be accepted as vital to the orderly development of education. In cabinet meetings, ministers conferences, technical meetings, in the proceedings of organised research and training centres set up for the development of new concepts and methodologies, planning of education came to be pronounced as a "top priority field of activity."

(b) Formulation and adoption of educational policy:

Remarkable initiative ~~would be the unit of existing~~ has been taken up by the Hon. Minister for Education in formulating "White Paper" on education policy of the state. This White Paper was circulated, discussed and debated in meetings,

workshops, seminars and sessions and ultimately the main policy incorporated in the paper is now accepted by the community as the State policy on education.<sup>1</sup> Maharashtra is the only state in the country which has a defined educational policy. It is this policy which is now being implemented in the state.

(c) Setting up planning units: It is understood that in the educational administrative set up of our state government, a separate wing for "Planning"<sup>2</sup> has been created. It is this "Planning wing" which is expected to evolve "action plans" for the implementation of educational policy. It is also reported that in the field of higher education a number of universities have now created "planning and development cells."

(d) Educational planning an essential sector: To a certain extent it is now progressively being accepted by the (economic) policy makers, that education in general and higher and education in particular is not only a desirable social service but it is an "essential sector" in the overall plan of the state development.

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1 April 1968. Main contents are (1) Educational objectives and guiding principles for educational reorganization have been laid down. (2) It is indicated that perspective plan of 15 years for educational development would be prepared. (3) Comprehensive Educational Act would be prepared. (4) A common Educational Pattern of groups would be adopted and (5) District would be the unit of planning.

2 This is under R. Branch of the Department of Education.

5.3 (1) Inadequacies and disappointments: There are a number of remarkable features that indicate inadequacies and result to a certain extent in disappointments. Following are some of the main elements representing the dark disappointing side of the bright picture of growth and development.

(a) Undergrowth: A number of features indicate clearly undergrowth. Looking to the growth of institutions, area and number of persons served by the Institute, enrolment, enrolment per 1000 persons in the population as well as expenditure, it is very much evident that as compared to other developed and even <sup>to</sup> some of the developing countries our higher educational system is undergrown. (a) Number of institutions in 1963-69 was 419. (b) Enrolment per thousand population is 5. (c) Population served by one institute of higher educational is 1.75 lakh.<sup>2</sup> (1970-71 figures). (d) Total expenditure on higher education is Rs. 19.86 crores (1968-69). (e) Total direct expenditure for 1000 population was Rs. 2553 (in 1965-66). (f) Then there are a number of other indication of undergrowth. It is revealed that out of 235 talukas in the state, as many as 70 talukas have no college. In western Maharashtra out of 150 talukas, 47 talukas have the college. In Marathwada, out of 46 talukas, 18 talukas have no college. In Vidarbha out of

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1 Figures of institutions for 1969-70 448, 1970-71 515 and 1971-72 579. Enrolment 1969-70 - 297,386, 1970-71 - 331,164 and 1971-72 - 352,526.

2 Figure for 1970-71 is 1.64 and the same figure for 1971-72.

39 talukas 5 talukas have no college. It is true that there are several reasons for this. Many talukas are not only economically but even educationally backward. Secondary education is not well developed and therefore the place is not educationally mature or ripe to have a college. These areas which are not satisfactorily connected with a transport link. This is the case particularly in Konkan as well as in some parts of Marathwada and Vidarbha. (g) On the basis of population, the distribution of colleges not only indicates uneven distribution but even undergrowth. Out of 317 colleges in the state 151 or 47.65% are located in cities having a population of 50,000 and above, 42 colleges (13.24%) are located at places where population is between 25000 and 50000. For the population bracket of 10,000 to 25,000 there are 74 colleges (23.34%) and for the localities having population of 10000 or below there are 50 colleges (15.77%).

(b) Uneven distribution of higher educational facilities:

It is true that before reorganization of Maharashtra State, three main regions were included in these different provinces of <sup>THE COUNTRY AND THAT</sup> a heterogeneous character. Western Maharashtra was a part of the former Bombay State. which one had tendency towards normal and continuing growth of higher education. Marathwada region under the rule of Nizam had not achieved much progress in higher education. Vidarbha region was somewhat in a better position than Marathwada. All the three regions were on different footings. Thus out of 105 institutions, the 1950-51 western Maharashtra had 77 Vidarbha, 25, and Marathwada 3. As regards

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1 Educational development in Maharashtra and Higher Educational prospects and problems in Maharashtra.

the enrolment out of 42000 students 32,000 were in western Maharashtra. 450 in Marathwada and 8,569 were from Vidarbha. In matter of expenditure on higher education, out of total expenditure of 2.5 crores of ~~Rs. 2.01 crores~~ or 79.19% was spent on western Maharashtra. 19.92% on Vidarbha and 0.89% on Marathwada. Since then vigorous efforts have been done to remove this disparity and regional unbalance. However, the imbalance and disparity still persists. In western Maharashtra there are 248 institutions, 182000 enrolment and number of student per institution is 733. In Marathwada number of institutions is 54, enrolment 25,000 and the number of students per institution 463. In Vidarbha number of institutions is 117, enrolment 63,000 and the number of students per institution is 534. Out of the total expenditure on higher education of Rs. 19.36 crores, or 71.47% spent on western Maharashtra 21.50% on Vidarbha and 7.03% on Marathwada. The (rate of rise of institutions - Greater Bombay 93.5%, western Maharashtra 315.3%, Vidarbha 255.9%, Marathwada 786.0% and state 213.3% increase during 1960-61 and 1970-71). Enrolment per thousand population is for the entire state is 5 while greater Bombay it is 15 for the rest of western Maharashtra it is 4; for Vidarbha is 5 and for Marathwada 4. Population served by higher educational institute is 1.24 lakh for Greater Bombay 20.83 lakh for western Maharashtra except Bombay 13.84 lakh for Vidarbha and 20.81 lakh for Marathwada (the State figure is 1.64 lakh). Analysis of total expenditure also reveal similar features.



For the entire State of Maharashtra the figures are number of institutes 419, enrolment 269000 and the average number of students per institution 642.<sup>1</sup>

(2) Failure to adapt to changing needs of the community :

There is the general failure of the higher educational system to grow and adapt to the rapidly changing environment. Here in the entire growth process, the main impulse had been to do on a much more larger scale, what was done before. Perhaps it is not adequately appreciated that the time now calls for accompanying great quantitative expansion with equally great changes in the structure contents and methods i.e. qualitative improvements.

(3) Maledjustment and the paradox of scarcity & abundance :

It is due to the absence of above mentioned accompanying change in an appropriate manner, that has resulted in a paradoxical situation. Thus, while economic growth is handicapped and inhibited by shortages of specialized man power, there is the simultaneously growing complex problem of finding out jobs for the increased number of graduates at different levels, that at present the higher educational system is producing fast, in the state. It is this manpower imbalance that clearly indicates, a lack of adaptation of the higher educational system, to the needs of the community.

(4) Maledjustment between quantitative and qualitative

expansion : As stated above with a heavy focus on quantitative

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<sup>1</sup> Education Development in Maharashtra. Higher Educational problems and prospects. It is thus obvious that despite all higher educational progress multitudes of masses and many areas are without adequate facilities of higher education. Facilities of higher education therefore are very much underdeveloped and therefore inadequate and yet unevenly distributed. This results in imbalance.

expansion, adequate attention seems to have not been paid to the important qualitative aspects. In fact the higher educational system is now facing a very serious risk of 'lop sided growth'. It would indeed be very much difficult to effect any qualitative adjustment, when an inappropriate large qualitative enlargement has already taken place.

(5) Absence of any serious effort to plan higher education:

In fact, in the sphere of higher education even upto now there had not been any serious attempt in planning. Most of the growth is "unplanned". whatever broad outlines of plan were prepared, even these outlines had very serious difficulties. Fundamental difficulty, had been mainly due to the well-marked gaps between words and deeds, between policies proclaimed and actions taken, between the methodologies prepared by theoreticians, accepted by officials attending conferences, and their actual application in the planning and implementation process.

(6) Vacillation in priorities: In the absence of any overall integrated planning, basic educational priorities vacillated. Such a vacillation had been well-marked in general educational planning, priorities jumping from primary education to vocational training, from secondary and higher education to literacy training and life long education. Counterpart of this vacillation is to be found in the sector of higher education as well. The inevitable result of these changes in the priorities is wasteful imbalance within the higher educational system and between higher educational system and the environment.

(7) Organizational deficiencies: (a) Staff deficiencies:

Throughout the period, planning units, created by the government within the department and the units operating in the universities, remained understaffed and staffed by men who, had no specific training for this kind of tasks. (b) Absence of effective links between decision making areas:

The planning units and sub-units within the government and universities had no effective links between various elements within the main stream of educational decision making. (c) Isolation of planning unit: These planning units practically remained isolated from the economic and social development decision making process.

Having indicated broadly the main areas of inadequacies and disappointments it is now necessary to attempt a diagnosis of the existing situation. The assumption is that an objective diagnosis would operate as a guide in finding solution.

6. Diagnosis of present conditions

6.1 Multi-factoral causes: There are a number of reasons responsible for undergrowth unequal growth as well as an absence of an appropriate adjustment between the higher educational system of the state and our present and future needs. There are a number of historical factors, negative situations, organizational deficiencies, attitude factors as well as financial factors responsible for such a situation. A broad diagnostic analyses of these factors may be presented, as stated hereunder.

6.2 (1) Historical factors: These express themselves in a number of legacies and ultimately result in creating a number of negative situations, that obstruct objectively planned or even any normal growth. As regards the main historical facts and legacies the significant amongst these are:

(a) Even upto now an absence of clearly well defined objectives of higher education.<sup>1</sup>

(b) Policy-decisions emerge haphazardly, out of a welter of circumstances and complexities of pressures responding more to the exigencies of the moment rather than carefully prepared long term <sup>planes.</sup> pieces of development. Policies are often based on wishes and slogans and seldom on understanding of facts and basic motivations, within the framework of political life and power structure where normally ministries of education are comparatively weak. Political strength and the authority wielded by and Education Minister is the decisive factor in bringing about change and innovation but it is rare for an education minister to command such a position.

(c) The result that what took place in the past and even upto now is unplanned uncontrolled growth of higher education resulting into the emergence of an unintegrated structure of higher educational system. In matters of higher education there is an absence of a clearly defined role of the state government.

(d) Imbalances in organisational structure and structural deficiencies that have resulted due to indifference of the

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1 Confusion of aims resulting in the lack of clear policies and choice persists. The necessary effort to resolve even some important issues has not been forthcoming. (From Kirpad, Chairman, Executive Board, UNESCO. In Crises in Indian universities preface, Munsukhani.)

of the government and the resulting absence of any well defined policy and structure.

(e) Inadequate finance: This legacy still continues. An open acceptance and adequate understanding regarding this inhibiting factor has not really been fully developed as yet.

(f) Negative legacies and factors are many. Important amongst them are (1) Basic inertia and social conservatism of the entire higher educational system. It is this inertia that is now resulting in enlarging the gap between relative rates of renovations in the higher educational system and the changes that are rapidly occurring within the society.

6.3 Failure of the higher educational system to adopt to the rapidly changing environment: cannot really be denied by any presentation of voluminous statistical figures relating to the growth in institutions enrolment size of the teaching force equipment expenditure and finance. Adjustment is absent and the situation is serious. The main <sup>impulse</sup> pulse during last decade is that (1) of doing on a much more larger scale, what we were doing in the past. This is misunderstood with adjustment indeed there is no appreciating the pressing necessity of bridging the gulf between the product of the system and the needs of the community.

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1 Higher Education is fragmented and placed under the control of various government departments such as Education, Health, Agriculture, Labour, Commerce. There is the bifurcation between science technology and general education with no coordination. The same is the case of universities and colleges.

6.4 Half hearted attitude of the community is another legacy a negative factor that still continues to be significantly effective. There is a marked half hearted attitude towards the idea that higher education is essentially an important element in the development and growth process and also the idea that higher educational growth needs planning. The question whether higher education should be restricted to those who are fit to receive it and require it for jobs available or it is to meet the explosion in aspiration - irrespective of the availability of the minimum facilities and funds and specific requirements of employments has not been answered as yet. The confusion on this basic question whether higher education should be restricted to those who are fit to receive it and are required for the jobs available or it should meet the explosion of the number and aspirations irrespective of the availability of minimum facilities and specific requirements of employment has not been answered. Would it be better to follow selective principle and concentrate resources on building up few centres of <sup>excellence</sup> ... rather than distributing resources equally amongst evergrowing institution is not answered. It appears that we are not as yet either clear or determined regarding above said aspects and <sup>their</sup> implications.

6.5 Absence of adequate understanding of the challenge:

It is not very much clear to many that higher education now has a role to play which was not in existence in the past 50 or 100 years. The new role of higher education is that it is to be the major instrument for economic development and social

transformation. These are new things and these are new roles for higher education. For example in Cardinal Newman's book - "Idea of a University" there is no reference to these roles. It is not even upto now sufficiently adequately appreciated that if higher education is to play new roles, a new thought to planning, organisation management and administration is to be given.

6.6 Lack of the sense of commitment: There is much talk about the spirit of dedication. This is frequently referred to in d'm cliches and platitudes that have become a stock in the trade of politicians who continue to pronounce on educational problems without sufficient and adequate understanding of their <sup>complexities</sup> ~~complexes~~ and implications especially of the needs and aspirations of those who are directly concerned with the process of higher education namely students, teachers and educational administrators. Lack of any deep involvement in the nature and process of social change on the part of youths teachers, parents, administrators, politicians policy makers result in inertia and confusion. There is even now the uninterrupted legacy of having little attempts to develop meaningful communications, mutual participation and smooth coordination. The result is the legacy of absence of any sense of commitment. This lack again is experienced at all levels and with all ranks. Main lackings are the absence of any relevance and the commitment. This is due to the absence

of participation and the absence of desirable organizational and management structures.<sup>1</sup>

#### 6.7 Absence of dynamic effective higher educational leadership

This could have been tolerated and adjusted in the past. One can understand that in the past there were really few educational leaders who influenced profoundly the course of educational development. However, absence of leadership at a juncture when higher education is to operate<sup>as</sup> a weapon of socio-economic transformation is really a matter of great concern. Objective appreciation of the situation makes us aware of the fact that there really is not merely a dearth but really an absence of such a dynamic leadership, that can visualise the future educational needs of the community, can understand the present realities, can identify the path that is adopted in meeting challenges and reaching goals and that inspires people and initiates a determined group activity. Such a leadership is wanting at<sup>all</sup> levels and at all ranks. In the absence of such a leadership, initiative taken up by the Ministry of Education in formulating a 15-20 year policy of educational development is not likely to be effectively implemented, and as far as higher education is concerned this policy is really likely to be lost in wilderness.

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<sup>1</sup> Dr. D.S.Kothari's Presidential Address Regional Seminar on application of modern management techniques to Educational Administration, New Delhi, Nov. 2-12, 1970, Asian Institute Report, 1971, p. 91.



### 6.8 Psychological "resistance built up" in management and administration

The results of a low degree understanding of the present day challenges in higher education, absence of commitment and absence of dynamic leadership, are both inertia, indifference and the psychological resistance-built-up in the management and administration. Inertia and indifference is so much that really nobody bothers. There is a remarkable tendency blindly to support and stabilize existing order and establishment. With reference to educational administrators and managers at key post, there is a psychological resistance to planning in higher education. Administration and managers apprehend the process of planning. It is felt that this would ~~see~~ usurp their prerogatives and authority. Usually this resistance is under cover; practically wise, seasoned and experienced smile indifferently at all talks as they are quite sure that nothing important is going to happen.

### 6.9 Absence of integration in social economic and higher educational planning

There is an observed failure of higher educational planning to become integrated with the relevant planning in social

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1 If any proof of this required the proceeding of academic councils meetings of various universities during the last 10 years may be studied. "If you can provide to sleep do not awake. If you can provide merely to remain and awake, do not walk or work, sit and relax, if you can provide, not to run, walk" is the operative principle practiced!

and economic aspects and this absence is yet continuing. In our State of Maharashtra, it is to be plainly stated that so far, there has not been any parallel planning effort in education, society, community, and economy as a whole, - in manpower resources and social development aspects as well. It is strongly felt that such a planning is very much needed to provide the basic frame work for planning in higher education and in its growth and development.

#### 6.10 Tendency to piece-meal planning

A cumulative consequence of the above stated factors is a tendency towards piece-meal planning and this tendency is even upto now continuing. What is really attempted is piece-meal, short run unintegrated projection of expected actions. Educational plans of the state, generally and higher educational plans particularly, do not command a comprehensive coverage, embracing all levels and facts in a simple quantitative as well as qualitative perspective. It is apprehended that in the absence of any long term perspective, reaching beyond a single year and a coverage of a period comparable to the length of at least formal higher education itself, no fruitful results are likely to be achieved.

#### 6.11 Fluctuations in Policies

It appears that we have still not escaped from our tendency of changing (higher) educational goals and policy and making, without basic rethinking, material changes in already approved plans.

6.12 Organisational Difficiencies still continue. Basically our entire higher educational system that is built up for passive roles of maintaining law and order and status quo so far it is not meant for initiating and generating fundamental social transformation. Our organisational structure and set up is not even created for achieving maximum efficiency even in the tasks for which the organization is set up. In analytical terms, an organization is to achieve at least (a) efficient performance of the primary mission (b) reduction of inter personal, inter group and inter departmental conflicts - a balance of power and performance between such parts. Performance effectiveness of organization is dependent on as to how well the task at the total organization level and at its discrete task levels is conceptualized and organized. The design of the organization is to provide the best fit for the task to be performed. It is however, observed that the poorer conceptualization of the primary task of the comprehensive organization and sub-system levels, greater is the confusion and discard at various levels of the operating management and the primary work levels. Conflicts in inter system operations show up; inter personal and inter group hostility<sup>ies</sup> continues.

~~6.13~~ Organizational Difficiencies are still continuing:

(a) Throughout the period the planning units created by the government within the department and created by universities remain understaffed by men who had no specific training for this kind of task. (b) There is the absence of effective links between various decision making areas. The planning units

within government and within universities have no effective links between various elements within the main stream of educational decision making. (c) There is the isolation of planning units - particularly these units remaining isolated from economic social development<sup>al</sup> decision making process.

#### 6.12 Fragmented and Weak Educational Administration

Higher education is fragmented and kept under different controls of various government departments such as Education, Health, Agriculture, Labour, Commerce, Industries, Defence etc. There is emerging bifurcation between science technology and general education. The coordinating machinery is as yet not existing or ineffective. Beyond providing finances specially to meet deficits the state governments role is as yet really not defined.

The observation is that higher educational administration is weak and it continues to be so. The entire structure is yet not well adapted to the enormous developmental task, trust on the old bureaucratic law and order and status quo maintaining, passive, administration the basis of which in the past, had never been that of development, growth and transformation. This still continues. Even in matters of coordination on a simple routine issues, state government is to operate through joint board of Vice Chancellors which judged by performance, is a discussion group of Vice-Chancellors and certainly not an action oriented effective body. Many of significant government schemes have been made most ineffective by this body. This is due to the attitude of not permitting government to initiate new schemes <sup>on</sup> the name of

"university autonomy" and combining <sup>it</sup> with inaction and inertia.

#### 6.15 Scarce and uncertain resources

Another inhibiting factor is the scarce and uncertain financial resources. At any level no objective effort to find more and certain finance for higher education seems to have been undertaken. In fact, there are reasons to believe that this has not been visualised as one of the important problems or challenge, of finding out more and certain finance for future higher educational growth.

#### 6.16 Under-developed information system

Even upto now it seems to be not adequately appreciated that "more information" better the decision. It is this aspect that has been responsible for the development of information and communication theory. A more objective approach seems to have been not as yet adopted, To tackle the lack of reliable continuous data, permitting an objective appraisal of existing condition. It is in fact high time now that attention be given <sup>not</sup> only to the storage and retrieval of information ~~and not~~ <sup>but</sup> even to the building up system of real time information <sup>System with</sup> feed back. <sup>process.</sup>

#### 7. Inadequacies of past actions

Above stated diagnostic analysis of the trends during the past decade, brings us now to the consideration of basic inadequacies. Conditions of undergrowth and lop sided growth,

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1 As would be obvious, if the yields of higher education are related to the needs of the economy.

maladjustment and imbalances are clear indicators of inadequacies in the fulfilment of any objectives both in quantitative and qualitative terms. Inadequacies are indicated by the deficient and sharply declining internal output rate of the higher educational system. External output also is equally unsatisfactory. No doubt, a number of reforms in structure and programmes and methods are constantly attempted, yet their very number suggests that they are still of little avail. It is admitted that these quantitative and qualitative structural or organizational, and operational deficiencies cannot be ascribed merely to past ten years, but it must also be realized that in spite of our past ten years efforts, these deficiencies have persisted. These therefore constitute constant warning, that much remains to be done and new efforts are all the while necessary.

## 7.2 Analysis of future trends needed

While the difficulties involved in removing these deficiencies themselves are quite enormous and serious, there are very clear signs that these difficulties would be more complex and serious in the immediate future. There are a number of complex forces in operation and our higher educational system is to cope up with them. For appreciating the main difficulties and their dimensions, it is indeed necessary to understand these complex forces and the problems and prospects they create for us. Following are the significant aspects of these forces.

## **8. Future Trends**

### **8.1 Rise in the social demand for higher educationa**

There is an over powering rise in the demand for more higher education of every type. The flood of aspiring students is already there and managers and higher educational administrators are very much pre-occupied in the problem of rescue and rehabilitation work, so much so that so far they have almost no time even to think of such things as quality efficiency etc. This flood is not likely to subside.

This force is relating to the rise in the social demand for higher education beyond one, the existing system is equipped to satisfy. It must be noted that the demographic pressures show no signs of abatement. The demographic explosion has a direct influence on the higher educational problem. A huge proportion of population of the college-going age, coupled with the increasing proportion of literate and educated people within the higher age groups, is bound to create an increased demand for having an access to higher educational levels and institutions. Once the problem is settled at the primary and secondary levels the pressure is bound to be transmitted to higher educational levels. It must be mentioned that there is nothing irrational in such pressures. It is now increasingly realized that provision of adequate and appropriate higher education is a necessary condition for ensuring a lasting economic progress. If our country and our state is to rank amongst the developed one, it must not only manufacture but also invent. Once the higher education is established at a satisfactory level, there must be the further advance in the

direction of scientific research. Any pause in the process means "falling back". Yet it must be clear that the type of the higher education which is most directly relevant to economic progress, is the most costly. Hence both in terms of quantity and quality, higher education is bound to require finance of a steadily expanding magnitude.

**8.2 Explosion in knowledge:-** Experience during the last decade reveals that knowledge is growing very fast. Technological developments are very much rapid. It is estimated that during five years period the available stock of knowledge doubles. It is indeed a formidable task for a developing nation to come parallel to the stage of knowledge development with developed nations. This task becomes much more complex and difficult by the rapidly expanding rate of new knowledge growth and this fact certainly exerts, pressures in our efforts to develop educationally.

**8.3 Acute resources scarcity and rising costs increasing stringency of resources and economic and financial squeeze:**

The above stated aspect brings us to the question of finance. It should be observed here, that while during last ten years extremely rapid rate of growth of public expenditure on higher educational system took place in a climate of financial abundance, there is a reason to believe that in future, far from being met with the facilities and convenience as in the past, the increased cost of expenditure, will call for quite difficult decisions of a budgetary nature. Analyses of current situation indicates that it is not possible to augment the higher educational totals within the state budget, unless the



state budget itself is augmented. With the given rate of economic growth, counteracted by the rates of population growth, there is indeed very little possibility for adjustments or manipulations. It is true that despair is really criminal; yet in the circumstances that are clearly before us, it would be in vain to count upon spectacular improvements, unless very much resolute effort is made than hitherto. One of the usually suggested solution is that of reducing unit costs. If the higher educational system is completely to remain unchanged, then it is very much unlikely that a reduction in the unit costs can be brought about. Our observations show that, depending on the area and level of higher education, the rate of increase of the educational cost are 2 to 5 times greater than the rate of increase in enrolment. Then again it cannot be lost sight of that the bulk of the cost of education consists of salaries. These salaries, even upto now, are too low to ensure quality recruitment. Most needed improvement is in the professional standard of teachers. Mere advance towards seniority of teachers, the lowering down of the <sup>teacher</sup> /student ratio - all these aspects are bound to increase "staff costs" and with these, unit costs. These limitations are made still depressing because of the upward trend in the real cost of higher education. Apart from the familiar results <sup>of</sup> inflation on higher educational budgets, the main upward trend centres around the basic fact that higher education is labour intensive industry, still closer to the hand-craft technology. In an effort towards quality through conventional means, costs go still higher and higher. In view of the absence of any possibility of expanding

productivity without rise in costs as revolutionary technological transformation in the process are out of question, the costs for students are going to rise progressively. The unescapable conclusion is that there is going to be the lightening of the belt and a financial squeeze.

#### 8.4 Irrelevant product mix growing maledjustment between higher educational system and environment

These depressing instances are further aggravated by the evidence that the teaching and the output of the system, namely the product-mix of the system is not of the right type. The output or the product is ill fitted to the rapidly changing needs of social transformation and development. It is also ill fitted to the individual who at present is caught in a rapidly changing society. It is true that the attitudes, job preferences and status patterns that are given to the student by the community or society, work to a great deal of extent against the emergence of a proper product-mix and against the promotion of a process of social and economic development by the higher educational system. The result is an emergence of a three way dead lock in (a) old attitudes and old employment arrangements (b) new aspirations and needs of development and (c) the higher educational system. Immediate consequence of this deadlock is the growing inability of our state to absorb human output of Higher Educational Industry thereby posing quite a serious problem of educated unemployment and <sup>also</sup> the pressing scarcity of educated and trained personnel in the areas that are in the development process strategically more important.

There appears to be <sup>a</sup>very remote possibility that an immediate, energetic action would be taken to adapt our curricula contents and student flows to the exigencies of man power requirements and to the changing conditions, in which today's student will live tomorrow. Obviously there would be the rapidly growing maladjustment.

8.5 Growing graduate unemployment: There are quite clear signs that the graduate unemployment would grow, quite rapidly. This would be so, due to a number of factors. It would so partly because the over all economy of the state is not growing rapidly. It would be also so due to the fact that our higher educational system is providing to the economy, a "wrong kind of product". Another contributory factor is the expectation that higher educational attainments would without any vocational guidance, automatically correspond to a very high level of responsibility.

8.6 Growing discontent of the youth: It must be observed that such a discontent already exists. Discontent is due to the fact that the present day higher educational programme, structure and methods are not corresponding either to the proclaimed democratic aims of the society or to the real economic cultural, social and political situations of our times. Any type of adjustment process (that has not been even either initiated or thought) is bound to take quite a time and the youth is certainly not likely to have any patience. The result would be growing discontent of educating <sup>youth</sup> youth and a real explosive situation.

### **8.7 Inertia and inefficiency of our traditional higher educational methods**

This has no match to the new situation. System of administration, syllabus curriculum teaching methods are the points of observation. The traditional business of higher education has always deferred the system from adopting and improving its internal affairs. This is the inertia of the system. There are no signs to indicate that this static situation of inertia, absence of any commitment and urge to change and transform would not continue unabated.

8.8 The result is a deepening of the crisis which if no positive deliberated concerted action is taken, is bound to continue as a future trend and is bound to explode.

### **8.9 Other aspect of the deepening crisis and the hope**

Apart from resource crisis there is the gigantic task of lifting the whole generation out of static traditional-conventional bounds. There is thus cataclysmic confrontation between the ability to create revolutionary techniques and mass ability to assimilate and master these techniques. In this situation of a real confrontation one need not take with a philosophical attitude inertia, that the battle is lost and accept the defeat. It is in this crises situation that our hope lies. Then there is hope in the germinating force leaping to life, challenging man's imagination and getting from his responses that make the civilization jump upwards. It is in the emerging young generation that we have our hopes. It is this aspect that in our hope and while planning strategies it is this aspect that requires our constant attention.

## 9. Approach to Action - Strategy

9.1 Preliminary observations: Primary purpose of this note is diagnosis and indeed not prescription. Yet having understood the nature of crisis the question of what should be our line of action and what should be done cannot just be avoided.

9.2 No simple solution: It would illogical to say that the panacea to the crisis is (1) Take more money (2) get <sup>more and</sup> new men and (3) make students and teachers and if possible managers and administrators work hard. It is quite obvious that such simple solutions do not exist although all this would be necessary. For getting result, quite for sometime there it is not one solution, but a multiple of solutions that are to be followed.

9.3 Main anchor sheet of hope state level strategy: The only hope for coping with the situation seems to be that of adopting a state level strategy that is geared up to match equally the large components of the crisis. It shall have to be a strategy that shall have to be pressed with firm determination steadily and vigorously over <sup>at least</sup> the minimum time period of 5, 10, 20 years. Alternative to the adoption of such a strategy is stumbling into perilous higher educational future with no 'road map' and proceeding according to the direction of wind perhaps moving in circles all the times.

9.4 Flexible frame work of action with definitions of directions of and continuity of action: Higher educational development strategy is the framework of action for implementing

specific educational policies that are reasonably balanced, organically integrated well tuned, and moving in the right direction. Both the policies and the framework of strategy, should be subject<sup>ed</sup> to constant review, and in the light of progress, new knowledge and fresh insight, subject to modification. However, this does not mean that it should be so flexible as to present itself in an altogether new form when a new minister, New Vice Chancellor or a new director takes office. Without reasonable continuity and without a cumulative movement that can be built up by constant care, the strategy is not really likely to be effective at all.

9.5 Broad consensus of the community for strategy: Higher educational developmental strategy cannot exist in a vacuum. It cannot be merely something that is done in the back room of the ministry by some experts statisticians operating calculating machines under the direction of the direction<sup>or</sup> of higher education, secretaries under secretaries of the department. Strategy is to be built up through widely shared aims of rational perception and will power that rises from the economic social milieu. It is therefore necessary that the real strategy is to be found on broad consensus that embraces diverse political social economic and educational interests and enjoys enthusiasm and loyalty of numerous leaders of diverse groups.

9.6 Development of strategy at various levels: The strategy of a tangible shape shall have to be developed at several levels and shall have to be fashioned to fit peculiar circumstances and

responsibilities at each level. State regional district and local strategies shall have to be formulated. However, it shall have to be ensured all the time that all the strategies at various levels are sharing a common approach to diagnostic acts and all strategies are proceeding along a common basic line of direction and priorities. It is in this context that the broad approach to the strategies is as mentioned hereunder.

9.3 Constant watch and attention internal external aspects

input-output and stress on innovation and modernization: Two

indispensable features are to be kept in mind. (a) Attention is to be centred upon the relationship within and the relationship of the system with the environment outside - both on input and output side. Whereas at present these relationships are badly out of tune, they are to be restored to a better balance and to better mutually compatible rates of movement.

(b) The second is that the strategy must have a heavy stress on innovations in every aspect of the system. However, the change is not to be for itself but a carefully calculated change to achieve the needed improvement and adjustment. It is the higher educational system that shall have to take the first initiative towards adjustment. <sup>At the</sup> Heart of this is to get away from sluggishness and to take such initiative and start changing more rapidly and in the right direction. Neither these innovations will come automatically nor will they be assimilated quickly. However, it is obvious that if the strategy to succeed, innovations shall have to become the way of life in higher education.

This means that (a) those who are directly involved and concerned with higher education shall have to be convinced ~~with higher education shall have to be convinced~~ that there is no other way out of the existing crisis - except the way through innovations. This alone will bring in new excitement and a new sense of adventure and challenge. Thus there should be a new attitude towards change both from within as well as from without that is to say from innumerable clients of higher education namely parents students employees. The other condition is that (b) the higher educational system must itself become equipped with means of innovations.

#### 9.8 Development of innovations and modernization priority:

For developing major efforts in educational innovations as a campaign, it is necessary to develop an order of priority. Obviously everything cannot be done at once or at one and the same time. Something is to happen before something else can be done. This means that the priorities are to be set. Analysis of the crisis drives one to suggest following priorities.

#### 10. Main line of action: Initiating sweeping revolution and ~~adjusting for that purpose a state level strategy faction~~ of ac adopting

10.1 Need to initiate a sweeping revolution: Given that the enrolment must increase, that under the present system unit costs cannot be reduced, that it is unthinkable even for a moment that spectacular increases in the financial resources available to higher education would take place, then the only solution (viewed from the point of view of expansion) is that



of making such changes as will substantially increase the yield in higher education. All the above stated analysis brings us to the <sup>m</sup>unescapable conclusion that if higher educational system of our State is to make an appropriate contribution to our economic and social development, then through the application and adoption of modern scientific methods, that our higher educational system must undergo a sweeping revolution. After all such revolutions have already been initiated in the field of agriculture and industry and there is no reason why higher education should lag behind. It is therefore very much necessary that within the coming ten years, major changes in all aspects of higher education, in its management structure institutional models, Management and operational techniques, modernising of teaching and modernisation of learning process should be initiated. It must be quite clear that our present day higher educational institutional structure management techniques of teaching and learning <sup>are</sup> not designed to do (namely development and transformation) what the structure is now called upon to do now and therefore it is apprehended that, if appropriate changes are not introduced soon, this structure is likely to crack and crumble under pressure. what  
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#### 10.2 Revolution through innovations, improvements and actions:

It is through innovations that the efficiency and ability to face the challenges can be developed. The main approach in this respect can be presented under (1) research, (2) planning, development and (3) increasing efficiency and (4) strengthening finance. (5) Modernisation of educational management and

administration and (6) experimentation, (7) introduction of innovation (8) extension (9) modernization of teaching and learning process and the course contents and involving community into a collective action, (10) creating a core of committed for such a transformation.

**10.3 Main areas of action :** The hall mark of the coming decade should not be so much of the quantitative expansion but adaptation change and innovation. For this purpose of the rational formulation of plans research is needed which is not possible without research. It is through research and rational planning determined and decisive action that the stumbling stone is to be turned. This sets us on the proper road map of action. Main areas of action, then are research, planning and development, including the creation of relevant organizational structure and machinery and information system, initiating a process of innovation and modernization in management, and modernization of teaching and learning including the transformation through the adoption of new educational technology and finally strengthening of finance.

**10.4 Research :** A number of problems immediately arise. Having accepted the proposition that major changes in the structure and institutional models in higher education are necessary, then the questions that arises are (a) How innovations in the system are going to take place on a scale that is needed particularly when institutional backgrounds and means for innovations are so inadequate? (b) Usually educational innovations are sporadic and episodic, they are not the products of a systematic continuous process but usually products

of accidents; they are not as rapid and as comprehensive as they ought to be. Now, against this background, is it to be ensured that innovations would be continuous, objective, rapid and comprehensive? To these problems the solution is for the education to engage itself in the institution building of its own, to create and to staff adequately facilities for critical self-examination, for spotting out problems, areas, for undertaking analysis and identifying alternative paths of solutions, for researching and experimenting, so that ultimately a large flow, of major improvements in the process of education are developed. Here again in the first stage, the institutional building (for the above stated purpose) is to be done for the "most vital sector" and it is from this sector namely the higher educational sector, that the experimented innovations are to percolate in an efficient and rapid manner to the other areas and section of education. In short the beginning of the solution is to be found in the "creation of a research and planning institution for higher educational levels."

(2) This research is different from past research: This suggested research activity is to be completely different from the traditional research activity, undertaken <sup>So far</sup> in the past, so far. Traditional educational research had been fragmentary descriptive and theoretical. This research had practically no impact on the course of educational development. Now the research that is needed is to be continuous. It is to be objectively aimed at finding solution to unsolved problems, its specific purpose being to find out ways, devices and new

methods to meet specific functional needs that were never present before. Research shall have to be specifically directed at solving specific problems of educational planners, administrators and managers. It would also be the purpose of this research activity to find out better courses and contents. By the very nature of this research activity, the strength is to be drawn from a variety of academic and professional subjects fields. It is to give significant attention to the comparative analysis of the experience of many countries and many states in our country. What is suggested is therefore, certainly not an "isolated library research" but "on the field", "an action oriented" research, closely tied up with the "problem solving" and "fact finding process" in the educational development generally and higher educational development particularly.

(3) Integration of research and planning activity: Above-stated analysis clearly indicates a need for complete integration between higher educational research and higher educational planning activity. It is the educational planner who is to put forth the needs of innovations in a clear perspective and thus guide the research priorities and allocation of efforts. Planners are also to help in analysing the implications of alternative innovations and help in developing new institutional arrangements for innovating and getting to the research units, adequate support as planning cell can well-establish the imperative need for innovations (by demonstrating consequences resulting from an absence of innovation). It is also the planning staff that can phase implementation of

reforms resulting from research. Obviously the main areas of research activity would be (a) collection of statistical data needed for planning (b) diagnostic studies - (analysis of sociological, economic, demographic, technological - scientific aspects - forecasts of man power requirements, evaluation, typology of educational growth and development, standard higher educational strategies, <sup>in</sup> methodologies to estimate output, educational costs, resources comparative efficiency of various types of techniques, etc. Efficiency in administration and management techniques, etc.) (c) educational experiments and finally (d) applied research in actual planning and execution. In short complete integration between action oriented research and innovations and the planning activity is imperative.

(4) Basic step is of identifying existing talents and co-ordinating existing facilities in an institutional set up: In the organisation of above said research activity, in the early <sup>phases</sup> ~~places~~ it is neither necessary to develop new techniques nor new talents. These techniques are not unknown in the institutional circles, in higher education - talent is wide spread. Really what is mainly needed is the identification of the talent, at the present operating in various higher educational institutions and universities, and make this wide spread talent, focus their attention to the practical problems in education. In fact this is an opportunity for higher educational institutions and universities to serve their family. There had not been so far, any interesting and exciting challenge to research and scholarship abilities. If available research talents are

institutionalized manner. The main task of the proposed academy would be to coordinate efforts provide clear perspective, fix up research priorities, allocate research faculty and finally, follow up and evaluate the total effort.

### 10.5 Planning

(1) There is no escape from planning higher education: At the very outset the fact that planning in higher education is a "must" should be fully appreciated. If the future trends as indicated in the (a) rise in the social demand for education (b) rapid growth in knowledge and technology (c) acute resource scarcities, increasing resource stringencies and economic and financial scarcities (d) growing maladjustment between the higher educational system and the environment (e) rapidly growing graduate unemployment and (f) the rising discontent of youths like to result in a most explosive situation <sup>are</sup> ~~is~~ fully appreciated, then there seems to be no escape from the proposition that the future growth and development of higher education shall have to be planned. The results of an unplanned uncontrolled growth, specifically the inadequacies imbalances maladjustments, wastages and frustration should at least now make us wise. Planning is necessary not only for avoiding the above stated results, but also for ensuring optimum results within the shortest possible time - in terms of adequate and satisfactory answers to the basic higher educational challenges.

(2) Planning is not mere projection but collective action:

It should be made clear that our basic approach is not merely to project the past with the future, along a straight line. Our

main object is also to change the future, To do things better than they were done earlier before. The Central question is not that how quickly can we expand what we are doing now but what are our objects, and in relation to them alternatives, and with the given unescapable limitations, what are the paths that would take us, farthest ahead, most quickly. For this purpose efficiency and performances of the higher educational system in terms of productivity is to be improved. Within the existing framework of management, planning would be the fundamental component to improve management - an invitation to modernization process.

(3) Process of Planning: The main process in planning higher education is not a sporadic process, as it is at present, ending in the preparation of a plan. Planning is to continue throughout the period of implementation. Obviously the process would consist of identifying higher educational objectives and resources, finding out alternatives, studying the implications of alternatives and choosing wisely amongst them, deciding specific targets to be met with, within the specific period or time limit and developing the best means of implementing the choice - thereby continuously improving our performance.

(4) Stages in planning: The main stages would be (a) First Stage:- determining the policy. This has been already attempted in our state. However, objective organisational and operational details have not been worked out. (b) Second Stage: Drawing on the strategy and outlining short, medium and long term perspective plans. (c) Third Stage: would

consist of a variety of activities including short run programming of an individual single sector and inter-sectoral programmes. (d) Finally there is to be the project stage which may be sectoral, regional or state level. This stage is to have a complete process operation, ending in follow up and evaluation.

(5) A Few misconceptions need be cleared up

(a) While determining the basic objectives and approaches in planning, we are certainly to consider economic objectives. Yet economic objectives are not the "only objectives." Social, cultural and human development (development of the integrated personality of the student) are also equally important objectives in higher education. It must always be openly accepted that economics, sociology education all these are the aspects of one and the same reality and to isolate these aspects, would be arbitrary. Although economic objects are better defined the pressing, yet all the aspects of higher education - namely - cultural, social, psychological, all are to be appropriately considered.

(b) Another point is the consideration of qualitative and quantitative aspects, while determining the number of students, their distribution in various branches of higher education. Here the use of man power forecasts together with the vocational analysis and analysis of the social demand for education shall have to be adopted. There is obviously no escape from financial constraints. On the basis of above stated approaches the operational strategy of the programme shall have to be developed.



(c) The next important area of consideration is the problem of improving and adopting the structure, methods and contents of courses - up-to-dating and modernization of curriculum and tools of education. The planning and programming in this respect is also quite pressing.

(d) Above said planning and programming will be incomplete, unless a plan for improving and modernizing management is prepared. Present day need is not only to develop a programme for the modernisation of educational administration but also to develop appropriate educational leadership that would initiate a basic shift in the administration and management approaches.

#### 10.6 Strengthening Finance

(1) Next to the organization of research and planning is the question of finance. Here, to avoid being seriously handicapped by financial or economic constraints, the higher educational system of our State, shall have to act vigorously. The main direction of efforts would be two-fold. (a) To find supplementary revenue and (b) to find the ways of getting greater and better results from the available finances.

(2) Search for new, supplementary revenue: Having fully explored the existing traditional sources an attempt is to be made to study practices in other states and countries. A wide variety of fiscal measures - both public and private, are adopted to collect revenue for higher education and some of them are new and ingenious measures. In fact no effort has been done to mobilize <sup>organised</sup> <sub>Corporate and institutions sources</sub>. It is also to be noted that outlays on

higher education are not strictly limited to finance. They include a variety of services and other means and it may be useful to examine and explore new prospects in this respect. A state that is progressively industrializing also can have new sources.

(3) For mobilizing more funds and resources new methods of institutional structure can be thought of. In fact one of the very potential schemes is that of stabilizing an higher educational finance corporation. This scheme is to be fully in all its practical details worked out. Funds can also be mobilized through a process of collecting a higher educational cess from those income.— Tax payers whose productivity is significantly increased because of the higher education which they received during their studentship days.

(4) External help: It is also possible to mobilize a certain amount of financial help from outside. Here there are two types of difficulties usually experienced.

(a) Many a times it is difficult to "afford" an outside financial help because it is difficult to meet the "matching requirement" of external assistance by "local participation" incorporated in the project.

(b) External aid results in altering completely the "priority scheme". As regards the first difficulty a solution might be developed by making a supply of loan available with easy terms, with long term repayment cycles, low interests and liberal grace period. Difficulties in developing local participation might be reduced if the lending, borrowing and the external helping agencies come together and find out the

ways to meet with this situation. However, the basic fact cannot even be escaped that the entire problem of finance for higher education is ultimately rooted in the low economic levels and slow growth rates. Even in higher educational allocations therefore, a high priority shall have to be specifically given to the projects that rapidly spur economic growth, so that ultimately financial resources for higher education could be more generously available during subsequent periods.

#### 10.7 Fourth line of strategy: Improving efficiency:

(1) Another aspect is that even with the most determined efforts to supplement available resources for higher education from internal and external source are undertaken, yet problem of financial constraints will not be solved. Higher educational system of our state, shall have to resort to the <sup>fourth</sup> ~~third~~ line of strategy, namely that of making strenuous and continuous efforts to improve internal efficiency and external productivity. It will be necessary for this purpose, to study analytically, where the present resources are going, how are they used and where the greatest potential for economy exists? For improving external productivity, it would be necessary to examine the utility of what is taught presently and also to study the adjustment of the higher educational system to the developmental needs of the individual student and of the entire state, in its economic and social goals, in higher education. Modernizing curriculum, altering pattern of students choice and flow are some of the approaches that would produce immediate

results in the improvement of productivity in higher education. Another very significant sector of improvement is the efficiency improvement in the structures and organisation of higher educational management - a process of modernisation of the administration and management in higher education.

(2) Modernisation of ~~more~~ higher educational management and administration: Adaptation of management and administration to the needs of higher educational action programmes:

There is always a gap between the plan and the implementation and this gap is mostly due to a number of administrative and managerial lackings. It is therefore necessary to appreciate the fact that efficient implementation of the plan cannot be ensured, unless administrative and managerial aspects are fully considered. It is always rightly said that "educational planning without administration and management is empty, and educational administration without planning is blind." Planning and administration therefore cannot be separated. They shall have to be integrated, from the very beginning and throughout the structure. This means three things: (a) The idea that when plan would be complete, the implementation is to begin is an extremely dangerous proposition. A finished and inflexible plan is contrary to the spirit of educational planning (which basically an adaptation to change) and cannot be administered automatically. (b) It must always be clear that educational planning is neither a prediction of technologists nor a promise of politicians. It is <sup>c</sup>working hypotheses for all sections and constituents of educational process.

Having a planning section with few experts and administrations, is bound to create tensions. Planning must not be the monopoly of the department of higher education or any other office. It must permeate entire educational and administration process.

(c) Now the entire administration and management in higher education shall have to be oriented to developmental requirements. It is to be seen how the existing administration and management adapts smoothly to this new requirement.

(3) Existing traditional management and administration in government and higher educational institutions: Present administration and management is mostly organized to "despatch current business and therefore mostly static. The main concern of the administration and management seems to be with the setting of rules and standards and with the efforts to ensure observation of these rules and standards through a system of supervision. Basically administration is pre-occupied with the rules and procedures. Organizational arrangements, staffing, the inbred attitudes and self-conceptions of its roles, are all, obviously, ill-adapted to deal with the management tasks and challenges that now confront the higher educational system. As stated earlier, the present day administrative and management structure were not created to meet new challenges of development and transformation. Therefore they are not easily adaptable to the introduction of innovations and initiating development. Attitudes in management are also not open to these challenges and innovations. The need of the time, therefore, to adapt administrative and managerial set up to the needs of development and growth in higher education.

(4) Developmental management and administration: The starting point is the re-defining of the role of higher educational administration and management specially their developmental role. It should be obvious that if actions to improve in efficiency and productivity in terms of output, growth and development are to be the integral part of the system of higher education, then, for this purpose, the main initiative must come from the management and administration in the higher educational system. Main pre-occupation of administration and management must be with growth, development and improvement and not merely with the rules "standards" and "procedures". The main concern now, should be with the unleashing and mobilising of human energies, the ingenuity and spirit, the physical and financial resources, required for this purpose - both from inside and outside the educational system. This is obviously and anti-thesis of rigid rules and procedures. It is also to be clear that development and growth of higher education cannot be fostered by tedious uniformities but by a "creative inter play of diversities". It is admitted that there are risks in such an approach but these shall be lesser risks as compared to the risks involved in the perpetuation of inhibiting factors.

10.8 Initiating transformation through a process of developing educational leadership at relevant sectors and levels: Thus transformation from rules and supervision to initiative and fresh developmental approach is the pressing need. Initiating such a process of transformation and affecting improvement is

the "leadership function". For performing this well-needed function, it is necessary <sup>to create</sup> (a) at the top of higher educational system, a well-informed leadership system, reinforced by a competent team of specialists <sup>and to create</sup> (b) <sup>at</sup> creation of strong and creative leadership throughout the system -/all administrative and management levels including the local institutional administration, teacher and even the student management levels. In creating such an appropriate leadership at relevant levels following basic considerations are involved.

(a) Reform in administration depends on "change" - change in the outlook and attitudes from excessive traditionalism and defensiveness of old and fear of new to developmental <sup>1</sup> attitude.

(b) Change in the outlook and attitude can be effected through (i) Rendering information service and expectation that gradually rational decision making and actions would be initiated, when the decision makers at appropriate levels are well-informed. (ii) Development of an appropriate system of recruitment and training to new entrants and (iii) Development of a continuous, well-organized "in service training programme" - for all, working at the strategy points in the management and administration in higher education.

10.9 Development of a "core programme" and the organization of training schemes: (1) All the above stated action, (change in

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<sup>1</sup> Attitudes and interest in education, Knevens, Routh Ledge Kegan Paul, London, 1965. ||

the attitude through information service as well as the development of recruitment and training programme - though quite important) - are not likely to be immediately effective. The immediate action needed is to develop and adopt an "In servicing training" programme. It is only when such a programme, incorporating training of "in service" as well as "new recruits" supplemented by information service, is launched and pressed into action that the process of change in the "attitude" will really be initiated. It is for the organization of this function that a "top priority" is to be given.

(2) It is startling to note that while our educational system generally and the higher educational system particularly, is the biggest industry, yet virtually there is no provision for professional training to the administration - training other than that which is received by few, under teachers training and the grass root class room experience. Result is that educational administration, at all levels and sectors, have all along remained, intellectually isolated from new research and practices, in other fields of administration and management. This has resulted in perpetuating (and even refining) - yesterday's ideologies, principles and practices, theories and techniques, rather than new ones. This situation now really requires an immediate attention and correction.

(3) Existing universities in Maharashtra State together with the department and colleges of education are ill-equipped to organize, coordinate and conduct the educational management training. The logical basis (for creating primary leadership



and strengthening through the same, the development of pre-recruitment and post-recruitment "in service" training programme) for this task would be the university and its department of education. But here is another startling fact, namely that the universities in Maharashtra are themselves without any coherent system of modern management. It is very much doubted as to how far our universities in Maharashtra, have means and methods to examine themselves critically as institutions, have the ability and willingness to plan their renewal, reform and future progress and implement such a plan in an orderly manner. It is also doubted as to how far our universities, as institutions, would make commitments in this respect, and deliver the goods. The plain and candid conclusion is the universities as they operate at present cannot even plan their own future in an orderly manner. They can neither undertake the state level planning of higher education nor "lead" the higher educational system to plan itself. They cannot take up a lead in evolving initiating and conducting training programme for developing appropriate managerial attitudes and ability in higher education. However, universities can and in fact are expected to participate actively in conducting research, rendering information service and undertaking follow-up and evaluation<sup>100</sup> of the entire programme, from time to time.

(4) If immediate improvement is to be initiated then there is no alternative to training: An objective evaluation of our efforts to modernise and improve (administration

management contents of courses syllabus, training and educational methods evaluation etc.) our educational yield through improvement of internal efficiency and external productivity indicates, that our efforts so far, had been slow and ineffective. This has been so due to a number of reasons. The important amongst them, be'n (a) dirth of determined and decisive, planning executive and academic leadership (b) apparently democratic and slow method of decision making, (especially in academic matters) in various bodies. (c) psychological resistances and inertia. (d) conflict of interest. If any improvement is to be done, then all this will have to be changed, possibly through a dynamic change in attitudes and approaches. It is a conviction that the present day administrator and academician is bound to rise to the occasion, in case he is appropriately taken into confidence and fully made aware of challenges. Training of new entrants will inject purpose, enthusiasm and dynamism in the system. When this new element goes to various academic executive and planning bodies which really should not take long, it is bound to exert influence and bound to press for immediate action. It is only through such a process of training and creating new attitudes that immediate change, modernization and adaptation is possible. Alternatively, with the existing methods and procedures of introducing a change, there appears no hope for immediate improvement (unless of course due to any reason some explosive violent situation develops).

**(5) High degree of optimism in the possibility of turning stone :**

It must be stated, quite optimistically, that the situation is quite susceptible for a rapid and immediate improvement. (a) "Brain power" needed for this purpose, already existing in our State and the higher educational system. (b) A lot of valuable experience - (mostly outside our higher educational system) in the fields, in which management practises have made spectacular advances, is also available and at hand. Main need is to understand and adopt the strategy mobilising brain power within the system and the potential valuable leading to experience outside the system and make it available to the existing educational management and administrators. (c) Whatever additional finance would be needed for this purpose, it is not difficult to mobilize the same. The immediate task therefore is to appreciate the need to develop in training programme evolve and implement the same. (d) Having stated the strategies that are to be adopted in the form of research - planning strengthening of finance - modernisation of management and administration through a system of training and orientation it is now necessary to consider innovation and modernisation.

Having stated the strategies that are to be adopted in the form of research planning strengthening of finance modernization of management and administration through the system of training and orientation, it is now necessary to consider innovations and modernization in academic areas, This mainly falls under two categories namely (a) modernization of teaching and modernisation of learning.

**10.10 Modernization of Teaching :** Observed facts are that today teachers have not much chance to modernise themselves and raise their productivity through keeping their knowledge in the subject upto date, and keeping then teaching technique upto the mark. Our teacher seems to be trained for yesterdays schooling and not for tomorrows. If by chance he is trained for tomorrow, he is

obstructed and reframed from utilising his training by the realities of training and operational arrangements in the institution. Thus the professional growth of our teachers is in a problematic state of affairs - particularly because it appears that it is nobody's business to ensure his professional growth and keep him up growing. Clearly our higher educational system is not going to modernise until the whole system of teachers training is drastically overhauled teachers training is not only to be instituted first, it is to be made intellectually richer, more challenging and is to be extended beyond preserving training to a system of continuous professional renewal and career development of all the teachers. A step in this direction will create possibilities of attracting more of the community's talent into the higher educational system and developing new dimensions in the work.

**10.11 Modernization of Learning:** Modernization of learning process is the next important area open for innovation. There is not only one way of teaching. It is therefore necessary to initiate collective thinking in <sup>this</sup> ~~the~~ direction.

**10.12 Information System:** It is necessary to improve "information system" in higher education. It is obvious that any improvement in the system is just difficult when the knowledge about the system is inadequate. Further whereas the support to the system is to be from the society the society must be fairly well informed and should have an access to further information. It is in the connection that following points may be considered.

(a) While existing arrangements are publishing data regarding students institutions teachers expenditure income etc, This data is to be presented within time and in a much more analytical manner. It is necessary to pay more attention to the analytical techniques, that can well be adopted so as to make the data administratively useful in planning in development of operational efficiency etc.

(b) Our higher educational system has got no effective machinery for evaluating <sup>on a continuous basis</sup> our own performance or to see specific ways of increasing the quantity and quality of the <sup>educational</sup> educational system within the limits of available resources and point out the needed and promising innovations of every kind. The system of evaluation should be comprehensive and questioning the entire frame work of higher education, from contents procedures to <sup>the</sup> evaluation systems and <sup>also</sup> design of the educational programmes etc.

(c) Higher educational system should also be subject to external scrutiny. No such system of scrutiny operates at present.

(d) Information should be directed to society and particularly that to part of the society which has a deep interest in the higher educational performance - press radio and television also should be appropriately informed.

### 10.13 Extension

#### (1) Experimentation and introduction of innovations:

The next problem is the introduction of the research product, namely the innovation, strengthening finance in all spheres,

management, teaching and learning methods and methods of practice. It is a usual experience that mere innovation is not enough. What is really needed is the "putting of research and innovation into application". This is a complex and a long operation and includes a series of stages. These can be enumerated as hereunder starting from the development and finalization of an inter-disciplinary research, (a) communication of innovation, (b) consultation with the people concerned (c) Persuading and encouraging them to experiment with pilot projects, (d) follow up, and (e) evaluation and the preparation of new means (manual, equipment premises etc. and even progressive extension and generalization.) These are some of the important stages.

Obviously each of the stage consists of a series of operations and all these operations are systematically to be followed. It would not be possible to transform attitudes and introduce innovations unless results are ensured. For this through a system of supervision follow up and evaluation at each stage. It would be necessary to involve the community in the intellectual administrative and financial efforts - specially to involve the management of educational institutions, teachers, students, parents and educational administrators in this process. All these segments shall have to be made interested and shall have to be brought in agreement with the basic objectives and priorities and even shall have to be prepared to support and be actively involved in the effort of improving the system. Here the main problem is that education is a democratic process and as such educational planning cannot

Planning

be imposed or enforced by law. It is to be understood and accepted. In this process the main obstacle namely socio-psychological resistance, inertia, lack of enthusiasm, shall have to <sup>be</sup> met and for this purpose a process of communication, conversation and exchange of ideas and experience, convincing, creation <sup>ing</sup> of a situation leading to the undertaking of experimentation on the pilot project basis, follow up, evaluation and extension are all needed and it is for the purpose ~~the academy shall have to organize and undertake "extension" function.~~ shall have to be organised.

## 11. Concluding observations and immediate actions

### 11.1 Needed an immediate reconstruction of higher education:

Since 1960 there had been quite a remarkable progress in higher education in the State. All the same the progress leaves much to be desired and done - specially because there is a distressing wide gulf between thought and action. It must be appreciated that even though, there are well conceived and generally accepted policies and even programmes, there is no energetic effective implementation of the same. Now really there is no place for half hearted policies and half hearted actions. Our economic and social development depends quite significantly on higher education that we provide. Reconstruction and modernization of the entire system of higher education is, therefore, very much crucial. This reconstruction is to be <sup>e</sup> affected with meagre resources in terms of men, money and material and within the life-time of a generation. The choice therefore appeared to be between

improvement in the yield of higher educational system through research, planning modernization i.e. total reconstruction in various administrative academic spheres or disaster. It is for the purpose that a top priority to the suggested scheme is demanded.

11.2 Needed a dedicated determined team work: that is mainly needed now is (i) the definite ascertainment regarding the role of higher education in the national economic and social development, (ii) a positive psychological motivation and energy needed for this vital transformation of relating our higher educational system to the life needs and aspirations of the state and (iii) maintaining it at the highest level of efficiency. For this task, is essentially needed the commitment hard dedicated and determined team work, developed through the services of research workers educational administrators management heads of institution, teachers and even students. Until and unless a hard dedicated team work is put forth by the above stated segments, there cannot be any break-through of the vicious circle. It is for this decisive action that various action programmes includes (a) Establishment of academy, (b) Establishment of a financial corporation for education, (c) setting up action committees for modernisation of teaching and (d) students activity and <sup>administration Committees</sup> .... are proposed. It is very much positively felt, that in the absence of an institutional work in future, higher educational system of the state would not be in position to contribute materially for the economic social cultural and political development of our Maharashtra State.



11.3 Need for an immediate consideration of this note and action:

It is for the above stated reasons and the immediacy involved, that it is earnestly requested that this scheme is to be immediately referred to a select expert committee. The scheme may even be circulated for ascertaining public opinion and seeking suggestions. What is emphatically to be mentioned that the purpose of this note is not merely to report, but generate action. A report which is shelved or does not lead to an action is worse than no report (as it leads to frustration). Time is the essence of the problem. Hence the specific recommendation to appoint a committee for immediate consideration and action.

APPENDIX IRecapitulation of Findings and Recommendations

1. This is basically an action oriented diagnostic study of the present crisis in the higher educational system particularly of our Maharashtra State. The main purpose of the note is not merely to initiate thinking but to initiate a determined action.
2. In the beginning important concepts and issues regarding the nature and problems in Economics of (higher) Education have been presented.
3. This is followed by a presentation of an analysis of higher education as an industry.
4. Then the typical characteristic features of the higher educational industry that are at the foundation of the present day crisis, have been examined. These features are (a) those who produce, do not sell, (b) those who consume do not buy and (c) those who finance, do not control. This analysis is followed by an examination, (d) the attitude of the community. As to how these aspects are at the root of the crisis also have been explained.
5. Then a diagnostic analysis of the presently operating higher educational system in the state is presented. This presentation is in the form of an (1) input, (2) the process and (3) output analysis. Enumerated and examined inputs are (a) philosophical - namely the existing knowledge, values and goals, (b) Demographic namely the teachers and the students and (c) the economic namely finance and physical equipment.

Then there is the process consisting of (1) aims and priorities to guide the activities of the higher educational system. (2) Students, whose learning is the main aim. (3) Management, to coordinate direct and evaluate the system. (4) Structure and time schedules to deploy the time and students flows, - amongst <sup>different</sup> ~~efficient~~ purposes, (5) contents, the essence of what the students are expected to acquire, (6) the teachers to help and orchestrate learning process (7) facilities to house the process, (8) technology - referring to all techniques used in making the system work, (9) the quality control (10) research and (11) the costs, indicating efficiency. As regards these various aspects relating to the process more significant namely students, teachers, the management contents and technology have been somewhat thoroughly examined. Then there is the analysis of the output and presentation of the problems relating to the measurement of efficiency. Dynamics involved in the changing of the system and the role of external environment and external factors has also been examined.

6. Having presented the diagnostic analysis of the system in the background of the challenge the significant role which the higher educational system is to play in the coming times has been stated. Higher education is an important factor in initiating a rapid technological progress, economic development and new social order. At present the main challenge before the higher educational system of Maharashtra is that of creating within the shortest time and with least costs, practical efficiency and high technical skill. This is to be achieved by increasing and improving awareness, aptitude and ability of human capital.

7. Since the creation of Maharashtra State in 1960, during this decade, there had been revolutionary developments. Higher education grew in terms of enrolment, institutions, expenditure, improved in terms of profiles, equalization and regional balances. Need for planning came to be generally accepted. A clearly defined educational policy of the state came to be formulated. Educational planning came to be generally recognized as an important sector of economic and social planning. Planning units came to be established. However, there had been disappointments as well. There had been the case of (a) undergrowth and inadequate growth and uneven distribution, (b) failure of the higher educational system to adapt to the changing needs of the community, (c) maladjustments, resulting into the paradoxical situations of scarcities and abundance in terms of educated manpower, (d) maladjustments between quantitative and qualitative expansion, (e) absence of any serious effort to plan higher education, (f) vacillations in priorities, and (g) organizational deficiencies of a very serious character.

8. Diagnosis of the present conditions indicates that there are several factors and forces at play. There are (a) Historical factors and inhibiting legacies of the past as well as (b) Negative factors and legacies of the past like absence of well-defined objectives unplanned, uncontrolled growth and emergence of an unintegrated structure, imbalances in the organizational structure, failure of the higher educational system to adapt to the rapidly changing environment and needs,

half-hearted attitudes of the community absence of awareness and understanding of the challenge, lack of the sense of commitment like basic inertia and social conservatism. Absence of dynamic leadership psychological ~~resistance~~ <sup>resistance</sup> of managers and administrators, absence of integration between economic and educational planning, fluctuations in policies, weak educational administration, the scare and uncertain resource, lack of facts and data and finally, tendency towards peace-meal work. <sup>have been stated</sup> Inadequacies of the past actions have also been examined.

9. Main future trends are towards (a) rise in the social demand for education, (b) explosion in knowledge, (c) Acute resource scarcity, rising costs and economic and financial squeeze, (d) Growing maladjustment between the higher educational system and the life needs and aspirations of the community, (e) Growing graduate unemployment and finally, (g) growing discontent, especially of the youth. The result in the deepening of the crises.

10. It is against these inadequacies of the past and future challenging trends, that the main action, namely that of undertaking efforts to increase higher educational yield through a sweeping revolution, is to be initiated. There are no simple solutions - A state level strategy is to be adapted and revolution initiated. This revolution is to be effected through the acts of innovations improvement and adaptation. The main approach is that of undertaking on an organized institutional basis, (a) Research (b) Planning and development activity, (c) Strengthening of finance, (d) introduction of

efficiency drives through innovations and modernization of educational administration and management (this is to be operative through a system of education and training that would aim at creating awareness, aptitude and ability in the administrators, managers and key persons) and thereby developing educational leadership and finally (d) Modernization of teaching and learning and (e) through experimentation and gradual introduction of innovations through extension. Operational details of above stated steps and stages have been broadly worked out and presented.

11. In the concluding remarks, it is reiterated that there is an immediate need for the reconstruction of higher education in Maharashtra. This reconstruction requires a dedicated determined institutional team work and an institution to act as a permanent agent for planned change. It is for this purpose that appropriate consideration of the note is earnestly requested.

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