

Academy for higher education

By

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ACADEMY FOR HIGHER EDUCATION : A NOTE

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1.0 Preliminary Observations

1.1 Objectives of the note

The main objects in presenting this note, are as mentioned hereunder.

(a) On the background of an analysis regarding the main challenge before the system of higher education in our Maharashtra State, to submit an objective appreciation of achievements and inadequacies, in the progress of higher education during last decade in the state;

(b) In the light of future trends, to indicate broadly the path, that is to be adopted in meeting squarely the main challenge and problems in higher education;

(c) To make out a case for planned, collective and cooperative efforts and to establish thereby a case for an immediate establishment of an Academy for Higher Education;

(d) To outline, broadly, the organizational and administrative structure for such an Academy and finally,

(e) To indicate a perspective programme of action for such an Academy.

1.2 The main purpose is to initiate action

It must be, in absolutely clear cut terms mentioned, that the purpose of this note is not merely to initiate thinking but to initiate a determined action, that is so immediately needed, in this sector of education.

1.3 Broad synopsis of the note

The note firstly incorporates (a) an analysis of the main challenge before higher educational system, followed by (b) an appreciation of the progress of higher education, including an analysis of achievements as well as inadequacies (c) in the light of future trends, the main direction of efforts are

indicated, followed by (d) relevant organizational and administrative concepts regarding the Academy, finally (e) certain perspective programmes are indicated, incorporating detailed appendixes.

2.0 Main challenges

2.1 Assumptions

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

2.2 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. 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".

2.3 Main challenge : creating right type of men; increasing and improving quality and character of human capital

Arising out of the above mentioned assumption, is the second assumption, namely, 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 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 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 sympathies 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 and burdens, 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 infant democracy). Such persons should neither be indisciplined, nor ease loving, self-centered parasites, and finally such a person who has a faith in the cultivation of social sensitivity of charity and compassion towards the under privileged sections of the community and endeavouring 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 costs, in terms of material financial and human resources, practical efficiency, high technical skill, appreciation of dignity of work, clarify 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. It is on the background of the above stated challenge that the progress of higher education is to be measured.

3.0 Progress of higher education - during last decade in Maharashtra

3.1 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 extraordinarily 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 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.

3.2 Development and growth of higher education in Maharashtra

(I) 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 16.78%.

(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.85.55 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) Equalization and balance - A good deal of equalization of educational opportunities has taken place. This is the result of the policy of a deliberate development and expansion of higher educational facilities in the under-developed region (e.g. Marathwada).

(II) In addition to the above mentioned developments in enrolment, institutions, teachers and expenditure and the development towards regional equalization 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 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 organized 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 has been taken up by the Hon. Minister for Education in formulating a "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. Maharashtra is the only state in the country where there is a defined educational policy of the community. It is this policy what is now being implemented in the state.

(c) Setting up planning units - In the educational administrative set up of our state government, a separate wing for "Planning" has been created. It is this "Planning Wing" which is expected to evolve action plans for the implementation of educational policy. In the field of higher education it is reported that 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 is not only a desirable social service but it is an "essential sector" in the over all plan of the state development.

3.3 Disappointments and inadequacies

With all the above stated triumphs, there are disappointments, the opposite of the bright side of this educational decade, - the dark side. Following are the main elements of disappointments.

(a) Undergrowth and inadequate growth - Despite all educational progress, multitudes of children are still without any education. There are millions of adult workers, farmers, professional men and mothers who are not getting any training, uptodating and improvement, or who are not getting any chance for literacy which they need to raise their productivity. Facilities for higher education are still very much under-developed and inadequate and unevenly distributed resulting into imbalances.

(b) Failure to adopt to changing needs of the community - There is the general failure of the higher educational system to grow and adopt 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 calls for accompanying great quantitative expansion with equally great changes in the structure contents and methods i.e. qualitative improvements.

(c) Maladjustment and the paradox of scarcity and abundance -

It is 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 the higher educational system is producing fast, at present, in the state. It is this man power imbalance that clearly indicates an imbalance, a lack of adaptation of the higher educational system, to the needs of the community.

(d) Maladjustment between quantitative and qualitative

expansion - As stated above with a heavy focus on quantitative 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.

(e) Absence of any serious effort to plan higher education -

In fact, in the sphere of higher education there had not been any serious attempt in planning. Most of the growth is "unplanned". Whatever broad outlines of plan were prepared, these outlines even, had very serious difficulties. Fundamental difficulty, in this context, 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.

(f) Vacillation in priorities - In the absence of any over all integrated planning, basic educational priorities vacillated. Such a vacillation had been well-marked in general educational planning, priorities jumping from primary education to vocational

developed due to historical facts and still continue as legacies of the past, (d) the legacy of inadequate finance still continues. What is needed is the open acceptance of the fact that it is not possible to escape suddenly from these inhibiting legacies.

(II) Negative factors - Then there are a number of negative factors that are at play. Important amongst the negative factors are:

(a) Basic inertia and social conservatism of the entire educational system and more particularly of the higher educational system. This conservatism and inertia has now resulting in enlarging rapidly the gap between the relative rates of renovations within the higher educational system and changes rapidly occurring within the society. The failure of higher educational system to ^{adapt to} the rapidly changing environment cannot be denied merely by the presentation of statistical figures, relating to the growth in enrolment growth in stitution or in the size of teaching force or even equipment and finance. The situation becomes serious particularly because the main impulse during the last decade, has been merely that of doing on a much more larger scale what was done before and not that of appreciating ^{the} necessity of simultaneously bridging the gulf between the product of the system and the needs of the community.

(b) Half-hearted attitudes - Then there are those half-hearted attitudes towards the idea that education is an essential investment in the development and growth process, and also the idea that educational growth needs planning. It is apprehended that even till now, we are not either quite clear, or determined about the above said aspect.

(c) Absence of dynamic efficient and effective educational leadership - One can well understand the absence of educational leadership that could significantly influence the course of educational development in the past. However, it is a matter of great concern that at present in the higher education there is an absence of a dynamic leadership which could visualize the

future higher educational needs of the community, which could understand present realities, which could identify the path that is to be adopted in meeting with the challenge, ^{and} inspire a group activity. It is an observation that such a leadership is wanting at all levels top middle and lower - and in all ranks. It is in the absence of such a leadership, that one really feels concerned about the effective implementation of education policy that has been with a vision zeal and idealism, initiated by the Hon. Education Minister of Maharashtra State.

(d) Absence of integration in educational social and economic planning - There is the observed failure of higher educational planning to become integrated with the relative planning activity. In our State of Maharashtra it must be plainly stated, that so far, there has not been any parallel planning effort in education and economy as a whole, in man power and social developments. In fact it is very strongly felt, that such a planning is very much needed to provide to basic frame work for planning in higher education and its growth and development.

(e) Fluctuations in policies - It appears that we have still not escaped from our tendency of changing the higher educational policy and goals and making material changes in the plans - already approved.

(f) Psychological resistance of administrations and management- It is observed that with reference to many educational administrators and managers at the key positions, there is a psychological resistance to planning in higher education. Usually this resistance is under cover. It is observed that administrators and managers apprehend that the process of planning might usurp their own prerogatives and authority.

(g) Weak educational administration - The observation is that the educational administration is weak and the administrative structure is not well adapted to the enormous developmental task thrust on the administrative set up, the basis of which had certainly not been development and growth.

(h) Scarc and uncertain resources is another inhibiting factor. Financial resources are not only scarce, they are uncertain.

(i) Lack of facts and data - Almost throughout the period and even upto now, lack of reliable, upto date data continues to be quite serious. It is this situation that makes the appraisal, regarding the present position and trends in higher education, very much difficult.

(j) Tendency of piecemeal planning - Finally there had been the general case of piecemeal, short-range and unintegrated planning. Educational plans of the state, could not command a comprehensive coverage embracing all levels and parts in a single, quantitative as well as qualitative perspective. It is apprehended that in the absence of a long term perspective reaching beyond single year and covering a period comparable to the length of at least the formal education itself, no fruitful results can be achieved.

4.2 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 under growth and lop sided growth, maladjustment and imbalances are clear indicators of inadequacies in the fulfilment of objectives both in quantitative and qualitative terms. Inadequacies are indicated by the deficient and sharply declining internal output of the higher educational system. External output also is equally unsatisfactory (as would be obvious, if the yields of higher education are related to the needs of the economy). 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 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.

5.0 Future trends

5.1 While the difficulties involved in removing these deficiencies themselves are quite serious, there are very clear signs that these difficulties would be more 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 prospects they create for us. Following are the significant aspects of these forces.

(a) Rise in the social demand for higher education - The first 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 to have 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 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.

(b) 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 task for a backward nation to come parallel to the stage of knowledge development with advanced 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.

(c) 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 education show that accelerated expansion of 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 hither to. 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 teacher student ratio - all these aspects are bound to increase "staff costs" and with these, unit costs. The inevitable conclusion is that there is going to be a tightening of the financial squeeze.

(d) Growing maladjustment between higher educational system and the environment - There appears to be very remote possibility that an immediate, energetic action would be taken to adapt our curriculum contents and student flows to the exigencies of man power requirements and to the changing conditions, in which to-days student will live tomorrow. Obviously there would be the rapidly growing maladjustment.

(e) 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.

(f) Growing discontent of the youth - It is observed that such a discontent already exists. Discontent is due to the fact that the present day higher educational programmes, 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 patience. The result would be growing discontent of educating youth.

6.0 Main line of action : Efforts to increase yield by increasing efficiency through innovations and improvements

6.1 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 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 education should not lag behind. It is therefore very much necessary that within the coming ten years, major changes in all aspects of higher education, in its structure and even institutional models should be initiated. It must be quite clear that our present day higher educational institutional structure was not designed to do (namely development) what the structure is now called upon to do and therefore it is apprehended that, if appropriate changes are not introduced soon, this structure is likely to crack under pressure.

6.2 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 (a) research, planning, development and increasing efficiency and strengthening finance. (b) modernisation of educational management and administration and (c) experimentation, (d) introduction of innovation (e) extension and involving community into a collective action.

6.3 Research, planning development and strengthening finance:
the institutional approach in initiating innovations

(a) Various problems - 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 arise are (a) How innovations in the system are going to take place on a scale as 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. How, against this background, is 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 strong 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".

(b) This research is different from past research - This suggested research activity is to be completely different from the traditional research activity, undertaken 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 objective; aimed at finding solution to unsolved problems, its specific purpose being to find out ways, device 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 process and contents. By the very nature of this research activity, it is clear that 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. It is, therefore, certainly cannot be 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".

(c) 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 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 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.

(d) Basic step is of identifying existing talents and co-ordinating existing facilities in an institutional set up - In the organization of above said research activity, it is neither necessary to develop new techniques nor new talent. These techniques are not unknown in the institutional circles, in higher education - talent is wide spread. What is mainly needed is the identification of the talent, for 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 to have a great impact, then these talents cannot be kept scattered aimlessly in all directions, at once. They shall have to be concentrated on selected problems, with utmost intensity to break through, to the significant new knowledge and techniques and practices. All this is utmost necessary, that all our efforts are to be directed towards solving within the shortest possible time specific problems and the needs of the practical administrators, educational planners and managers. As indicated earlier, research is the business of many teachers and specialists and research workers and these do exist in our higher educational set up. Under the existing situation our six Universities in Maharashtra have 32 colleges of education out of

which 12 are government colleges and 20 non-government, private colleges. (Bombay University 3 - (1 Government + 2 Private), Nagpur University 9 - (4 Government + 5 Private), Poona University 6 - (All Private), S.N.D.T. University 2 - (All Private), Marathwada University 5 - (1 Government + 4 Private). In addition to these then 152 junior colleges of education. Then there are the departments and faculties of education in the universities. The basic problem therefore is to plan and initiate research and planning activity of each department of education at the university, followed by the activities in the respective colleges of education. The present day need is to mobilize "brain power" and potentially valuable experience and for that purpose, to identify talent, and facilities, coordinate these for applying to the problems of educational development in an 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.

6.4.0 Planning Function of the Academy

6.4.1 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) 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 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 mal-adjustments, wastages and frustration should 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.

6.4.2 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 performance 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.

The main process in planning higher education is not a sporadic process, as it is for the present, ending in the preparation of a plan. Planning is to continue through out 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.

6.4.3 Stages in planning - The main stages would be

- (1) First stage: determining the policy - This has been done in our state.
- (2) Second stage: drawing on the strategy and outlining short, medium and long term perspective plans.
- (3) Third stage: would consist of a variety of activities including short run programming of an individual single sector and inter-sectoral programmes.

- (4) 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.

6.4.4 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 objective are not the "only" objectives. Social cultural and human development (development of the integrated personality of the student) are also 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 and 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 modernization of educational administration but also

to develop appropriate educational leadership that would initiate a basic shift in the administration and management approaches.

6.4.5 Coming decade - A decade of adaptation - It must be stated by way of a conclusion that the hall mark of last decade was a quantitative expansion of higher education. Now the hall mark of the coming decade should be greater adaptation, change and innovation and for this purpose rational formulation of plans and therefore that of planned determined and decisive, actions.

6.5.0 Strengthening finance

6.5.1 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.

6.5.2 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. 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.

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 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.

6.5.3 The second line of strategy: Improving efficiency:

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 the lease problem of financial constraints will not be solved. Higher educational system of our state, shall have to resort to the second line of strategy, namely that of making strenuous and continuous efforts to improve external difficulty 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. Changing 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 modernization of the administration and management in higher education.

7.0 Modernization of higher educational management and administration

The training function of the proposed academy

7.1 Adaptation of management and administration to the needs of higher educational action programme - There is always a gap between the plan and the implementation and this gap is mostly covered by a number of administrative and managerial actions. 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 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 adopts smoothly to this new requirement.

7.2 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 preoccupied with the rules and procedures. Organizational arrangements, staffing, the inbred attitudes and self-conceptions of its roles, are all, obviously, illadapted to deal with the management tasks and challenges that now confront the higher educational system. It must always be remembered that the present day administrative and management structure were not created to meet new challenges of development. 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.

7.3 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 mobilizing 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 an 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.

7.4 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 that (a) at the top of higher educational system, a well-informed leadership system, reinforced by a competent team of specialists (b) creation of strong and creative leadership through out the system - at 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 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.

7.5 Development of a "core programme and the organization of training scheme - All the above stated action, (change in 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.

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.

7.6 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 that cannot plan their own future in an orderly manner, can neither undertake the state level planning of higher education or lead the higher educational system to plan itself. They cannot take up a lead in evolving initiating and conducting training programme and deliver the good quite immediately, for developing appropriate managerial attitudes and ability in higher education. However, universities are expected to participate actively in conducting research, rendering information service and undertaking follow-up and evaluation of the entire programme, from time to time.

7.7 If immediate improvement is to be initiated then there is no alternative to training - An objective evaluation of our efforts to modernize 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 being (a) dearth 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 believed 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, it is bound to exert influence and bound to press for immediate action. It 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.

7.8 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) There is much of the "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 strategy to mobilize brain power within the system and the potential valuable 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.

8.0 Extension function of the academy

8.1 Experimentation and introduction of innovations - The next problem is the introduction of the research product, namely the innovation, in 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 long and complex 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,

follow up, and 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 through a system of a supervision follow up and evaluation at each stage. For this, 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 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 met and for this purpose a process of communication, conversation and exchange of ideas and experience, convincing, creation 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.

9.0 Organizational administrative and financial aspects of the "Academy"

9.1. Basic pressing need is the performance of specific

functions - Main propositions, so far, had been that (a) if higher educational system of our Maharashtra State is not to remain static, conventional and therefore ornamental, if it is really to contribute towards economic and social development of the state, then it is necessary to ensure that certain specific functions are performed

continuously and efficiently. (b) Mainly these functions are (i) Research, (ii) Planning, (iii) Strengthening of finance through supplementation of new resources and through the development interval efficiency and improvement of yield and production, (iv) Education and training function through ^{it} development of managerial efficiency, educational leadership as well as modernization of courses contents syllabus text books, techniques and tools in the educational activity, is to be achieved and finally (v) Extension function. (c) It is for the efficient and continuously progressive performance of these functions - that the creation of an institution namely the 'Academy for higher education' is strongly recommended.

9.2 The Academy and its organization is to be functional - What is important is the performance of functions and not the creation of a new institution. Academy is not suggested as an "ornamental institution" but specifically a functional institution. If by any arrangement, efficient performance of above stated functions can be ensured, then certainly there is no insistance to create the Academy for its own sake.

9.3 Existing establishments are not appropriately well-fitted to undertake above mentioned functions - However an objective examination indicates that at present, there exists no administrative managerial or academic set up, that can appropriately undertake the responsibility of the performance of above stated functions. One arrives to this conclusion, because of under-mentioned reasons.

(a) All India Staff College for Educational Administrations and the Academy - It is learnt, that the Government of India (in collaboration with the University Grants Commission National Council of Educational Research and Training and some "Foundations") is planning to establish an All India Staff College, for educational administrations. However, it is felt that this "All India" college would mainly be dealing with education and training and not with other functions like research, resource

planning, finance or extension. It is also felt that an "All India" body would not be in a position to appreciate appropriately the state and regional requirements. It is therefore felt that in the Academy, nothing conflicting is being suggested. In fact it is hoped that, in matters of education and training, the Academy can function as a counter part of the All India Staff Training College. Such an arrangement and collaboration is likely to be more fruitful.

(b) The State Institute of Education, Maharashtra Government and the Academy - The State Institute of Education, Maharashtra Government, is working on similar lines and is really doing a good job. However, the scope of activities of the State Institute is different and restricted to secondary-level of education. Administrative management and academic problems at higher educational levels are varied and complex. The State Institute is also not doing much comprehensively in research and planning. The conclusion therefore is that 'with the given set up', the State Institute cannot possibly operate as an Academy for higher education. Even if during the "promotional stage" certain functions of the academy are undertaken at the State Institution, later on, in the immediate future, a time is bound to come, when a distinct independent organizational establishment would be needed.

(c) Gokhale Institute of Politics and Economics and the Academy - In our state, there is another important research institution. "Gokhale Institute of Politics and Economics" is an internationally renowned establishment, undertaking research and teaching function in Economics, Politics, Sociology and Education. Gokhale Institute had been undertaking research and studies in planning development and growth etc. and it is quite likely that the Institute may even undertake "applied research". Although education and training is very much a part of the activity, one is not, at this juncture, very much clear as to what role the Institute would play in the modernization of educational administration, ^{or} mobilization of resources and whether

"Institution" would undertake any "extension" function. However, possibilities of Gokhale Institute working in the initial stage as the "promoter" are to be fully explored.

(d) Office of the Director of Higher Education, Education Department - its 'A' and 'R' Branch and the Academy - It is true that the Directorate of Higher Education and 'A' and 'R' branch under the Department of Education are very much concerned with some of the important function of the proposed Academy. However, either the Directorate of Higher Education or these branches and sections cannot undertake any responsibility about strengthening of finance, education and training and modernization of administration and management.

(e) Arrangement of training educational administration at the staff college and Academy - It is understood that there is a proposal, initiated by the Directorate of Higher Education for undertaking a part of education and training function by arranging training to educational administration at Government Administrative Staff College. However, it is felt that under such arrangement, research and planning and extension work would be separated and isolated from education and this would result in completely losing the motive spirit of adoption, modernization innovations and modernization.

(f) Universities, their faculties and departments of education, colleges of education and the Academy - None of the universities, as they stand organized and operating at present, as well as their faculties, departments and colleges of education, are in a position to undertake the responsibility of performing the proposed functions of the Academy.

9.4 Various levels of operations and the need for coordination

While suggesting a pattern of organizational structure, another aspect is to be appreciated. Here are a number of functions that are undertaken by various agencies at various levels (Central Ministry of Education and Youth Services, University Grants Commission, National Council of Educational

Research and Training, Asia Foundation, State Ministries for Education Finance, Social Welfare, Universities and their faculties and departments of education, colleges of education, officers in charge business and finance in the university and colleges etc). Some of the functions proposed to be undertaken by the Academy are being performed by these agencies. Since duplication is to be avoided, the Academy is to operate through these agencies. The main approach therefore is that of planning programming and coordination, control and evaluation. The Academy therefore is to operate as an "apex" body acting through various regional and local agencies, through a process of co-ordinated approach. A detailed operational scheme for this purpose can certainly be worked out and submitted.

9.5 Broad outline of organizational set up

On the basis of above mentioned considerations the undermentioned organizational structure for the academy is suggested.

- (a) For achieving vertical and horizontal coordination, there should be an advisory committee which should consist of
- (1) Minister for Education, Maharashtra State;
 - (2) Director of Higher Education,
 - (3) Director of the State Institute of Education
 - (4) One representative of the joint committee of Vice-Chancellors - a vice-chancellor,
 - (5) One representative of Central Ministry of Education,
 - (6) One representative of University Grants Commission,
 - (7) A representative from Asia and other foundation,
 - (8) One representative of Principals,
 - (9) One representative of teachers,
 - (10) One educational expert and finally
 - (11) Director of the Academy as the member-secretary.
- (b) For various types of specific actions 'task' forces and working group are to be created.

9.6 Mobilization of resources

- (i) Mainly three types of resources would be needed
- (a) human resources in terms of appropriately qualified trained men
 - (b) material resources in the form of establishment includes

library and statistical laboratory and (c) financial resources.

(ii) There is no doubt that sizeable funds would be needed.

(iii) While the state government is to shoulder basic responsibility of finding out finance, there are a number of other agencies that can be tapped. International organization like UNESCO, Research Programme Committee for Higher Education, International Association of Universities, various foundations, central, Union Ministry for Education and Youth Services and University Grants Commission can certainly be fruitfully approached. A part of the funds can also be collected through the universities and colleges. (iv) In view of the significance of the activity and the agencies that can be approached it is confidently felt that finance is certainly not the major obstacle.

10.0 Concluding observations and immediate actions

10.1 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 wide and distressing 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 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 or disaster. It is for the purpose that a top priority to the suggested scheme is demanded.

10.2 Needed a dedicated determined team work - What 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 the 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. It is for this task, is essentially needed the 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 the Academy is 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 a position to contribute materially for the economic social cultural and political development of our Maharashtra State.

10.3 Needed 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 specifically 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 there is the essence of the problem. Hence the specific recommendation to appoint a committee for immediate consideration and action.

Appendix No. 1SUMMARY AND RECOMMENDATIONS

- 1) The main purpose of the note on Academy for Higher Education is not merely to initiate thinking but to initiate a determined action.
- 2) 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 the awareness, aptitude and ability of human capital.
- 3) 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, (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.

4) 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 like basic inertia and social conservatism, half-hearted attitudes, absence of effective educational leadership, 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 peacemeal work.

5) Main future trends are towards (a) Rise in the social demand for education, (b) Explosion in knowledge, (c) 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.

6) 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. 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) through experimentation and gradual introduction of innovations.

7) Operational details of above stated steps and stages have been broadly worked out and presented.

- 8) The inescapable conclusion is that these functions must be performed. Efficiency continuity and co-ordination demands that these functions must be performed institutionally.
- 9) Whether these functions can be undertaken by any of the existing Maharashtra Government Organs or any other existing institution is to be examined. The main conclusion is that where^{as}/it may be the case that in the initial promotional stage, these functions may be initiated by any of the existing institutions, ultimately a distinct, full-fledged institution would be necessary. Thus for initiating a planned change in higher education immediate establishment of academy is needed. The Academy is to act as a permanent agent of planned change.
- 10) A brief outline of the organizational structure of this proposed Academy as well as approaches regarding the mobilization of resources for the Academy are 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.
- 12) Finally in appendix there are in addition to this (i) summary (ii) a note on inventory of important research needs and organization of research and planning function in the Academy, (iii) A note on the educational and training function of the Academy, incorporating even broad training courses for educational administrators, managers and executives, new entrants and educational planners, (iv) Next to this is a list of statistical tables followed by some 25 tables. Finally (v) A brief bibliographical note to this work is added.

Appendix No. 2(A NOTE ON RESEARCH FUNCTION OF THE ACADEMY)INVENTORY OF RESEARCH NEEDS IN HIGHER EDUCATION
AND ORGANIZATION OF RESEARCH

1. Main objective of research is the improvement in the yield of higher education : The main purpose of organizing the research activity under the Academy, is to improve the yield of higher educational system in Maharashtra. Improvement in yield is to be achieved through (a) development of internal efficiency and (b) increase in the external productivity.
2. Significance of efficient management in the maximization of output: The first approach is the development of internal efficiency. Unfortunately, even so far, the importance of efficient management in higher educational institutions is not realized. Efficient management is the strategic factor in ensuring, within the given limits of resources, the maximization of a desired type of educational output. Since the available resources for higher education are acutely poor, efficient management is the only way to optimise. Poor management not only means an immediate and long term waste, it also means in the higher educational world, frustration and discontent. It is for this reasons, that the programme of management development becomes a strategically important, prime most programme.
- as 3. First step in the development of efficient management is to undertake and organize, fact finding adaptational and developmental Research. It is an axiom in management development, that improvement in management is a function, firstly of management education and secondly of the utilization of trained personnel in the performance of executive and administrative jobs. As for the first, the main object of management education, teaching and training, is to improve current higher educational management practices. Here the questions that

arise, are as to, in what context the training is to be given and what is to be taught (when we have no idea as to what are these "current practices" in the higher educational management, which we propose to improve through a process of training and education? Should we teach educational management

practices that have been practised with some success in our higher educational system in the past, or new techniques that have been tested and verified elsewhere? But the main trouble is that we do not know what are the practices that are being followed in our higher educational system. We have no idea as to what are the current practices that are in operation at present in the higher educational management, - practices which we propose to improve through education and training. It would really be absurd to talk of improving an entity of which, we practically know nothing. It would be equally academically unsound to entertain an approach that all that is indigenous is inefficient and all that is imported, is excellent and therefore blindly to be adopted. In a poor Maharashtra State of ours, it would be wrong to teach practices (without any consideration of adaptation of these practices to our conditions) that are followed in affluent efficient societies. It would equally wrong to discard all that comes from affluent and modern societies. Therefore the logic is that for improving our practice, training and education in higher educational management is needed; and for making this training more relevant to the conditions and needs of management in higher educational world, there is an immediate need of undertaking, empirical fact finding, research (with a view to getting first hand knowledge of the universe and with a view to finding out what in the higher educational management techniques is to be adapted and how is to be adapted?) Without such a fact finding and adaptational research, training and education in higher educational management would be abortive and futile. The immediate

need therefore is to undertake an organize, "fact finding adaptational and developmental research.

4. Second step is the improvement of external productivity through Planning and for planning, undertaking organized research : Improvement of educational yield through increasing the external productivity is closely connected with the better adaptation of the higher educational system (i.e. the contents structure, courses, curriculum and the teaching methods) to the life needs and aspirations 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, firstly, collection of statistical data shall have to be undertaken followed by diagnostic studies and case studies in the educational, economic, sociological, cultural, demographic, technological and scientific aspects of the life, needs and aspiration of the community, shall have to be done. The whole process, of drawing up of a plan, collection of data for the purpose of diagnosis, forecasting manpower requirements, choosing priorities and experimentation, belongs to research. These specific forms of research are themselves based on more general research. Thus, while there are certain general themes for research like typology of higher educational development, standard strategies of higher education, methodologies to estimate general output, comparative efficiency of various types or techniques of education, there are also the problems like perfecting mathematical models, calculation of global, educational and specific higher educational resources, costs measurement of unit costs etc. in higher education.

5. The research is to be mainly applied : It is generally stated that there are three types of researches (a) fundamental (b) applied (i.e. one aiming at finding answers to the problems that are relevant to practical operational matters) and finally (c) opinion or attitude research (i.e. say tapping

a body of assessment and judgement made by appropriately qualified people. Although all these three types do contribute to the modernization of administration and planning process, it would be clear from all the above stated analyses that, for the present, we are mainly concerned with the second i.e. applied research. In this applied research, our main activities would be (a) fact-finding data collection, (b) undertaking diagnostic studies, (c) carrying out adaptation (namely contents structure syllabus, methods etc.) studies as well as (d) forecasts and developmental studies, in educational aspects of higher education as well as economic social cultural demographic technological aspects, relating to the life, needs and aspirations of the community. It is these studies and research activities are all the while needed for improving in our yield.

6. The strategy in the research activity: Problems, that the system of higher education in Maharashtra is facing, are large and complex and relatively unexplored. Therefore, for becoming effective and efficient in the various areas of research, a strategy shall have to be developed. It is necessary here (a) to develop a tentative design for research structure, (b) to examine carefully available data and literature including operational research surveys etc. all that is scattered in the files, old records of many agencies and institutions, (c) to undertake pilot projects of field investigations aimed at testing the hypothesis, methodology, feasibility, ascertaining the size of the sample to ensure reliable conclusions and finally (d) to have the final design of the project to be followed and completed.

7. Scope : The scope of projects would vary from one man to working for few months, to the various teams working for years. Similarly variations in costs are bound to be present. It would be always convenient to break a large project in small

components that would be manageable and complete within a short period of course, with the arrangements for ultimate co-ordination of results.

8. Main difficulties (a) development of inter-disciplinary team and (b) finance: It is necessary to state that most of the projects will call upon a variety of skills. It is not only the educationalist, educational administrator or even educational planner, but even the economist, and the social scientist would be needed. In each of these broad categories, experts with specialized skills like educational accountant, educational budget officer, comparative educationalist, psychologist, demographer, economist specialized in cost, price analysis, public finance specialist, econometrician and manpower economist would also be needed. All this means the work of an inter-disciplinary research team.

Obviously, the main difficulty would be that of the shortage of appropriately qualified competent research workers. This problem can be solved by having a basic core of research workers, and then developing an inter-institutional collaboration. Perhaps the main problem would not be that of getting people from different disciplines, but that of making them work together, as an inter-disciplinary team - and further that of making them work, according to a strict time schedule.

(b) Finance: Shortage of funds is another important problem. Usual experience is that there is a chronic shortage of funds for social science research, especially educational research. The observation is that unfortunately so far, in social sciences and education, there has been a wasteful use of scarce resources - the limited resources being utilized on fragmentary, uncoordinated ineffective projects - where concerted major efforts would have yielded positive results. Then again, in relation to the amount spent on physical research, the money spent on research in the 'biggest industry' of ours, namely Education, it would certainly not be inappropriate to find more

money on educational research, particularly when, it is quite obvious that "odds are promising, and the stake high enough to gamble if really this is a gamble!"

9. Major research needs and the specific projects to be undertaken for research activity in the academy: Major research needs are to be presented under two main heads. (a) Management and organizational research projects aiming at improvement of the internal efficiency and (b) Planning research projects aiming at the improvement of the yield through increasing external productivity.

A) Fact finding diagnostic studies in Management and Organization

Project Set No.1 - Higher education management

1.1 Organizational structure authority pattern.

1.2 Administration practices - Specific functions and their performance - (a) Institutional planning (i) Routine planning - Admission Allotment of work, time table - cocurricular extra-curricular activities of students, evaluation of performance. Records, Returns, Visits inspection, Budget Research. (ii) Development and growth planning. (b) Operational research.

1.3 Decision making principles procedures practices. Direction Communication. Motivation morale building. Control. (a) Evaluation.

1.4 General administration - Office management information systems controls - Manuals etc.

1.5 Leadership in higher educational institution

1.6 Participation of teachers and of students in the conduct of affairs.

1.7 Participation of higher educational institution in the educational planning of the region.

Project Set No.2 - Specific areas of administration

2.1 Financial management and administrative practices

1.(a) Functions in financial management, (b) Analysis of financial needs, (c) Form of capital (fixed working long term

intermediate short term - recurring, non-recurring, (d) Financial structure (e) Cost of finance.

2. Financial Administration - (a) Financial forecasts and budgets, (b) Cash cycles and current finance, (c) Inventory management, (d) Maintenance, depreciation, (e) Income management, (f) Administration of reserves - including management of provident funds, (g) Audit financial records etc.

3. Comparative analysis of expenditure of private and government institutions - Inter-institutional - inter regional comparisons.

4. Financial problems of new and old higher educational institutions.

5. Role of private bodies and government in the finance of higher educational institutions.

6. Exploring the possibilities of mobilizing external finance, including institutional and corporate finance.

2.2 (B) Academic Administration

(1) Academic organization - Faculty (Teaching staff) Organization and Administration Department institutional executives - university faculty - university executives.

(2) Academic policies and procedures

(a) Policies and procedures regarding academic affairs - Admission, courses curricular, Instructional methods, Institutional programme. Follow up, evaluation testing allied academic work - Research - including institutional research - Adult education continuing higher education - cooperative and general extension programme - correspondence, study programme, service and external educational assistance programmes, calendar, registration and students records superior students, field experience etc.

(b) Policies regarding academic personnel - (i) Appointment, orientation, training, placement, work load, evaluation of work promotions etc., (ii) Faculty (Teaching staff) rights and

responsibilities, (iii) Academic freedom, (iv) Faculty (Teaching staff) role in the governance of the institution.

(c) Policies regarding student personnel administration -

(i) Organization of students personnel administration, (ii) Students personnel policies - Admission, orientation of new students, Advisement, Conselling, financial aids, students activities - governance of students community - publications, disciplinary administration.

(d) Policies regarding learning resources and instructional resources: Library, laboratory, museum etc. Instructional services and communication systems, programmed learning service, learning laboratory and independent study service.

2.3 Adaptation of academic working with the life needs and aspirations of the community

2.4 Personnel management and administration - Research items for academic personnel administration are already mentioned above.

(a) Organization and administration of academic and non-academic personnel.

(b) Personnel policies - Recruitment training promotion morale records. Internal communications etc.

2.5 Administration of space and physical plan administration

2.6 Administration of public relations

10. Having presented so far, these research project items that study mainly administrative and management facts at the micro institutional level, it is now necessary to enumerate research items of macro character, items that are mainly meant for improving external productivity of higher educational system through planning and better adaptation of the higher educational system to the life needs and aspirations of Maharashtra community.

Project Set No. 3 - Research studies regarding planning process

Higher educational planning is like a social process. It is to grow through a series of stages. However, such a process is not likely to have any effect, unless the foundation of this process are well-established. Foundations of planning process are (a) good working tools in the form of sufficient basic facts, and methodology, (b) Favourable environmental conditions including effective organizational and administrative arrangements, together with the competent staff and finally above all, a strong support of political leaders and public opinion, emerging out of a conviction that higher education is all important and as such deserves very high priority. Based on these considerations, following projects can be considered.

3 .1 Comparative study of Higher Educational Planning - In other states and in other countries, especially the study of the integration of these plans with the economic and social plans. This study is also to incorporate a study in the structure and organization of higher educational planning machinery - process by which objectives and targets are established, means by which priorities are set, decisions taken and implemented. Basic aim is to understand basic operations in the higher educational administration.

3 .2 Organizational and administrative matters pertaining to higher educational planning - Mainly the issues regarding geographical aspects of planning coordination between state regional and district planning.

3 .3 Higher educational innovations, research and development - and the operational process of adaptation of innovations.

Project Set No.4 - Manpower aspects

Research studies regarding manpower aspect

One of the important task before the higher educational system of our state, is to create for economic and social development of Maharashtra a supply of man power of the right kind and right number. Manpower projections therefore are to constitute

as one of the important criteria for determining the priorities between levels and types of higher education in the qualitative and quantitative expansion in future. These requirements, there after, are to be translated in terms of output and thus are to serve as an important criteria in the establishment of higher educational targets. It is the work of higher educational planner to take into account the man-power, needed for not only the economic but even social and cultural development and then to establish targets. It is on these considerations that the under mentioned projects are suggested.

4.1 Project - Adjustment of popular demand for higher education to the practical needs of social and development - Based on our social economic cultural and economic traditions as well as based on our own values and prejudices, our Maharashtra State has its own pattern of demand for higher education. It may be that this may not be the one, which the economic development of our State requires. If higher educational system is exclusively or primarily adapted to the popular social demand, it is not likely to correspond to the patterns of skills that are needed for accelerated economic growth and social development. If on the other hand our higher educational system is adapted exclusively or primarily to the needs of skilled man power (with little regard to the private preferences of parents and students) this would result in considerable public dis-satisfaction and even in an idle, under-utilized capacity. It is therefore necessary to find out where private demands and economic needs deviate and what can be done to alter private demand, so that a good adjustment between private demands and national needs take place. It is for this purpose that the project is important.

4.2 Project - Adapting professional higher education to the needs of development - Whereas there is no automatic adjustment between professional educational programmes and the needs, it is necessary to review the situation and initiate adaptation and adjustment. It would be necessary to assess from time to

time, on one side the result of the growth of higher educational programmes and on the other the needs in professions and sub-professions.

4.3 Project - Development of middle level skills & abilities -

Amongst the various groups of skilled man power required for modernization and development, middle level personnel are numerically most important. Usually there are mal-adjustments and the resulting shortages of middle level skills. The main aim of the project is to identify such shortages and to suggest ways and means of overcoming these rapidly and unexpensively, so that higher educational programmes adapt well to the actual needs.

Project Set No. 5 - Projects pertaining to costs and efficiency

Main reasons for undertaking these studies are (a) cost is a matter of major concern to the higher educational planner as finance is the main limiting factor, in educational development. Shortage of reliable cost data and the inadequate techniques are major obstacles in planning higher educational development, (b) Cost data and cost analysis serves an essential function. They make it possible to appraise merits of alternative ways of pursuing the same educational task, (c) They are necessary for determining alternative patterns of allocating limited and fixed educational resources between different sectors of the higher educational system, (d) They assess the financial merit and demerit of changes and innovations, (e) They test efficiency of an established educational practice, (f) Cost analysis is the principal means of assessing efficiency of the educational system - a problem that confronts us, who have scarce resources of every type, finance, building equipment teachers etc., and therefore who cannot afford to use these uneffectively and inefficiently. Finally (g) Cost indicates the economic feasibility of a higher educational plan.

However, certain qualifications regarding cost studies must be mentioned (a) It is a half and misleading truth that cost increasing-change necessarily results in the improvement. There are a number of factors like student-teacher ratio, size of the educational institution, variety of courses etc., that affect aggregate unit costs (b) There are a number of alternative methods of spending the same amount and having the same unit cost, yet affecting marked improvement (improving teaching technology by e.g. team teaching, programmed instruction, performing certain training tasks out side conventional class room, reorganization of teacher training and teacher career and salary structure by putting up premium over quality and performance.) It is therefore necessary to examine these alternatives, not merely in terms of costs but also qualitative and quantitative results then (c) there are areas that really cannot be studied merely by cost data e.g. high drop out rates, lavish building, out dated teaching methods, irrelevant curriculum, under utilization of facilities and bad administrative procedures.

It is on the background of above stated reasoning, that under mentioned projects are suggested.

5.1 Project - Raising productivity and reduction of costs in the higher educational system in Maharashtra.

5.2 Project - Higher educational costs in the developing community (Maharashtra).

5.3 Project - Application of innovations in higher education and its impact on cost structure.

Project Set No. 6 - Research projects relating to finance

Financial burden of higher education is considerable and it is continuously growing. The problem of financing higher education - whether from public or private funds, is therefore of prime importance. Main issues here are (a) How is the higher education financed at present, (b) What are the most effective measures of raising higher educational revenue? (c) What norms

can be established in regard to the pattern of educational finance? It is around these issues that the under-mentioned projects are suggested.

6.1 Project - Methods of financing higher education - A comparative study of higher educational finance, in other states and in other countries.

6.2 Project - Financing of expansion and modernization of higher education.

Project Set No. 7 - Research projects relating to teachers

Teachers are the crucial resource in higher education. In fact, they are the largest single group of qualified man power. As such, few projects that are suggested. The first project deals with the supply and demand of teachers in higher education. The main aim of this project being to understand imbalances existing in adequately and appropriately qualified staff, identifying the measures that are to be adopted in adjusting with the situation the second project deals with the possibility of improving the quality and quantity of teachers.

7.1 Project - Balancing of supply and demand of adequately and appropriately qualified teachers in higher education in Maharashtra.

7.2 Project - Qualitative and quantitative improvement of teaching man power in higher education in Maharashtra.

11. Concluding observations

It is in no way claimed that the above stated list is exhaustive or final. While some projects might be taken to be relatively less important and therefore less pressing, there might be other important significant projects that may also be considered. The purpose of the appendix is to present a perspective. It is on the basis of this perspective that priorities in the schemes are to be decided and a comprehensive, fully worked out, action programme is to be launched.

Appendix No. 3

(A NOTE ON EDUCATIONAL FUNCTION OF THE ACADEMY)

TRAINING AND MODERNIZATION OF HIGHER EDUCATION IN MAHARASHTRA1. Objectives of training programmes

- (a) To make higher educational system active and dynamic by (i) creating awareness of the challenges before us, (ii) developing ability of every type including various types of skills to meet these challenges appropriately and (iii) evolving appropriate attitude at all sectors and levels in higher education.
- (b) To effect a quick adaptation of the higher educational system to the life needs and aspirations of the community through modernization of (i) courses, contents and syllabus, (ii) teaching methods and (iii) evaluation system (experience, so far, in modernization reflects that due to many reasons entire impulse to modernize is lost in the procedures followed by academic bodies, hence a concerted action through a new body and new procedure.
- (c) To develop a dedicated and determined team of indoctrinated planners and programmers, administrators and managers, teachers, educational leaders and student leaders who would act as dynamic agents for planned change and finally and ultimately,
- (d) To improve the yield of higher education in our Maharashtra State through a development of internal administrative managerial and teaching efficiency and through increasing external productivity.

2. Categories of persons to be trained

- (a) Planners, policy makers, decision makers, executives and administrations in (i) business and financial matters and office administration, (ii) academic administration and (iii) students administration, acting and operating at the government, university and higher educational institutional level.
- (b) New entrants to the educational teaching service and
- (c) Student leaders.

3. Types of the courses

There shall have to be "basic" as well as "refresher" courses. It will also be necessary to organize "intensive" training courses, as well as "specialized" training courses. Possibilities of organizing "crash" training programmes "tailored training programmes" as well as "correspondence courses" also shall have to be fully explored.

4. Levels of training courses

Training may be organized on (a) State (b) Regional (university as the base) or district level (leading college in the district being used as the base).

5. Duration

Duration of each programme shall have to be flexible, depending upon the type of the trainees, type of the courses and course contents. While "Crash programmes" may be of the duration of a week, "Intensive full time courses" may extend over twelve (12) weeks.

A broad outline of important and immediately needed training courses

1. For general administrators at the institutional level

1.1 Governing Boards

(Training programme for trustees policy boards)

(a) Title of the board, (b) Types of governing bodies, (c) The composition - representation of special group, of faculty members (teaching community), of students (d) Method of selection - self perpetuating - continuity rotation selection criteria, (e) Compensation to member, (f) Functions and responsibilities, (g) Operational analysis: appointment of various committees and their types executive committee, building and property committee. Investment committee budget and finance committee, fund raising committee, educational policy committee, (h) Powers of the members and boards and their relations with faculty (teaching community), students and other members, (i) Evaluation.

1.2 College (general) administrator (Training programme for chief executive officers (principals and vice-principals)

(a) Administrative theory of higher educational administration, (b) Growth of an institution and bureaucracy in the administration of higher educational institute, (c) The climate - external and internal forces affecting the administration of higher educational institution, (d) Organizational patterns, (e) The system analysis, the operational analysis, information service, (g) Administrative policies, (h) Specific areas of administrative activities - finance and business management, academic management students management, personal (academic, non-academic management. Plant management - Public relations management. Institutional Research service. Office administration, (i) Strategic planning in the development plan (i) Administrative consideration for the institutions undergoing substantial and rapid change, (j) Administration leadership.

2.0 Specific areas of administration

2.1 Business and finance administration in the institute of higher education

(a) Business and finance functions - (i) Financial accounting function, (ii) Record function, (iii) Report function preparation of reports and presentation of statistics, (iv) Budget function - preparation of budget, (v) Costing function - analysis of financial aspects of student management, personnel management, plant management, academic administration, - public relations, management of auxiliary services etc., (vi) Purchase function, (vii) Inventory function, (viii) Investment function - management of invested funds and (ix) Fund raising function - for general - and specific purpose.

(b) Organization of the business and finance section.

(c) Operations, practices and procedures programming.

(d) Control coordination, evaluation. Development of internal efficiency.

2.2 Academic administration

(Training programme for heads of departments)

- (a) Academic goals and objectives - Levels of academic work, field of study, students to be served, research programmes.
- (b) Academic policy - faculty - (teaching staff) personnel policy. Academic standards. Regulations governing students work performance.
- (c) Internal frame work of academic organization - Organization of supporting services - inter-institutional cooperation. Admission. Academic records - and the unit of academic record keeping, calendar.
- (d) Planning academic programme
 - (i) Academic planning for (a) A new college, (b) Academic planning for an established college - proposed changes in the basic academic framework, new areas of programme. Curriculum inter disciplinary work, research - Analysis of anticipated work load. Personnel requirements physical facilities, supporting services.
 - (ii) Contents of an academic plan - (a) Institutional support of an academic planning, (b) Faculty committee and its policy - development of distinct goals, (c) Teaching procedures. Large lectures, tutorial studies, seminars, workshop. Team teaching, team learning, programmed instruction, field work, concentration on a single subject area - (d) course credits by examination, comprehensive examination - self examination by students - selection of teaching and evaluation procedure.

Execution - follow up - Evaluation - Contribution in institutional research - Self-study.

2.3 Student administration

(Training programme for staff members in-charge of students personnel - Welfare and activity services)

1. Framework areas

- (a) Philosophy of higher education and the significance of student services in student centred education.

- (b) The setting.
- (c) The student. What is he, who is he, the social psychological intellectual and financial or economic aspects.
- (d) Psychology - (i) Developmental psychology - adolescence psychology - personality development and integration - personal dynamics, mental hygiene abnormal psychology, (ii) Educational psychology and psychology of learning, (iii) Social and group psychology, (iv) Psychology of counselling.
- (e) Methodology - (i) Individual group, case study, interview. (ii) Statistical methods.
- (f) Students activities, service and welfare - cocurricular activities - and the students participation in the same.
- (g) Administrative process - planning programming organization management control coordination evaluation. Problem of staff and personnel developments in service - training - financial aspects - Purchase and inventory - equipment public relations.
- (h) Administrative leadership - efficiency development etc.
- (i) Specific areas of work.

2.4 Hostel and residential hall administration

(Training programme for officers and staff members in charge hostel administration wardens records etc.)

- (a) Place of hostel in the total educational activity.
- (b) Personality development in the hostel (adivsement and guidance).
- (c) Hostel as an adjunct to formal educational work in the class room.
- (d) Student centred cocurricular activities in the hostel.
- (e) Staffing for efficient administration.
- (f) Student participation in the hostel administration and leadership development.
- (g) Physical facilities in the hostel.
- (h) Financial aspects of hostel administration.

- (i) Admission.
- (j) Records.
- (k) Recognized residential homes and supplementary residential facilities.

(l) Evaluation.

2.5 Educational plant management

(Training programme for estate and property managers)

- (a) Physical planning - space scheduling and utilization space standards for office, lecturing hall, auditorium, recreational halls, residential facilities - specialized facilities - cost estimates budgets.
- (b) Planning new higher educational institution - conversion and transformation of existing institution - branch of an established institution - merger. Educational counterpart of a parent organization - criteria for a new institution - potential of students to be served, community requirements - available resources in money, men, materials - Analysis and development of capital requirements. Capital required for construction of academic blocks, laboratory, library, students activities, administration offices. Housing utility services. Land for extension. Development, capital needed by a rural or urban college. Real state acquisitions modest beginning - possibility of mobilizing limited internal sources - dependency on outside sources. Capital budgetary and financial administration.
- (c) Physical plant administration - functional aspects - maintenance security and safety insurance - organization for emergencies - financial and costing aspects - preparation of budget estimate - necessity of costing and keeping cost records. Policy regarding allocation of direct and indirect costs. Organizational aspect - staff establishment - developmental aspect - programming designing and construction of new facilities for books store, housing, food services etc.
- (d) Special areas in plant management.

2.6 Personnel administration

- (a) The type of the staff - academic, non-academic.
- (b) Job analysis and qualification standards.
- (c) Recruitment policies and procedures.
- (d) Training control, morale.
- (e) Compensation, benefits.
- (f) Placement.
- (g) Work allocation and work schedules.
- (h) Evaluation of work.
- (i) Promotions etc.
- (j) Records.

3.0 New entrants in academic professions (For college teachers, joining teaching profession)

3.0 Orientation of new teachers

- (a) Philosophy of higher education - Basic values and faiths.
- (b) Psychology - Developmental psychology, Psychology of personality development. Abnormal psychology social and group psychology. Psychology of counselling and educational psychology or psychology of learning.
- (c) Methodology of work - Also including educational teaching methods - lecture tutorial guidance batch, courses curriculum system. Work programming. Lesson preparation, class control discipline etc.
- (d) The environmentology - The community, the management (institutional) tradition organization practices etc.
- (e) The student - What is he, who is he? His needs. Tension problem of students adjustment to the academic work.
- (f) The teacher - His multiple role. His responsibilities to
 - (i) Responsibility to self, (ii) Responsibility to his discipline,
 - (iii) Responsibility to his colleagues in the college, university and the educational community, (iv) Responsibility to students, (v) Responsibilities to methods, skills and techniques

in teaching, (vi) Responsibilities to administration and management - Corresponding rights of teacher - qualities qualification capacities.

(g) Challenges before the higher educational system of Maharashtra State.

4.0 Orientation of student leaders

Phase I - Principals, chairmen gymkhana committee and advisers to the gymkhana.

Phase II - Chairman, gymkhana advisers and student elected leaders.

Phase I

1. The philosophy and theory - (a) The philosophy of "student centred higher education" and the place of student's activities in education as well as in students life (b) Nature, scope and types of students activities - their classification.

2. The setting - (a) The organization of students activities. Pattern of administration decentralization delegates and their significance in leadership development (b) Staffing of students activities and "in service training", (c) Finance for students activities, (d) Students participation in students activities.

3. Operational analyses and planning for minimum programme - (a) Planning - long range, short range co-ordination control evaluation, administrative procedures adopted in the conduct of students activities, (b) Minimum programme for immediate action.

Phase II

4. Youth power, potential and problems - (a) Youth power and potential. Organizations their role and their methods, (b) Indian youth. Potential problems, organization.

5. Youth and student leadership (a) Nature and characteristics functions, significance with special reference to the role of the leader in social dynamics and economic and social transformation, (b) Types of youth leaders qualities and qualifications.

6. Student activities in the college and youth leadership -
 (a) Collegiate students activities and the opportunities in the identification of leadership potential and its development,

(b) Challenges, programmes of action and avenues open.

7. Leadership development in students activities - (a) Nature and scope, classification of students activities and the role of a student leader, (b) Organization of students activities, pattern of administration, delegation, and development of leadership, (c) Finance for students activities, public accountability and procedures, (d) Students participation, (e) Planning programming co-ordination control evaluation, (f) Leadership techniques in democratic leadership - skills in conducting meetings etc., (g) Minimum programme.

5.0 Orientation of educational administrators, institutional managers and higher educational planners

(Teachers and administrative officers. Experts other than planning unit experts. Middle level experts - General staff in the department and in the university).

(a) Trends in educational planning - (i) Historical outline - Educational planning before and after Second War - Major regional conferences, development of educational planning in India and in Maharashtra State, (ii) Evaluation of educational planning - Broadening of field of planning - from quantitative to the qualitative aspects. Consideration of factors of yield, structure, contents and methods - integration of higher educational planning with general developmental planning, (iii) Educational expenditure - Volume of expenditure on higher education - capital and recurring expenditure - sources of funds - unit costs, (iv) Educational planning authorities - Location, functions of planning units - methods of drawing up plans, staffing higher educational planning units, (v) Inadequacies of past actions and the difficulties to come - Dimensions of problems, possible solutions and difficulties, problem of planning and the planning of planning.

(b) Objectives and preparation of higher educational plan

(i) Determination of higher educational aims and policies - Objectives - definitions of aims and objectives of higher education, which authorities are to define goals and aims - levels at which forecasts are made and integration of goals defined at different levels, (ii) Diagnosis of economic and social development and educational development - Basic data needed, (iii) Technical and practical problems in higher educational planning - Various misunderstandings - various methods of determining number of students enrolled and their distribution in various branches of higher education - problem of structured contents - methods and techniques in planning for higher educational development, (iv) Higher educational strategies - Principles of strategy in educational planning - different strategies for different regions and at different times common strategies in similar situations, (v) Research in higher educational planning - Type, themes - liaison with research work in other fields. Organization for research and research budget, (vi) Institutional planning and programming.

(c) Implementation of educational plans - (i) Administration of higher education - Planning and administration - adaptation of administration to the needs of planned action and adaptation of administration and planning to the needs of educational action, (ii) Finance of higher education - Measuring available finance, classification of expenditure, balancing of expenditure, presentation of budget, optimum use of resources and the quest for new resources, external aid, (iii) Training of educational staff - Categories to be trained, types and levels training. Current problems in training for educational planning, using trained persons, planning of training courses.

Appendix No.4LIST OF TABLES1.0 Enrolment

- 1.1 Percentage of Literacy and the task
- 1.2 Progress of Education: Percentage of enrolment in relation age group as on March 31, 1967.
- 1.3 Enrolment in primary - secondary and higher education
- 1.4 Summary table: enrolment at various levels per 10,000 population
- 1.5 Regional progress: Enrolment at various levels per 1,000 population
- 1.6 Enrolment in higher education
- 1.7 Enrolment in higher education, course, levels.

2.0 Institutions

- 2.1 Data relating to educational institutions at primary secondary and higher education levels;
- 2.2 Growth of higher educational institutions in Maharashtra
- 2.3 Number of colleges Government and Non-Government and Universitywise.
- 2.4) Population served by one institution and enrolment
- 2.5) per institution
- 2.6 Arts Science and Commerce College

3.0 Teachers

- 3.1 Teachers, students and Institutions as on 15th July 1967
- 3.2 Teachers in the universities and colleges

4.0 Expenditure

- 4.1 Plan and non-plan educational Expenditure in Maharashtra State
- 4.2 Total educational expenditure by source
- 4.3 Educational expenditure by objects.
- 4.4 A Summary tables, Regional progress of direct expenditure by categories (Actuals and Percentages)
- 4.4 B Summary tables, Regional progress of direct expenditure by objects (Actual and Percentages)
- 4.5 Total expenditure and grant-in-aid by government

- 4.6-A } Receipts and Expenditure of universities and
- 4.6-B } colleges (1964-65)
- 4.7 Total expenditure on higher education 1962-1971
- 4.8 Maintenance grant paid to Non-government colleges during
1960-61 to 1968-69.
- 4.9 Summary table (Regional): cost per pupil, Direct expenditure
- 4.10 Cost per pupil by categories in higher education

1.1 Percentage of Literacy and The Task
(As per census - 1961)

Name of the Region	Percentage of Literacy		
	Men	Women	Total
1 Bombay Region	49.4	24.4	37.6
2 Poona Region	41.9	16.0	29.2
3 Nagpur Region	40.9	14.1	27.8
4 Marathawada	26.2	5.7	16.1
5 Maharashtra State	42.8	16.7	29.7

Table No. 1.2: Progress of Education - Percentages of Enrolment in Relative Age-Group
(As on March 31, 1967)

	Bombay Div.			Poona Div.			Western Mah.			Vidarbha			Marathwada			Maharashtra St.		
	Boys	Gir- ls	To- tal	Boys	Gir- ls	To- tal	Boys	Gir- ls	To- tal	Boys	Gir- ls	To- tal	Boys	Gir- ls	To- tal	Boys	Gir- ls	Total
1. Age Group 6 - 11	62.2	49.5	56.1	79.4	55.9	67.5	69.4	52.3	61.0	64.7	46.0	55.3	67.8	31.6	49.5	68.1	47.5	57.9
2. Age Group 11-14	83.5	66.3	75.7	89.7	49.7	70.7	86.1	59.0	73.6	77.2	49.2	64.0	65.3	18.6	43.2	80.8	50.3	66.5
3. Age Group 14-17	74.6	47.9	62.5	66.2	24.8	46.7	71.1	37.8	55.7	59.4	26.1	43.6	48.0	7.6	29.0	69.8	30.2	48.7

According to
Class
Standards

Grade 1 - 5	99.5	75.2	87.7	115.0	73.6	94.1	106.0	74.5	90.4	95.4	64.1	79.8	89.2	38.8	63.9	100.9	66.3	83.8
Grade 6th - 8th	61.8	40.6	52.1	64.4	26.0	46.2	62.9	34.2	49.6	58.1	26.2	43.1	60.7	12.2	37.8	61.5	28.8	46.2
Grade 9th -11 -12	44.0	24.9	35.4	43.3	13.9	29.4	43.7	20.1	32.8	33.6	10.2	22.6	29.6	33.8	17.4	39.2	15.1	28.0

Sankhyakiya Sankshep Granth (Marathi) pp. 52,53.
(as on March 3, 1967)

1.3 Comparative figures for Envolment in Primary Secondary and Higher Education (figures are in lakhs) -
- Maharashtra State -

Year	Primary Edn.	Secondary Edn.	Higher Edn.	Total
1960-61	41.78 (81.15)	8.58 (16.67)	1.12 (2.18)	51.48 (100.00)
1961-62	44.68 (80.14)	9.80 (17.58)	1.27 (2.28)	55.75 (100.00)
1962-63	46.31 (78.88)	11.01 (18.75)	1.39 (2.37)	58.71 (100.00)
1963-64	49.56 (78.33)	12.18 (19.25)	1.53 (2.42)	63.27 (100.00)
1964-65	51.40 (77.13)	13.56 (20.35)	1.68 (2.52)	66.64 (100.00)
1965-66	55.35 (76.62)	15.00 (20.76)	1.89 (2.62)	72.24 (100.00)
1966-67	57.78 (75.99)	16.14 (21.23)	2.12 (2.78)	76.04 (100.00)
1967-68	59.09 (75.03)	17.27 (21.93)	2.40 (3.04)	78.76 (100.00)
1968-69	63.29 (74.64)	18.81 (22.18)	2.69 (3.18)	84.79 (100.00)
1969-70	65.10 (74.37)	19.43 (22.20)	3.00 (3.43)	87.53 (100.00)

Average in-
come per year
in %

5.58%

12.64%

16.78%

7.03%

Figures in () show the internal division in %

Source - 1 Statement showing comparative statistics
Maharashtra state.

2 शिक्षणावर दृष्टिकोण

1.4 Summary Table - Progress of Education (1965-66)
Enrollment of Students per 10,000 Population

Students Enrol- ment per 10,000 population Institutional Stage	Western Maharashtra	Vidarbha	Marathwada	Maharashtra State
1 Pre primary	9	8	2	8
2 Primary stage	1472	1253	1062	1356
3 Secondary	244	173	132	209
4 Higher Education	55	34	16	44
5 Professional School	13	29	13	17
TOTALS	1793	1497	1225	1634

Source : Educational Development in M.S. 1950-51 to 1965-66,
page No. 6 (Table 3(2)).

Table No. 1.5: Regional Progress of Education Enrolment per 1000 Population 1950-51 - 1965-66

	1950-51				1965-66			
	Western Mahara- shtra	Vidarbha	Marath- wada	Mahara- shtra	Western Mahara- shtra	Vidarbha	Marath- wada	Maharashtra State
1. Higher Education	1.79	1.09	0.13	1.37	4.70	4.41	1.98	4.20
2. Secondary Education	12.02	8.20	3.33	9.80	33.15	32.23	29.27	32.32
3. Primary Education	105.71	52.55	35.15	82.31	138.51	110.42	90.16	124.26
4. Other	11.80	17.05	0.63	11.38	27.85	10.54	14.21	21.64
TOTAL	131.32	78.89	39.24	104.86	204.21	157.60	135.62	182.42

Source : Educational Development in M.S. 1950-51 to 1965-66 page No.71 (Table L 1.1(2)).

Table No. 1.6: Enrolment in Higher Education - (Maharashtra State)

Sr. No.	Particulars	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
1.	University Dept.	3050 (2.76)	3150 (2.48)	3450 (2.47)	3800 (2.49)	4100 (2.45)	4950 (2.62)	5900 (2.78)	6700 (2.78)		
2.	Research Insts.	300 (0.27)	300 (0.24)	350 (0.25)	350 (0.23)	350 (0.21)	350 (0.18)	400 (0.19)	400 (0.16)		
3.	Science	2900 (2.62)	3000 (2.36)	3150 (2.26)	5150 (3.37)	5350 (3.20)	6800 (3.60)	7750 (3.65)	7800 (3.24)		
4.	Arts & Science	72300 (65.37)	83750 (65.94)	92900 (66.54)	100550 (65.89)	111000 (66.46)	126750 (67.01)	143050 (67.29)	164800 (68.44)		
5.	Agriculture	1650 (1.49)	2000 (1.58)	2300 (1.66)	2700 (1.77)	3100 (1.86)	3700 (1.96)	4050 (1.90)	4500 (1.87)		
5.	Applied Arts, Fine Arts, Architecture	1550 (1.40)	2200 (1.73)	2450 (1.76)	2400 (1.57)	2600 (1.56)	2450 (1.30)	2550 (1.20)	2500 (1.04)		
7.	Commerce	10800 (9.77)	11650 (9.17)	12750 (9.13)	13300 (8.72)	15300 (9.16)	15850 (8.38)	16800 (7.90)	20700 (8.60)		
8.	Engineering	4350 (3.93)	4950 (3.90)	5000 (3.58)	5600 (3.67)	5700 (3.41)	6250 (3.30)	6550 (3.08)	7650 (3.18)		
9.	Law	4400 (3.98)	4700 (3.70)	4100 (2.93)	4200 (2.75)	4350 (2.60)	5250 (2.78)	6450 (3.03)	5200 (2.16)		
10)	Technology	650 (0.59)	950 (0.75)	1250 (0.90)	1550 (1.02)	1950 (1.17)	1800 (0.95)	1800 (0.85)	2400 (1.00)		
11.	Medical	4800 (4.34)	5400 (4.25)	6550 (4.69)	7100 (4.65)	7200 (4.31)	8050 (4.26)	9150 (4.30)	9800 (4.07)		

Table No. 1.6: (Contd.)

	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
12. Social Science	200 (0.18)	250 (0.20)	250 (0.18)	60 (0.04)	75 (0.04)	75 (0.04)	150 (0.07)	200 (0.08)		
13. B.T./B.Ed./Insts.	1300 (1.18)	1900 (1.50)	1900 (1.36)	2050 (1.34)	2250 (1.35)	2750 (1.45)	3250 (1.53)	3600 (1.50)		
14. Others	2350 (2.12)	2800 (2.20)	3200 (2.29)	3800 (2.49)	3700 (2.22)	4100 (2.17)	4750 (2.21)	4550 (1.88)		
Total	110600	127000	139600	152610	167025	189125	212600	240800		

Note: Medical includes Allopathy, Dental, Ayurved Pharmacy and Nursing

Others include veterinary, oriental, cooperative, Yoga, Home science, Journalism, Dairy, Film, Family Planning etc.

Table No. 1.7: Progress of Education in Maharashtra - As on 15th July 1969
Enrollment in the Institutes of Higher Education

	Doctorate			Post-Graduate			Degree 2 Years			2nd Yr. Pre-Degree			1st Year Pre-Degree		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
ARTS	637	139	776	2722	1688	4410	16950	13516	30466	16665	10726	27391	28782	15205	43987
SCIENCE	368	68	433	1166	423	1589	15002	5197	20199	17116	3854	20970	23603	4911	28514
COMMERCE	20	3	23	2196	52	2248	18046	1124	19170	18015	903	18918	27855	1367	29222
EDUCATION	7	5	12	432	162	594	2641	1466	4107				15179	6606	2785
PHYSICAL ED.							324	76	400				1173	180	1353

Facultywise Enrollment As on 15th July 1969			
	Boys	Girls	Total
ARTS	65756	41274	107030
SCIENCE	57255	14453	71708
COMMERCE	66132	3449	69581
EDUCATION	19756	8495	28251
TOTALS	208899	67671	276570

Table No. 2.1: Comparative figures for institutions in Primary, Secondary and Higher Education
 - Maharashtra State (Figures are app. for last 2 degits)

Year (1)	Primary Edn. (2)	Secondary Edn. (3)	Higher Edn. (4)	Total (5) = 2+3+4	% Increase
1960-61	34600 (92.74)	2500 (6.70)	210 (0.56)	37310 (100.00)	
1961-62	35350 (90.99)	2900 (7.46)	260 (1.55)	38850 (100.00)	4.12
1962-63	36950 (91.39)	3200 (7.91)	280 (0.70)	40430 (100.00)	4.06
1963-64	38950 (91.41)	3350 (7.86)	310 (0.73)	42610 (100.00)	5.39
1964-65	40300 (90.58)	3850 (8.65)	340 (0.73)	44490 (100.00)	4.41
1965-66	41800 (90.55)	4000 (8.67)	360 (0.78)	46160 (100.00)	3.75
1966-67	43000 (90.29)	4250 (8.92)	370 (0.79)	47620 (100.00)	3.16
1967-68	43750 (89.74)	4600 (9.44)	400 (0.82)	48750 (100.00)	2.37
1968-69	43850 (89.65)	4650 (9.51)	410 (0.84)	48910 (100.00)	3.28
1969-70	44250 (89.39)	4800 (9.70)	450 (0.91)	49500 (100.00)	1.21
10 yearly average % increase	2.79	9.20	11.43	3.27	

Figures in () shows the Internal Composition in %.

Table No. 2.2: Growth of Higher Educational Institutes in Maharashtra State
(1960-61 - 1969-70)

Sr. Particulars No.	Academic Year									
	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
1. University Deptt..	29 (13.74)	35 (13.67)	41 (14.54)	45 (14.47)	46 (13.90)	48 (13.30)	48 (12.87)	51 (13.01)	51 (12.32)	52 (11.58)
2. Research Insttts.	15 (7.11)	15 (5.86)	15 (5.32)	14 (4.50)	14 (4.23)	14 (3.88)	14 (3.75)	14 (3.57)	14 (3.38)	16 (3.56)
3. Science	4 (1.90)	4 (1.56)	5 (1.78)	8 (2.57)	9 (2.72)	11 (3.05)	11 (2.95)	12 (3.06)	11 (2.66)	12 (2.67)
4. Arts & Science	77 (36.49)	101 (39.45)	114 (40.43)	129 (41.48)	143 (43.20)	159 (44.04)	168 (45.04)	179 (45.66)	196 (47.34)	211 (47.00)
5. Agriculture	5 (2.37)	5 (1.95)	5 (1.77)	6 (1.93)	6 (1.81)	7 (1.94)	8 (2.14)	8 (2.04)	8 (1.93)	8 (1.78)
6. Applied Arts, Fine Arts, Architecture	3 (1.42)	4 (1.56)	4 (1.42)	6 (1.93)	6 (1.81)	6 (1.66)	6 (1.61)	7 (1.79)	7 (1.68)	7 (1.56)
7. Commerce	14 (6.64)	15 (5.86)	16 (5.68)	17 (5.47)	19 (5.74)	19 (5.26)	19 (5.09)	19 (4.85)	19 (4.59)	22 (4.90)
8. Engineering	7 (3.32)	7 (2.73)	8 (2.84)	8 (2.57)	9 (2.72)	9 (2.49)	9 (2.41)	9 (2.30)	9 (2.17)	9 (2.01)
9. Law	8 (3.79)	8 (3.13)	8 (2.84)	8 (2.57)	9 (2.72)	9 (2.49)	9 (2.41)	9 (2.30)	10 (2.42)	13 (2.90)
10. Technology	2 (0.95)	2 (0.79)	2 (0.71)	2 (0.64)	2 (0.61)	2 (0.56)	2 (0.54)	2 (0.51)	2 (0.48)	1 (0.22)
11. Medical	20 (9.48)	23 (8.98)	25 (8.87)	28 (9.00)	26 (7.85)	28 (7.75)	28 (7.51)	30 (7.65)	31 (7.49)	33 (7.35)

.....2

Table 2.2 : (Contd.)

Sr. no.	Particulars	Academic year									
		1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
12.	Social Science	1 (0.47)	2 (0.79)	2 (0.71)	2 (0.64)	2 (0.61)	2 (0.56)	3 (0.81)	3 (0.77)	3 (0.72)	3 (0.66)
13.	B.T./B.Ed./Instns.	13 (6.16)	16 (6.25)	16 (5.68)	17 (5.47)	18 (5.44)	24 (6.65)	26 (6.97)	26 (6.63)	30 (7.26)	37 (8.24)
14.	Others	13 (6.16)	19 (7.42)	21 (7.41)	21 (6.76)	22 (6.64)	23 (6.37)	22 (5.90)	23 (5.86)	23 (5.56)	25 (5.57)
	TOTAL	211	256	282	311	331	361	373	392	414	449

Medical includes Allopathy, Dental, Ayurved, Pharmacy and Nursing.

Others include veterinary, oriental, cooperative, yoga, home science, journalism.

() show the internal % composition.

Table No. 2.3: Number of colleges Universitywise and yearwise in Maharashtra State

Year	University																		Grand Total	% increase
	Bombay			Nagpur			Poona			Marathwada			Shivaji			S.N.D.T.				
	G	NG	T	G	NG	T	G	NG	T	G	NG	T	G	NG	T	G	NG	T		
1960-61	15	21	36	13	27	40	11	40	51	6	10	16	-	-	-	-	8	8	151	
1961-62	15	23	38	13	37	50	11	54	64	6	12	18	-	-	-	-	10	10	180	9.08
1962-63	17	25	42	13	44	57	6	27	33	6	14	20	6	28	34	-	12	12	198	10.00
1963-64	17	28	45	13	49	62	6	29	35	6	20	26	7	29	36	-	12	12	216	9.09
1964-65	18	30	48	14	57	71	6	32	38	6	20	26	8	33	41	5	15	15	239	10.65
1965-66	18	31	49	16	65	81	6	38	44	7	21	28	8	40	48	-	15	15	265	10.88
1966-67	18	31	49	17	70	87	6	43	49	7	21	28	8	42	50	-	15	15	278	4.91
1967-68	18	31	49	18	75	93	6	46	52	8	24	32	8	44	52	-	15	15	293	5.40
1968-69	18	32	50	21	81	102	6	50	56	11	28	39	9	46	55	-	17	17	319	8.87
1969-70	18	35	53	22	88	110	6	58	64	11	31	42	9	56	65	-	19	19	353	10.65

G = Government
 NG = Non-Govt.
 T = Total

Goa colleges are excluded from Bombay University altogether.
 The figures in () of Grand Total show the total No. in Govt. colleges

Table No. 2.4: Summary Table - Regional Progress of Education 1950-51. 1965-66

Population Served by Institutions								
1950-51				1965-66				
	Western Maharashtra	Vidarbha	Marathwada	Maharashtra	Western Maharashtra	Vidarbha	Marathwada	Maharashtra State
1. Population served by one								
- College	267986	330739	1524667	323224	137141	117831	223531	140409
- Secondary school	33039	51399	138606	41407	11496	13410	12660	12075
- Primary school	1236	1832	1723	1413	1172	947	926	1067

Table No. 2.5: Summary Table - Enrolment per Institution - Development - 1950-51- 1965-66 - Regional

	Western Maharashtra			Vidarbha			Marathwada			Maharashtra State		
	1950-51	1965-66	%	1950-51	1965-66	%	1950-51	1965-66	%	1950-51	1965-66	%
1. Higher Education	479	645		361	520		201	442		443	590	
2. Secondary Education	397	381		422	432		482	371		406	390	
3. Primary Education	131	162		96	105		63	83		116	133	

**2.6 Arts, Science and Commerce Colleges as they exist
at present**
(15th July 1969)

UNIVERSITY	NO. OF INSTITUTIONS		ENROLLMENT	
	No.	Percentage	No IN 000s	Percentage
BOMBAY	39	15.92	74	30.33
POONA	52	21.22	52	21.31
SHIVAJI	49	20.01	37	15.16
MARATHWADA	30	12.24	25	10.24
NAGPUR	75	30.61	57	22.96
TOTAL	245	100.00	245	100.00

- 1 There are 448 colleges (as on 15th July 1969) and university departments of teaching SNDT University has 7 colleges (5 in Bombay 1 in Poona and 1 in Sangli) not considered separately. Of 448 colleges 245 colleges are for general education and only they are considered here.

Table 3.1 : Progress of education as on 15th July 1967
Teachers-Students Institutions

	Teachers	Students	Institutions
1. Pre Primary	1357	40967	571
2. Primary	175775	6509587	44223
3. Secondary	71239	1943055	4816
4. Teachers Training	1961	24814	209
5. Education	131	1373	19
6. Higher Education	13888	300364	448
7. Vocational Education	4151	46606	226
8. Special Schools	2845	44611	562
Totals	271347	8911377	51074

Table 3.2 : Teachers in universities and Colleges (1964-1965)

	Bombay			Nagpur			Poona		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. <u>General Education</u>	1371	590	1961	945	219	1164	949	166	1115
2. <u>Professional Education</u>									
Agriculture	--	--	--	132	--	132	150	1	151
Commerce	186	47	233	258	6	264	153	10	163
Education	40	28	68	94	23	117	50	10	60
Engineering	236	6	242	108	1	109	114	--	114
Law	90	4	94	22	--	22	16	--	16
Medicine	635	116	751	113	27	150	282	44	326
Veterinary	49	-	49	39	--	39			
Others	19	1	20	11	7	18			
Total Profession - Professional	1255	202	1457	777	64	841	765	65	830
Grand Total	2626	792	3418	1722	283	2005	1714	231	1945

contd..

Table 3.2 : (continued)

	MAHARASHTRA			SHIVAJI			S. N. D..T.			T o t a l		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1. <u>General Education</u>	449	37	486	698	73	771	80	191	271	4492	1276	5768
2. <u>Professional Education</u>												
Agriculture	32	1	33	31	-	31	-	-	-	345	2	347
Commerce	40	1	41	96	3	99	-	-	-	733	67	800
Education	18	3	21	26	9	35	20	30	50	278	103	381
Engineering	32	-	32	109	1	110	-	-	-	599	8	607
Law	7	-	7	13	-	13	-	-	-	148	4	152
medicine	53	5	58	45	8	53	10	14	24	1138	214	1352
Veterinacy										88	-	88
Others							7	4	11	1212	37	1249
Total Profession - Professional	182	10	192	350	21	371	37	48	85	4541	435	4976
Grand Total	631	47	678	1018	94	1112	117	239	356	9033	1711	10744

Table 4.1 : Educational expenditure of Maharashtra State (Plan and Non-Plan).
(Expenditure in Crores of Rupees.)

Y e a r	Provisions	Expenditure
1961-62	2386	2354
1962-63	2179	2179
1963-64	2928	2911
1964-65	3346	3334
1965-66	3854	3860
1966-67	3935	3966
1967-68	5411	5360
1968-69	7030	6960
1969-70	8545	6967
1970-71	8125	8555

Table 4.2 : Total educational expenditure by source

(Rs. in 000)

	1950-51		1955-56		1960-61		1965-66		Average Annual Increase
	Amount	%	Amount	%	Amount	%	Amount	%	
1. Government	105918	60.8	139438	57.7	299308	61.3	479893	61.7	10.6
2. Local Bodies	17329	9.9	25899	10.7	43408	8.9	62388	8.0	8.9
3. Fees	35005	20.1	56410	23.4	103269	21.1	172222	22.5	11.2
4. Other Sources	15999	9.2	19820	8.2	42465	8.7	62763	8.1	9.5
T o t a l	174250	100.0	241567	100.0	488450	100.0	777266	100.0	10.5

Table 4.3 : Expenditure on education (by objects) 1950-51 - 1965-66 (State)

	1950-51	%	1955-56	%	1960-61	%	1965-66	%	Average Annual Increase
<u>I. Direct Expenditure</u>									
a) University Research Institutes	6065	3.5	8343	3.5	15580	3.2	23816	3.1	9.5
b) Board of Examinations	1788	1.0	1029	0.4	3505	0.7	5984	0.8	8.4
c) Arts & Science Colleges	10662	6.1	14613	6.0	24644	5.1	44027	5.7	9.9
d) Professional colleges	6588	3.8	11492	4.8	24564	5.0	40109	5.2	12.8
e) Special colleges	369	0.2	279	0.1	1103	0.2	769	0.1	5.0
1) Total Higher Education	25472	14.6	35757	14.8	69396	14.2	114705	14.9	10.5
2) High Hk Secondary- Primary Middle Pre-primary	109314	62.8	148156	61.4	261031	53.4	447138	57.3	9.9
3) Professional Schools	7429	4.3	8530	3.5	21314	4.4	35027	4.5	10.9
4) Special schools Social Education	2386	1.4	560	0.02	684	0.1	495	0.1)	0.2
5) Others	-	--	1397	0.6	3194	0.7	1954	0.2)	
Total direct expenditure	144604	83.1	194799	80.5	355619	72.8	599319	77.0	9.9

contd.

Table 4.3 : (continued)

	1950-51	%	1955-56	%	1960-61	%	1965-66	%	Average Annual Increase
<u>II. Indirect Expenditure</u>									
A. Direction & Inspection	Break up not available		3368	1.4	6215	1.3	9529	1.2	11.0
B. Building	- do -		13873	5.7	50129	10.2	57919	7.4	15.3
C. Scholarship Concession	- do -		6131	2.5	44758	9.2	86822	11.3	30.0
D. Hostel	- do -		2624	1.1	5988	1.2	3503	0.5	02.9
E. Miscellaneous	- do -		21172	8.8	25741	5.3	20474	2.6	
Total Indirect	29649	16.9	47168	19.5	13283	27.2	179347	23.0	14.2
Grand Total	174250	100	241569	100	488450	100	777266	100	10.5

Table 4.4 (A) : Summary Table. Regional progress direct expenditure by categories
(Figures Rs. in 000)

	Western Maharashtra			Vidarbha			Marathwada			Maharashtra State		
	1950-51	1965-66	% increase per annum	1950-51	1965-66	% increase per annum	1950-51	1965-66	% increase per annum	1950-51	1965-66	% increase per annum
Institutions -												
1. Higher Education	20172	86578	10.2	5073	22266	10.4	227	5861	24.0	25472	114705	10.5
2. High/Higher Secondary	27426	125023	10.6	4409	36209	15.0	1095	16367	19.8	32930	177599	11.9
3. Primary/Middle	63653	177063	7.0	7910	60797	14.6	4338	29680	13.7	75901	267540	8.7
4. Pre Primary	477	1453	7.7	6	487	34.0	-	59	-	483	1999	9.9
5. Professional Schools	6577	23649	8.9	435	7970	21.0	417	3408	15.0	7429	35027	10.9
6. Special Schools	2094	1821	-	245	402	3.3	47	226	11.0	2386	2499	0.2
Totals	120399	415587	8.6	18078	128131	13.9	6124	55601	15.8	144601	599319	9.9

Table 4.5 : Total expenditure incurred and grant-in-aid paid during the period 1960-61 to 1967-68 by Government, Zilla Parishad authorised Municipalities, Private Management, etc. to pre-primary, primary, secondary and higher Education.

(Figures are in crores).

Year	Pre-primary	Primary	Secondary	Higher	Total
1960-61	0.17	15.96	9.98	1.57	27.68
1961-62	0.18	17.30	11.47	1.78	30.73
1962-63	0.19	17.82	12.96	2.26	33.23
1963-64	0.20	19.60	14.52	2.28	36.60
1964-65	0.19	22.76	15.97	2.57	41.49
1965-66	0.20	26.25	18.27	3.80	48.52
1966-67	0.22	30.57	21.15	4.74	56.68
1967-68	0.24	36.93	27.00		
1968-69	0.26				
1969-70					

(Blank columns represent that for the present information is not available).

Table 4.6 (A) : Receipts and expenditures Universities and Colleges (1964-65)

(Figures in Rs.000s)

	Bombay	Nagpur	Poona	Marathwada	Shivaji	S.N.D.T.	Total
<u>RECEIPTS</u>							
a) <u>Recurring</u>							
1. Central Govt.	2529	4002	2665	2618	1253	221	13289
2. State Govt.	12969	11893	9533	4984	5192	415	44986
3. Local Govt.	3304	7	58	84	81	2	3535
4. Fees	23151	9663	11241	3404	6579	1730	55767
5. Endowment	351	107	204	18	48	2	729
6. Other sources	1286	1101	898	113	808	287	4493
T o t a l -	43590	36771	24598	11220	13962	2658	122799
B) <u>Non Recurring</u>							
1. Central Govt.	2010	1728	1150	1053	860	219	7020
2. State Govt.	632	1555	588	886	1082	85	4828
3. Other sources	894	888	243	-	1650	200	3875
Total	3536	4171	1981	1939	3592	503	15723
Grand Totals	47126	30942	26580	13160	17554	3161	138521

(Totals may not tally due to rounding).

Table 4.6 (B) : Receipts and expenditures University and Colleges (1964-65)
(Figures in Rs.000s)

	Bombay	Nagpur	Poona	Marathwada	Shivaji	S.N.D.T.	Total
<u>EXPENDITURE</u>							
<u>A) Recurring</u>							
1. Teaching staff	14859	9078	10426	2656	4384	1053	42457
2. Adm. and other staff	6574	3674	4321	1625	1734	395	18323
3. Apparatus	2761	1091	1280	463	873	59	6527
4. Furniture	571	84	186	94	361	27	-1324
5. Scholarship concessions	3888	5989	4656	3392	2324	147	20396
6. Library	1690	824	895	423	541	170	4543
7. Games sports	500	85	301	91	252	32	1262
8. Examination	1128	978	1407	362	721	216	4813
9. Hostel	737	301	406	57	85	9	1596
10. Building	429	107	222	34	112	54	958
11. Other items	6242	4030	3850	1212	1429	750	17513
Total	39381	26241	27950	10408	12818	2914	119711
<u>B) Non Recurring</u>							
1. Library	605	596	272	252	355	38	2119
2. Building	526	1937	1348	1385	1172	815	7183
3. Equipment	2441	1777	778	545	732	223	6496
4. Other items	1654	93	692	6988	1630	56	11113
Total	5227	4403	3089	9171	3889	1132	26911
Grand Total	44607	30644	31039	19579	16707	4045	146622

Table 4.7 : Total expenditure on higher education.

Year	Provisions in crores	Expenditure in crores	Grants to Universities (₹n lakh)	Grants to Non.Govt. colleges (in lakh)	Expenditure on Govt. Institutions (in lakhs)	Total expenditure on Higher education (in lakhs)
1	2	3	4	5	6	7 (4+5+6)
1962-63	21.79	21.79	40.74	52.95	63.00	156.69
1963-64	29.28	29.11	52.32	57.35	68.17	177.84
1964-65	33.46	33.34	85.15	59.40	81.32	225.87
1965-66	38.54	38.60	86.69	67.63	73.88	228.20
1966-67	39.35	39.66	96.25	81.49	79.00	256.76
1967-68	54.11	53.60	138.86	147.53	93.70	380.10
1968-69	70.30	69.67	138.47	225.14	110.76	474.37
1969-70	85.45	85.55 (Estimated)	(Figures are not as yet available)	223.28	134.27	(in the absence of interim data, total cannot be worked out)
1970-71	81.25					

Table 4.8 : Maintenance grant paid to the non-Govt. colleges in different university of Maharashtra State.

(Figures are in Lakh)

Name of University	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69
1. Bombay	8.90	9.40	9.68	9.96	12.26	12.57	23.04	22.31	27.64
2. Nagpur	4.62	4.83	4.97	5.12	7.76	8.00	13.04	17.80	21.08
3. Poona	8.36	8.86	9.12	9.40	9.67	9.96	17.73	22.28	23.53
4. Marathwada	8.69	8.51	5.87	6.98	9.43	9.00	10.30	26.88	15.37
5. Shivaji	-	-	0.90	3.00	4.00	10.00	13.65	15.10	20.66
6. S.N.D.T.	1.53	1.72	1.83	1.94	2.06	2.18	2.77	5.73	7.17
Total	32.20	33.32	32.37	36.40	45.18	51.71	80.53	110.10	115.55

Source : Data published by Education Department.

Table 4.9 : Summary Table. (Regional cost per pupil (rs. Direct Expenditure). 1950-51 - 1965-66.

	Western Maharashtra			Vidarbha			Marathwada			Maharashtra State		
	1950-51	1965-66	%	1950-51	1965-66	%	1950-51	1965-66	%	1950-51	1965-66	%
1. Higher Education	585	675		611	481		376	415		587	608	
2. Secondary	118	138		71	107		69	78		106	122	
3. Primary	31	47		20	52		26	46		29	48	
4. Pre-primary	72	64		59	60		-	53		72	63	
5. Vocational	264	396		299	402		452	542		272	408	
6. Special	11	3		2	5		22	2		7	3	
Total	48	75		30	78		33	57		44	73	

Table 4.10 : Cost per pupil by categories in higher education.

	1950-51	1965-66	% increase over period	Maharashtra 1963-64	All-India 1963-64
1. University	3096	4403	42.2	5350	2370
2. Research Institutes	16044	6404		13016	4394
3. Arts and Science Colleges	356	327		364	333
4. Professional Colleges	603	848	40.6	750	878
5. Special Colleges	441	588	33.3	446	336

Source : Edu. Dev. in Mah. 1950-51 - 1965-66 Table XLV, page 68.

Appendix 5.

Bibliographical Note : Whereas it is not possible and not even intended to enlist all the references only important works referred to, are mentioned hereunder, -

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