

Efficiency and Accountability in Higher Education : Implication for Policy, Planning and Management

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This paper attempts to raise issues in respect of efficiency and accountability in higher education. The first section with some quantitative indicator shows the expansion in higher education sector due to demographic and developmental factors. This horizontal expansion has raised the issues of efficiency in recent years. The second section briefly discusses the higher education systems in various politico-cultural milieu. The lesson derived from that deliberation is that application of mass education concept to or development induced expansion of higher education requires selectivity, specialisation, strict standards and establishment of secondary channels of preservation of excellence in higher education. The third section discusses various models of conceptualisation about the university as an organisation. This was done to underscore the complexity of the situation as well as to provide a canvass for discussion of any approach for the attainment of efficiency. The fourth section discusses objectives of

a university. Here also we present diversity of views and conflict amongst approaches without taking any side. The view about objectives are important for attaining efficiency. The fifth section mentions the fact that any system is as efficient as its actors are. It goes on to discuss the role of academics in the university. We emphasise the fact the academics are not a homogeneous group and their individual goals may not be in conformity with the institutional objectives. In doing so we also discuss briefly the role of teaching and research in a university. The discussion attempts to underscore, the role academics can play in enhancing institutional efficiency and how they can hinder such attainment. The sixth section deliberates on the students and their typology. All types are not suited for higher education. This has been further complicated by inefficiency of the pre-university education system. This is important to remember because selectivity is desirable for efficiency but this assumes that feeder system is efficient and there exists a parallel channel to absorb the non-performers.

The seventh section discusses the academic administrations. While the importance of the role of Vice-Chancellor (or President) is emphasised, it is also noted that the prevalent selection system may seem filter out most capable persons. The positions of Deans and Department Chairman have been discussed and recent dimension of their role has been noted as a possible factor that may have caused inefficiency in the university system.

The eighth section tries to pull together some of

the conclusions of the earlier deliberations. The ninth section is devoted to concepts of efficiency measurement. It mentions that unidimensional measures are helpful but not wholly satisfactory, while an integrated measure faces many conceptual and constructional problem. Hence we may have to make best use of the different single measures being conscious of their limitations. It also discusses the specific factors that promote or hinder efficiency of the university system.

The tenth section deals with planning for efficiency and emphasises the role of continuous objective review of programs and courses in line with Zero-base programming system. The review has to cover performance of faculty, administration and support services. Such reviews are helpful in promoting adequacy, relevance and quality of academic program.

The eleventh section takes off from these and discusses policy for promotion and preservation of efficiency. But the policy is contingent upon the higher education model, objectives and organisational structure. However, no prescription is made for any system.

The last section deals with accountability. It mentions that the basic accountability of a true academic is to his academic self, to his pupils, to his profession and to the institution he serves. This was generally informal in the traditional system but the current efficiency requires its institutionalisation. In passing it mentions that best guarantor of autonomy in the higher education is continued efficiency of the system.

It is generally conceded that there has been a noticable expansion in higher education in the Asia

and the Pacific region. Statistics available on enrolment in higher education institution as a percentage of the population in the age bracket 20-24 for countries within the region show an impressive change. In Bangladesh Nepal, Indonesia and Sri Lanka the participation rate increased from one percent in 1960 to three percent in 1981, in Burma it rose to four percent from the same base, in Malaysia it increased to five percent from the same level in the same two decades and in Pakistan it nearly doubled during that period. In India the participation rate was three percent in 1960, and in 1981 it is estimated at eight percent. In the Philippines, the rate increased from thirteen to twenty six, which are same for New Zealand and Australia. Thailand registered the remarkable increase from 2 to 20 percent during that period. Republic of Korea attained a level of 18 percent in 1986 from a base of 5 percent in 1960. Hongkong during the same period reached a rate of 10 percent from a base of 4 percent. Singapore, pursuing a restrictive policy, allowed the participation rate to reach 8 percent from a base of 6 percent. The highest rate in the region is 30 percent for Japan which has expanded participation from 10 percent in 1960. The rate is higher in USA (58%), Sweden (37%), Canada (37%) and Ecuador (35%). The Japanese rate is higher than U. K. (20%), USSR (21%), Israel (26%) and roughly equal to GDR (30%), Denmark (29%), Netherland (31%), FRG (28%).

This presentation would, I hope, bring home three points. First, there has been a rapid expansion in

higher education in the region but there is a lot to catch up in quantitative terms alone. Second, participation in higher education and development are possibly not closely related beyond a certain point. Third, participation in higher education is very much a matter of policy (or absence of it).

It may be pertinent to look into the reasons for increase in participation in higher education. A basic factor is demographic with an increase in population in the relevant age-group, even without an increase in rate, the number of participants would increase. The expansion of higher education in U.K. U.S.A. and such other countries have been attributed among other factors to the post-war baby boom. In fact colleges in USA face a declining enrolment due to passing over of the baby-boom. Many countries of Asia and the Pacific have experienced and is likely to continue to experience high population growth rate e.g., Bangladesh (24%) for 1980-2000), Pakistan (2.7), Nepal, (2.6) Burma (2.9), Philippines (2.1), India (2.0) Indonesia (2.0), Malaysia (2.0), Thailand (2.0) and Sri Lanka (1.8), (while it is 0.7 for USA and 0.1 for U.K.) Thus for the most countries in the region, demographic pressure on higher education has been a contributive factor and would continue to be so beyond the turn of the century.

Besides the demographic reasons, there are other factors that contribute to increased participation rate. Economic development today has a deepened technological base than ever before, hence development needs create demand for technology oriented education which

in turn creates demand for higher education for maintenance and upstaging of quality of education and supply of qualified teachers. The countries which have expanded technical education without ensuring concomitant expansion of supportive higher education facilities have soon run into crisis and have become dependent on continued technical assistance.

Higher education is characterised by high income elasticity between income groups and compared to that low price elasticity within a given income group. This is partly because of perceived higher income prospect and increased chance of climbing social ladder as a consequence of higher education. These are generally true in an expanding economy but in respect of lower level of education, this seem to be a generally accepted phenomenon. This means economic development is likely to exert an autonomous pressure on demand for higher education unless such demands are frustrated by a restrictive policy of a regimented or highly structured society. Many of the countries in the region have experienced positive, at times rapid, economic growth. Japan experienced a growth rate of 10.4% during 1960-70 and of 4.6 during 1970-80. It has achieved rapid expansion in higher education to meet its technology dependent growth. Thailand has experienced a growth rate of 8.4 and 7.1 during these decades and has expanded higher education at a remarkable rate. But with high growth rates, 6.7 and 5.0, Pakistan did not experience such rapid expansion in higher education, which is partly explained by demography, nature of the economy and governmental

policy. Policy variable is the explanatory factor for the slow rate of enrolment expansion in higher education in Singapore during periods of remarkable economic growth during those decades. Expansions in higher education in Malayaasia (7.7 in 70-80), Indonesia (7.7) and the Philippines (6.0) have been aided by the momentum of high economic growth.

Public attitude to higher education also influences the participation rate. The attitude in turn is influenced by education and employment policy. If middle level education can ensure a socially valued job with good prospect for future, public demand for higher education is less insistent. On the other hand if secondary level education fails to uphold such promise, then the public pressure for higher education becomes persistent. Many of the countries in the region have not been able or did not deliberately formulate an education system which would contain pressure on higher education.

At this stage it may be of interest to look at the magnitude of explosion in higher education. The student population in the higher education institutes in Thailand was said to be 69 thousand in 1972 and it has increased to 94 thousand in 1981. The teaching staff increased from 8,918 to 35,731 during the same period. In the Philippines during the same periods student number increased from 659 thousand to 1276 thousand with corresponding increase of teacher from 23,969 to 40,022. Similarly in Malayaasia student population increased from 585 thousand in 1973 to 1467 thousand in 1978. In Nepal student population increased from 22.3 thousand (74) to 38.5 thousand

(79) and number of teachers increased from 1800 (74) to 2311 (78). In Pakistan the corresponding increases were from 108 thousand (72) to 148 thousand (77) for student and from 3790 (72) to 6566 (80) for teachers. In India the student population increased from 3.3 million (72) to 5.0 million in 77). The number of universities increased from 27 in 50-51 to 116 in 1980. Besides there are thousands of institutions offering graduate level education. In Bangladesh the corresponding figures are 136 thousand (72) to 244 thousand (81) for student and the teaching staff in 1981 was estimated at 12,768.

The expansion in numerical terms has been substantial.

II

So far we have purposely used the term higher education institution. It is known that these institutions vary in nature, content, character and coverage. Even the higher education system is different from country to country. Before we attempt to make our observations specific, it is proper to recognise this diversity. Since the education system in the countries of the Asia and the Pacific have been influenced by models of developed countries, it may help to recall those referral models instead of discussing higher education system in countries of the region which are covered in the country paper.

a) The Soviet System : The system has allowed application of the concept of mass education to the higher education system while selectivity is maintained in the core of the system. The Soviet System is highly

centralized. The educational system is under the control and guidance of The Ministry of Education and the Ministry of Higher Education. But some specialised institutions come under the specialized ministries e.g., Music conservatories are under the Ministry of culture, Medical Institutes are under the Ministry of Health etc.

Soviet Higher Education system had adopted the German education system and carried specialisation as far as it can go. Most professional education (Law, Engineering, Agriculture, Economics, Medical etc.) are provided in the specialised institutions. The role of the Universities are generally limited to humanities and pure science. The graduates of universities become research workers or teachers in secondary schools. In Soviet Union there are 794 higher education institutions of which 45 are universities. The technical institutes (Vysshie Uchebnye Zavedeniya, VYZ in short) account for 44.1% of student and 38.1% of graduates. The universities tend to be comparatively large institutions with residual presence. Officially, there is no difference in standards between VYZ and universities and they offer similar degrees under the same control and institutional system. The universities are not largely engaged in research, for which there are specialised research institutes. And there are differences in reputation amongst institutions of higher education and in that sense in their attainments.

Below this apex, there are secondary specialised schools (Technikumy) which provide courses in professional areas (e.g. music, librarianship) as well as in engineering and technology. These schools are post-

secondary in nature. The secondary schools have expanded rapidly over the years. Those who cannot make to the universities or VYZ, enter the specialised schools for vocational and/or lower professional training. The entry into higher education is highly competitive, one in three of the graduates of secondary schools get a chance. The pressure is also met through part-time courses. However wastage in part-time courses (drop-outs, failures) are higher than full-timers.

Thus, the distinctive features of the higher education system are separation of "general" higher education from "professional" higher education barring a few exception, separation of research function from teaching to the extent feasible, high selectivity in admission to core higher education system and accommodation of the pressure for higher education in specialised schools and through part-time education. The centralized control takes away much of the "academic freedom" in the Western system and provides for monitoring and evaluation. The system does not seem to have failed to achieve its goal as set by the authority.

(b) *The American Model*: This model carries the concept of mass education at the higher level to the furthest. It is a decentralized system and variation between schools are wide. There are specialised colleges or institutes and vast general universities offering wide range of courses. They vary in size with as little as 45 students and as many as 261.000 students or more. The teaching quality, physical facility, course contents, community life, sources of finance vary widely. The most obvious common criteria is that they

are all post-secondary education institutions. While the departments of the universities set the selection criteria for admission and from that point of view admissions into many top universities are highly selective. But higher education system as a whole generally offers a place to anyone who wishes to study and is able pay for it. Thus the system is not restrictive and planning at the institute level allows for the required elasticity in the system for growth and contraction, even though many schools in the higher education system may follow a restrictive admissions policy. The character of the higher education institution is decided by the academics and the governing body. It would be a general teaching institution (e.g., California Institute of Oriental Studies) a research based teaching institute or an institute that seeks happy balance between research and teaching. Though the system permits separation of 'general' and 'professional' as well as of 'teaching' and 'research', the higher education institutions have found their own blend in terms of their institutional objectives and environment. The pressure for higher education had been met through extension of the system in numbers and the slackening of the pressure is being met through redesigning of the part-time courses and through withering away of the marginal institutions themselves. But evaluation within the system has been voluntarily practiced.

c) *The Continental Model*: We shall primarily focus on the German model. In the higher education system there are the professional *Hochschulen* and the universities. The universities, because of the past

tradition, include medical and law faculties. Most of the graduates of the universities enter teaching profession, few at the university after gruelling apprenticeship under a professor. In Germany open admissions policy is generally adhered to. The secondary school certificate allows a school graduate a right to enter a higher education institutes, though within the system some institutions are more selective in matters of admission. But at this post-secondary stage there occurs high drop-out, particularly of those who come from the working-class. The alternative route to higher education through technical school system does not remedy this class-bias. There is a high wastage in the German educational system. Attempts were being made to remedy this through 'unified school' system.

The remedy to this wastage seem to have been found largely *Fachs chulen* which are post-secondary vocational schools open to students with lower qualification. Though these were not integral part of higher education system, there had been moves to integrate them into it.

The control of the state is minimal in accordance with *academische Freiheit* which means students progress or regress at his own will and professors teach anything or nothing but control teaching and research by his assistants in the manner that pleases him. This makes reform of the system difficult.

The German model does not provide for institutional accountability or evaluation and is dependent on professional commitment, and ethics of teachers. The system seem to have unspecified goals, the wastage

is heavy and the system provides certain safety-catch for the drop-outs. There are provisions for specialization in the system for the professional education as well as research. However the main controller in the university system is the highly respected professor and it is indeed difficult to rise to that socially prestigious rank.

(b) *The Japanese Model.* In the post-war years Japan has vigorously extended its formal education system. As a result only very insignificant percentage of Japanese do not achieve a high standard of literacy and almost all Japanese who enter a school complete it. Many Japanese attend supplementary school (Juku) during secondary school years in order to be able to attend desirable post-secondary school where entrance examination is very competitive. The motivation for achievement through examination is high as there is intense competition between students, their families and school. The system reinforces the drive for a level of achievement. There is drive for uniform national standards set through approved text books for each subject at the secondary level. The impressive fact is that the Japanese secondary school system strive hard to see that each pupil achieves a minimal standard. This is unlike American System where there is no national standard as such and there exists a great variation in courses. Use of final level informality is allowed. Single voluntary associations of teachers, systems of accreditation and post-school education testing services. The uniformity of high quality secondary education provides the basic qualification for a job as he is then receptive to learning more specialised skills at workplace.

Though the pressure for higher education has increased as a consequence of technological development, the Japanese higher education system through specialisation and continuous evaluation seem to have been able to keep abreast with the need. There has been growth of specialised professional school and research institutes. The success of the system seem to have been based on good secondary education, high selectivity, increased specialization and a blend of research and teaching.

(e) *The British System* : The Robbins Committee recognized that higher education is a national necessity and that everyone merits an education appropriate to his intellectual ability and willingness to learn. Britain was propelled towards a system of mass higher education but the traditional universities were unable and unwilling to sustain the pressure. The universities did expand but more new universities were opened to become centres of innovation in university education. The ailing British economy needed various categories in various quantities of trained graduates for its revival and the traditional university system was considered unequal to the task. This led to the establishment of vocationally oriented higher education institutions under government controls. This caused the establishment and upgrading of polytechnics and granting university character to a number of colleges of Advanced Technology.

This binary system has allowed for requisite expansion in the higher education sector, provision for growth of professional education, close association of

professional association with educational programs, evolution in the universities designing new courses while maintaining selectivity and academic freedom as well as gradual adoption of a broad curriculum and competing standards by new institution.

In addition open university system has provided opportunities of higher education to those who have been precluded by the established system through a technological revolution in teaching method.

To sum up, the pressure for higher education due to demographic and/or developmental factors required expansion of the capacity of higher education system. The expansion in all cases required creation of specialised professional education institutions and evolution of university courses. Research has been considered in some cases as specialised activity but a balance between teaching and research at an "appropriate" level in the higher education institutions have been sought. The "core" institutions have followed a selective admissions policy which helped establishment of certain standards unless those were set by an external agency. The overflow had to be accommodated through a growth of "lower" professional schools, parttime courses, open university system and the like. But in all cases, standards in higher education and reduction, in wastage required a rigorous secondary education system, competition, and in some cases supplementary re-education courses. These models seem to have attempted expansion with safeguards for standards and, responsiveness to national needs.

III

Having deliberated on the higher education system inclusive of non-university sectors—we shall in our deliberation concentrate on the university sector generally, as higher education traditionally meant university education and many of the countries in the Asia and the Pacific region are still traditional in their approach to higher education, though there has been expansion of professional schools and research institutions.

In order to be able to deliberate on *efficiency* (i. e., ability to produce desired effect with a minimum of effort, expense or waste) and *accountability* (i. e., the state of being liable to answer for ones conduct to a superior body), it is necessary to understand university as an organization. The university has been described in various ways—a community, a bureaucracy, a business firm, a political system or an extension of the school system. The traditional concept of a university is a community of scholars (*university scholarium*). According to that concept there is no conflict between the teacher and the taught or between disciplines or between different approaches. Every body is engaged in advancement of 'ideas' and enrichment of 'knowledge'. The process is interaction and introspection. The students are incidental seekers of knowledge and teaching is a process of examining the state of current knowledge and an input to research in the interest of knowledge. According to this concept the output of the university is contribution to knowledge and efficiency can only be measured in terms of those outputs.

presumably with greater emphases on quality. This concept was articulated in the concept of a research oriented university which appears like an inextricably bound organisms identified as departments, peopled by teachers and the taught. The accountability is informal and mostly to one highly conscious academic self.

Even these organisms, as they grow, need a system of regulation to provide and share facilities to coordinate activities, to reach out to selected members of the community and to judge the failure or success of the system. This is precisely at the base of the university organization i. e., bureaucracy. As the universities have grown in size this has been carried to an extreme which has been described as "a system where unnumbered students are enrolled for numbered classes, taught by nameless teachers and examined by faceless professors. "What is being emphasized is that expansion beyond a point depersonalises education with adverse effect on the learning process and thus reducing effectiveness of teaching. The efficiency of this bureaucratic organization can be understood in terms of utilisation and availability of academic facilities for students and teachers. The system needs to be accountable to peers.

This depersonalization process has given rise to the 'conflict' model in place of the 'community' model. According to this views a university is a business firm where teachers, students, researchers and staff collectively bargain for allocation of teaching, forms of instruction, hours of work, use of funds facilities and the like. The contribution of this extremist view is to force recognition of the fact that relationships in

a modern university with large number of departments, students, faculty, staff etc. are much more complex and a pluraristic view is closer to reality than a unitary view of such institutions. The efficiency of a conflict ridden large organization lies in balancing group demands for attainment of collective goals at reasonable cost. The accountability is multi-faced and to be effective it needs to be coordinated as well. The pluralistic view contends that a modern university is composed of several communities and divided both horizontally and vertically. Vertical division separate a physicist from an economist and horizontal divisions distinguish students from students (e. g. undergraduate and post graduate) and teachers from teachers : professors and lecturers). According to this view a university is divisible—parts can be added (e. g. a Business School) or deleted (e. g. a divinity school). In this pluralistic system constituent units have little to connect them and agency is needed to ensure equilibrium of efforts by controlling activities of the constituent units. The growth of a university requires a coordinating agency which has to evaluate and monitor the constituent groups. The purpose of the agency is to know the "contribution" of the unit to the total system and make allocation of resources accordingly. This is like managing a multi-product firm for optimising returns, growth and image. The efficiency is to be measured by the results of coordination vis-a-vis the goals of the system.

A further ramification of the conflict model is seen in the conception of a university as a political system where distribution of power is the critical factor. It

starts from the fact that a university is composed of various groups which cut across departments and these groups have differing interests and goals. In order to attain those goals the pressures from these groups are articulated in order to influence the decision process to formulate policies as per their point of view and execute them. At each stage it is a play between groups to capture decision making power or to minimise such power of the other groups ; pushed to the extreme such an approach has led to the application of conspiracy theory of organization to the large modern universities.

Whatever may be the model that fit a university, in order to understand or judge the efficiency and accountability, it is only proper to recognise the set of factors that determine goals, targets, the process for review and coordination, the structure of the groups or components, as well as the environment in which it operates.

IV

The efficiency of a university, for that matter any organization, can only be judged in terms of its objectives and in relation to the variables that are within its control. In this context it is appropriate to ask what are the objectives of the universities any way? The objective of the universities have been to teach students. But there were universities which provided "an extension of private education for gentlemen" whereas others were assuredly vocational. When the universities were small the social function of the universities were

or merely emphasised. But in the recognition that universities create and discover new knowledge and then transmit them to younger generation, there is an implicit recognition of the social and economic externalities of the universities' basic function of teaching and research.

Robbins Committee on Higher Education in U. K. stated four objectives of the universities to be as follows :

- (a) to provide instruction in skill to enable its graduates to participate in the national production effort effectively through skill-based division of labour ;
- (b) to promote mental faculty to produce cultivated personalities ;
- (c) to help advancement of learning ; and
- (d) to transmit knowledge-based common culture which sustains standards of citizenship.

All these objectives are biased towards teaching and the third alone underscores the place of research in the universities.

It may be generally assumed that these broad university objectives are transmitted to the departments which formalise their programmes and courses for the attainment of these objective. It is however doubtful how much conscious are the constituent units of these objectives and whether they attempt to set departmental goals independently in more specific terms within these broad objectives in the countries of the Asia and the Pacific region. The units/departments seem to be more concerned about degree regulations and often inflexible delineation of courses without relating it to any

specified objectives. It may also be said that the shift towards skill objective has in recent years deemphasized the other objectives in profession related departments and institutes as they implicitly emphasise specialisation without broadening the faculty of the mind.

Though research has not been emphasised by the Robbins Committee but the growing professional culture, aided by the evaluation process, has prompted the individuals to value research output as their objectives. Some universities (e. g. many in U. S. A.) have sought and promoted research activity as an institutional objective or they have been given these research functions to designated institutions by controlling external agents (e.g. USSR). The research commitments however vary from department to department depending on facility, funds and demand for it. Similarly research objective varies from individual to individual. US top universities seem to have overtly emphasized research for teachers.

The objectives of the university deductively is an amalgam of such objectives of individuals in the constituent units. The concept is not a simple one. The output objective of the universities are simply graduates (numbers and disciplines) and research (new knowledge). But this quantitative dimension seem to hide the quality objectives of the universities. This refers to performance (achievement in employment situation) of graduates, recognition of faculty research output by peers and professionals (as useful, fundamental, basic etc.) and academic standards. Besides these there are "system support" objectives of the university

which help attainment of quality and output goals. These are measured by teacher-student ratio, utilization of class space, library utilization rate, etc. and more are related to the management of the university and its constituent units. The support objectives work as planning props to attain output and quality objectives. These three constitute an organic whole and they have to be viewed in that perspective.

It should be noted that in our discussion we have deliberated on objectives from the supply side of the system. The demand side, represented by student and their guardians, seem to play a minor role in the determination of the control knowledge content in the courses. In olden days the students come to teachers in search of knowledge which was a conscious act. The depersonalisation and enlargement of the system seem to have institutionalized the objectives and the direct conscious participation by the students and/or their guardians has become remote. The students today do not come for knowledge as such but for qualification for employment which are set outside the system. The universities in general do not cater directly for employment and allow the external labour market system to take care of this. The guardians look for a return, monetary and otherwise, to the years of patient waiting and financial outlay in terms of a commensurately rewarding job. They do not have any direct influence on the university except where there are many higher education institutions of comparable quality and students and guardians can exercise their freedom of choice as a customer does in the free market system.

Thus the system carries a possibility of monopolistic behaviour and academic autocracy in determining objectives and service provided in real works.

Having said all this, we need to mention briefly the conception of a university as that qualitatively affects the objectives. There are two widely divergent views. One sees the new university movement as essentially based on collectivist and egalitarian values; while in contradistinction the classical notion of a university is that by its very nature it must be individualist and elitist.

We find that the German system of universities has tended to preserve the individualist and elitist tradition in the case of professors while the egalitarian approach has been accepted in matters of student admission at post-secondary stage. The conflict has resulted in high wastage. The Soviet mode conceives higher education as part of collectivist and egalitarian approach but the elitist character has been maintained selectively in the universities of Moscow or in the Kalinin or Riza Polytechnic Institute.

The American system has accepted democratic right to higher education while protecting the centres of excellence through monopolistic market structure and these centres nurture individualist and elitist approach. The British system through its binary approach, has made coexistence of extended democracy and elitism in higher education possible. So has Japan. The point that is being made is that the conception of a university is no longer unique, the social system has to cater to popular demands for egalitarianism while

presenting creative elitism that sustains progression and propagation of creative knowledge. Without a hierarchy and plurarism in the system accommodation of democracy and elitism becomes difficult. Hence the individual university's objectives will reflect egalitarianism and elitism in different proportions and constituent units of the university may also reflect the diversity as well.

V

The efficiency of any system depends primarily on the actors in the system itself; if we carry the community concept in the case of the university, it refers to the members of the university community. Broadly there are three sets of members academics, students and administrators.

Ignoring the system effect, it is the academics who are primarily responsible for ensuring attainment of the quantity and especially the quality goals of the university. The image and achievement of a university is determined by the character and attainments of its academic staff. It is they who primarily make what the university is or becomes.

Academics perform many roles. They are providers of knowledge and a model personality for the students. They are creative seekers of knowledge and a guide to juniors in the profession. They are pursuers of excellence and a man of ethics to his colleagues. They are setters of standards for the profession. They are depository of useful knowledge for the community and the government. They are image builders and

student attracters for the administrators of the university. The academics, thus, are not merely teachers or scholars; through those two attributes they perform wider community and social function. Further as a model and guide, they cannot have a discontinuity in conduct in his private and public life. They seem to get intertwined. These are difficult roles to combine in one. But these are manifestations of efficiency of a teacher in a community of students and scholars. This total personality view is being challenged in the West where value system are rapidly changing with perceptible consequences, but the tradition-minded society still values this personality portrait of an academic.

The academic as a teacher is required to integrate what is being taught with what is known to the subject. Unless this integration is achieved what is being sought remains information, it does not graduate into knowledge. At the level of the university it is the knowledge which is sought and not information, otherwise books could replace teachers. This is the basic test of an efficient teacher. This is difficult and traditionally this has been regarded to be a simple function. Apparently university teaching seems to be the only job, for which no training is given or seem to be required. This doubly makes the selection of a new teacher difficult. It also makes the job difficult for the new teacher. He seems to learn on the job, often imitating and emulating his favourite teacher.

Teaching is a profession where one cannot afford to make mistakes, more so in higher education institu-

tion or be lax, careless, unfair or impatient ; take a false step or cease to learn. He is watched and appraised by a changing but continuous community called the students and other academics. Thus his efficiency is constantly under observation. Through these activity the academic achieves a sense of progression, becomes intellectually more competent, thinks more coherently and deeply and feels the sensation of having his mind stretched and made more supple. These are some of the criterion by which an academic can judge for himself the attainments as a teacher. Because of this the teaching profession has been implicitly or explicitly in favour of self assessment for efficiency of teaching. To achieve all this a teacher has to be self-conscious and must have an extraordinary degree of sensitivity. He has to get on with people in order to communicate, must have a sense of involvement with a clear sighted recognition of his ability and objectives vis-a-vis those of the institution where he serves and the students whom he teaches.. He has to be active in pursuit of excellence in his work so as to imp'ant the same in his students and environs. In other words he demonstrates a code of conduct that promotes professionalism.

These are some of the basic requirements for efficient teaching. Having said this we may explore the reasons that hinders attainment of efficient teaching. It has been alleged that most academics drift into the service and accept it as a way of 'earning a living' when the requirement is a conscious option and acceptance of it as a way of life in a committed profession. It has been said that low salary tradition of the older

universities was a carry-over of "seminary culture" but was also helpful in getting committed faculty. Those who hold this view are of the opinion that recent comparative improvement in the financial rewards of the university teaching staff has led to three consequences. First, by comparing it with other vocations, it now resembles another vocation; second, because of this there has been a diminution of considerable social prestige that was attached to university teaching, third vocationalisation of teaching and equating it with other jobs, have contributed to the growth of Jobbers in place of committed teachers i. e., one who merely 'does' the job rather than one who 'ennobles' the job. There are others who would contend that higher and not equivalent emoluments would make stricter selectivity possible, it is the equivalence that is at fault. In response to this a group of researchers contend that the selection for appointment particularly at the lower level suffer from inadequate specification of qualification. The selection is primarily dependent on impression or evaluation by peers.

They are in a position to speak about the level of attainment in demonstrated knowledge as shown by the examination results or publication. But they are hardly in a position to judge him for professionalism or commitment to teaching and research. Once a mistake in selection is made, the system seems to be stuck with it, particularly in the developing countries.

The decline in the quality of teaching has been blamed on rapid expansion of higher education sector. This is said to be compounded by the fact that there is no 'training' facility for a teacher. It is said that

teachers need be educated in respect of their role and responsibility if not in the pedagogic methods because they are to engage in shaping young minds into wholesome persons. When recruitments are few and there are elders in the profession available for counsel and when the new recruit is able to make his own assessment and feels responsible to the profession and the institution, formal training may be avoided. In fact, in periods of slow growth of academia, the tradition of no formal training was avoided precisely for this reason. The question that is raised whether in periods of rapid growth of higher education training is a proper approach for maintaining and/or enhancing efficiency. The skeptics point out that those who need formal training are misfits to begin with and those who have the quality they do not need it. The truth possibly lies somewhere in between for many of the teachers.

It has also been contended that the present teachers in the universities suffer from a divided loyalty and that affects his performance as a teacher. There are disciplines which are profession-oriented e. g. Law, Medicines, Economics, Business etc. With the growth of specialisation within the subjects, the academics in these area at times seek 'recognition' or 'rewards' not from within the university system but from his fellow specialised professionals.

In other word his individual objective may not be in congruity with the institutional objectives. In such a case he makes his own choice and may prefer to lower down teaching compared to his professional work. The extreme case of this conflict is an academic entrepre-

neur who use the university post as a secure base from which to run what amounts to private business e.g., consultancy by business teachers, practice by medical teachers. In this case teaching effort is likely to decline in quality. There are also cases of another type of entrepreneurs who use the university job as a stepping stone to a position which does not need attainment in teaching as a qualification. In an expanding professional job market such hazards remain. It is an improvement in selection system, contractual appointment and salary, evaluation of performance and insecurity of tenure which might, I repeat help in the improvement of teaching standards.

The academic as a researcher is required to integrate what is known with new approaches, new knowledge and realm of the unknown that needs to be explored. Unless this integration is done what is being researched remains a separate identity it does not stimulate his teaching. At the level of the university such integration is a desired goal otherwise the process of knowledge creation and decreation of is not transmitted to the succeeding generation. Initiating students into successive stages of research, integrating them into research itself and transforming them into active researchers in the final stage is a function that research based higher studies are supposed to perform. This however could be fully accomplished at the higher levels but initiation and integration could be attempted even earlier. But at the extreme such researcher may turn out to be great 'mystic' scholars who is understood only by a few. In the institutions of higher education there are different

types of teachers. First, there are those who are basically teachers and teachers only. They effectively communicate existing level of knowledge. His seeking of knowledge is confined to seeking clarification, elaboration or a new way of presentation. He has limited interest in research. But he is available to students and would answer any question related to his competence without faltering and with conviction.

They are adored by teaching colleagues. They build up in themselves a loyalty to the institution, to their students and to their colleagues. He contributes to upgrade average efficiency of his student. There are some very inspired teachers committed to teaching who would use results of others research and integrate it for the benefit of student and thus create a solid foundation for advancement in students.

In contrast there are those who are research oriented. They devote a lot of time in seeking knowledge and stretching it. They normally communicate with the advanced students in the class while the average students seem to get lost. They enjoy teaching as a method of getting his thought process cleared. *The students are the sounding board.* Such teachers are eager to restrict admissions and update curriculum and are impatient with incompetents. But once the students are able to establish a communication channel, the academically oriented students never fail to get the most from him. Such a teacher may often be misunderstood and accused of partiality. While such a teacher raises the efficiency of selected students, he is apathetic to those who fail to cope up. Those few however contribute

greatly to the growth of professionalism.

The third type of teacher is an academic entrepreneur. He is an income or opportunity maximiser. The university work is residual to him. He uses the university as his base. His interest is in facility building. His interest in teaching is incidental and in research it is a consequence of his entrepreneurship. Students fail to build up a meaningful relationship except as a research assistant. He treats his job at the university as a vocation and nothing beyond that.

The fourth type is the apathetic type who just happen to be there. They either lost interest over the years or just do not find the job interesting any longer but stick around as noting better is within their reach. They neither teach well nor engage in research.

They are not sure as to why they are there. Students appear to them to be a source of burden or trouble.

The fifth type are the activist and has non-academic goals to achieve. He may seek power through the teacher trade unions, and/or through governing agencies in the university organizational system. Since such positions are rarely sought or given to those who are most (academically suited,) the activist through their customary action seem to occupy them. If one accepts either the political system theory or the conspiracy model for university organization, their action may indeed have negative impact on the efficiency of teaching or research or both in the institutes of higher learning.

A variant of this activist group are the political activists who maintain close liaison with political groups

outside. Their interest is in improving existing situation and they feel very committed to it. Many of these activists are interested in education and committed to teaching as that is the best conduit of their 'social' thought and action.

These are pure types and teachers are normally combination of two or three. However, the static system efficiency of an institution of higher learning is greatly influenced by a faculty which, has a balance of committed teacher and creative researcher who enjoy teaching. The other types, except, may be the 4 or 5 variant, are drag on the efficiency.

VI

The other important group is the student. The student as the beneficiary of the teaching system can contribute to attainment of desirable standards. It is difficult to speak in terms of a student group because by their attitudes and values they are different. It is difficult to discuss the whole spectrum of typology but we shall mention only the more dominant ones.

The most prevalent are the job seekers i.e., those whose orientation is 'vocational'. They are interested in a 'qualification' that would help them to get a job and rarely in knowledge. Since many jobs require university degrees as a proof of maturation, as employers look at the higher education institution as one performing first selection process for them or as producers of "establishment" men such an attitude is hardly surprising. This group of students are interested simply to pass the examination and resent teachers explora-

tion in knowledge. (Most in this group come from lower income category) for whom a job is vitally important.

In contrast to them, there is a group, mostly coming from upper income class, for whom the university is a staging post between school and society. They are seekers of social orientation and thus very active in extra-curricular activities that help their self-development as cultured and cultivated personalities. They have only incidental interest in vocational and academic objectives of the university education.

The third group is the delight of the academic as they find academic work interesting. They are concerned with knowledge and they are interested in exploring the concerns of academia. It is difficult to make a class identification for this group who through the learning process become a mirror image of their teachers. In this pursuit of academic excellence, some perform better and opt for university teaching and those whose performance are not upto the competitive mark often take up teaching in schools or colleges.

The fourth group are the problem group for teachers. They are the disinterested students who do not know why they are there. They came only because they satisfied admissions criteria and their parents or friends persuaded them to be there. A continuous evaluation for dismissals would quickly screen them out. Some conform to academic rituals and get through but most become drop-outs or linger on.

The fifth are activist group who put priority towards

improving and reforming social systems and ignore commitment to his studies. Some in this group seek position and power in student and related organizations and seek a career through such activities. Students with pronounced activist leanings are intelligent and hold strong views. But because of his priority, he becomes a non-performer or a low performer.

The sixth group are the anarchist who reject his milieu. The apathetic student accept it, the activist tries to improve it, but others donot bother about it. Their activities are antithetical to any established academic pursuits.

In presenting the complexity of value and attitudes of the students, it is proper to note that such pure types are rare, normally they are a mixture of two or three. Further, teachers present their lessons either for the vocationally oriented group or the academic oriented type. These group detest uninterested, unhelpful and unapproachable teachers. They also seek meaningful courses that are taught to upgrade what they know with what is being taught. For the second group such integration transforms information into knowledge while for the first information is needed for the qualification. But all the groups expect from the teachers fair-play in teaching and evaluation as well as lack of pretence.

The swelling of student population in the countries of our region have been accompanied by insufficient and sub-standard schooling as well as immaturity in thinking and outlook. The causes for this have been identified as not many good teachers, not adequate

facility and not enough finance at the elementary and secondary level even after many compromises with standards and sub-standard academic contents of syllabus. This is more true with densely populated and slowly growing economies. Large population meant larger demographic pressure and slow growth resulted in smaller allocation of resources. The institutions of higher learning are apex institutions. Unless they follow highly restrictive admissions policy, these institutions are affected adversely sub-standard secondary education. Further, absence of vocational component in school education coupled with limited opening for jobs produces a baby-sitting syndrome in higher education. The Government becomes interested in keeping the youth out of the streets and allows for expansion of admission in higher education institutions. This enforces these institutions to provide lower level education which in turn dilutes the entire education system. Thus in many of the developing countries higher education institutes are providing compensatory education at the undergraduate level and thus failing to prepare them for a meaningful post graduate education.

Thus the efficiency of the higher education can be broadly judged by the attainments of the students. While the causes may not lie within it and remedy should be found in recycling properly trained graduates to the elementary and secondary schools with adequate funds and facilities. In this context the higher education system has a role which has not been played in the absence of a remedial plan for submission of higher education system to meet the crisis of standard. In

other works the higher education institution can not be islands and maintain standard when the feeder institutions lack it. The remedy lies in planning for a strong system of education where different stages are clearly designed to attain defined standards which should be up-graded consciously and collectively. It should be remembered that high academic standards are the end-products of rigorous academic processes at an early stage.

VII

The third set of actors are the administrators. The basic function of the administrators is to distribute resources—man, space, time, books, equipment and money to the best advantage as per the objectives of the institution. This distribution calls for rules, norms, documents, controls, reports, and evaluation which create a bureaucracy. But the power of the administration is limited, it has only influence mustered by the leading men of the administration through their reputation, skill and contact.

In the universities much of the administration is carried out on fulltime or part-time basis by teachers of the university. at time by those teachers who are seekers of power and did not do justice to the departments. Vice-Chancellor in the British system (or President in the American System) is the chief academic and administrative officer. But the real power in the university is so diffused that the influence of any one person or position is limited. This is despite the fact that the system imposes on the chief executive the variety and

burden of work that is unknown in modern management.

However in the past the most successful chief executives have been strong, highly respected, scholarly but authoritarian in character. He used his capacity and quality for attaining desirable growth and distinction for the university. This has been replaced by a system that made the chief executive dependent on groups within and without the university. This certainly led to the total substitution of the authoritarian character of the chief executive but in its place imported one which is weak and subject to factional pressure those losing the very advantage of overall position that lends objectivity. The result has been that chief executive may be forced to comply with the wishes of a certain group of academics which in turn may cause lot of damage to the governance of the system. The chief executive fails under the altered system to play the role demanded of a leader of academic profession. This fits well into the subtractive model of leadership which states that authority of the chief executive is reduced to the extent his constituency groups or patron groups or client groups modifies his power. In such a situation concern for people (or group in a narrow sense) tend to minimise concern for performance (i. e. efficiency) the responsibility for which lies to a great extent with the chief executive. Studies of Academic administration have led many scholars to conclude that effective leadership is scarce or lacking in higher education. The system seem to filter out most capable persons who could enhance quality and performance from the academic leadership positions.

The struggles and difficulties in administration of higher academic institutions have led to the appointment of conciliatory, faceless, incapable and unimaginative kind to the positions of chief executives. This leadership crisis in higher education has resulted from 'structural peculiarities and complexities of organization design, decentralized governance, protracted policy setting mechanism, ambiguity in the authority vested in positions and multitude of pressures'—with which the university administration has to contend.

Such state of academic administration and quality of leadership is hardly conducive to pursuit of efficiency. The organizational structure of universities is described as flattened bureaucracy with political rather than hierarchical system. The political model is characterised by limited participation in policy-making, quickly changing faces in participatory organ, fragmentation into interest groups, continual conflict amongst groups, negotiated compromises as decision and significant influence of external interest groups. Such governance does not promote efficiency.

The efficiency of the university system is dependent on the efficient university administration which in turn is dependent in competent university leadership. The attributes of such leadership have been, pictured differently. A succinct description of such a leader is given by twelve behavioural qualities—approachable, articulate, charismatic, decisive, deliberate, emphatic, fair, firm, flexible, persuasive, sympathetic and a moral builder. A tall order indeed.

Below the chief executive, the next important

leadership position are those of Deans, unless those have been emasculated by the system. In a large university with decentralized administration such position of deans are indeed very important. A longitudinal study of deans in US institutions indicated that effective deans that promote efficiency have the following attributes: administrative capability, ability to lead and initiate, energy and intellectual ability, ability to relate to the field, personal academic appearance, practical field experience, research and publication record, personal values and national reputation.

They are up to the task and can deal with context related problems. They have necessary skills and personal attributes to be effective. But quite often they end up being abrasive, dogmatic, insensitive and unethical. Those who do not become autocratic, tend to become servant of a group and not always the change agent to promote efficiency.

The most important leadership position is that of a Department Chairman. In the British system there prevails a professional autocracy. This has been considered unhelpful in a non hierarchical system. A study of departmental chairman in 100 departments of US universities show that efficient chairman are those who are persuasive, can yield influence, enjoy reciprocal confidence, have national reputation and are able to reason with administration. Thus he has skill, scholarship, sensitivity and shrewdness. With only considerable personal eminence the departmental chair is in a position to maintain a cooperative team effort, ensure effective communication of information and ideas, promote dis-

cussion for achieving conscious, secure support for innovation and gather facilities for efficiency in teaching and research.

The university administrators are basically engaged in helping implementation of the decisions of academic administrators through allocation of time, space, resource, equipment, finance and personnel. They are facilitators and can only operate in conjunction with and with consent of the academic community. The parameters of administrative efficiency are basically a judgement of adequacy and use of finance, facility, faculty-time in relation to the output and quality goals of the institutions of higher learning.

VIII

What can we then say about the efficiency of higher education system in a country or a university. First is the obvious: the higher education system is a part of the total education system and its inputs come from the system below. The smaller the country and more uniform the system, it can be said that generally the higher education system cannot be much more 'efficient' in terms of output goals or quality goals than the total system. The only way to raise the efficiency above the system below is to follow a very restrictive admission policy and a greatly disproportionate availability of resources to the two sectors of the same system. Any policy that attempts to increase efficiency rapidly in the higher education sector is likely to create greater wastage in the pre-university sector given limitation of financial, teacher and managerial scarcity.

Second, the pursuit of efficiency in the higher education sector can only be built up in stages through continuous evaluation of objectives, inputs, facilities and outputs. But such pursuit, in order—to be effective and socially acceptable needs a system of deficiency remedial schools on the one hand and extension of vocational education system on the other. This allows the job seeker to follow an alternative and removes the demographic pressure and that of development dynamics on the higher education system. But this assumes the capacity for the economy to continually absorb growing number of vocational graduates. Simultaneously the higher education system remains open to anyone who can demonstrate competence and such flexibility diminishes the tension or empathy generated by a restrictive system.

Third, the system or an institution is as good as are the people who man and run it. For a system to be efficient, the management of the system need be efficient. This is not merely a question of structure or the process which should reflect adequately the objectives of the system itself. The assumption of the academic community of equals who are so responsible that self accountability makes the system work efficiently in a coordinated manner does not generally suit the description of higher education system today. Hence the diffused undefined responsibility code and decentralized responsibility centres may no longer be an ideal system as this makes evaluation of efficiency level difficult which in turn results in delay in identification of necessary corrective measures and may even

complicate adoption of such measures. In addition, the leaders in academic administration, due to the struggles and difficulties of the academe, has more often not demonstrated the qualities that are required for such positions. Vice-Chancellors have tended to become faceless, the deans weak and department chairmen a survivalist servant of the dominant group. Such attributes hardly promote efficiency.

Fourthly, the efficiency depends on the facilities made available to the faculty. Over crowding of the system or rapid growth of population in the system has often meant inadequate provisions of class, books, laboratory, etc. This has been largely due to the fact that the developmental priorities for higher education and socio-economic consequences of expansion of higher education were hardly clearly spelt out in any form, not to speak of the education policy.

Fifthly, rapid expansion of education failed to provide for trained and qualified teacher at the primary and secondary level. As a result of this and poor salary scale, these institutions were manned at times by the 'scrapes of the academic barrel'. Nothing has contributed more to inefficiency of higher education system than this. But this has been complicated by the fact that teachers in the higher education system, due to rapid expansion and closed shop practices, do not demonstrate the standard of scholarship, commitment to teaching, loyalty to the institutions, devotion to work or traits of personality that is required for the job. Thus inadequacy of faculty below gets compounded by lack of quality of the same in the higher

education system and results in substandard output both in terms of graduating student and research. Because of this dilution of quality, the universities as a source of service to the community and the nation gets dried up. The system is further threatened by the growth of academic entrepreneurs and apathetic teachers.

We have so far refrained from attempting a discussion of efficiency which is an organisation, environment and membership related concept. So far, our attempt has been to discuss those dimensions of a university. Efficiency of a university is to be understood in terms of its capacity to mobilise and use its resource in pursuits of its operative goals in a manner that effective goal attainment is least expensive in terms of resource.

In our discussion on goals, we have pointed out the multiplicity of goals as well as different perception of goals by members of the organization. The discussion was explicitly aimed at recognising the multitude of goals, and their changing and conflicting nature. This has led us to recognise that goal attainment can not be maximised due to presence of conflicts and constraints; it can only be optimised. The optimisation is possible within the environmental compulsion and behaviour of organizational members. However an analytical model integrating such factors in a systematic and comprehensive way to determine the correlates of efficiency in the higher education system is yet to be done. Such an approach is a monumental undertaking in view of many variables that relate to efficiency of

higher education system. Like other organizations, researchers have attempted to look in depth into some fores of efficiency (e. g. social and economic returns to investment, wettagage of resource, cost effectiveness etc.) Such piecemeal evaluation of efficiency are helpful but presents a problems of integration.

Narrowly interpreted, efficiency considers the issue of how much input is necessary to attain a level of output or a goal. This concept in the context of the higher education system has given rise to such concepts as success rate, attrition rate, employment rate. It is assumed that between two institutions within a given system one that has higher success rate or lower attrition rate or higher employment rate for its graduating students is more efficient. This however makes certain implicit assumption about quality of entering students and of academic inputs. In other words these rates are not comparable unless one standardizes the qualities of raw inputs and process inputs.

There has been another kind of efficiency measure that looked into the wastage. One such indicator is the drop-out rate. And capacity utilization is another indicator of wastage. Consistent capacity underutilization means either lack of effective demand which is not upheld by the pressure for higher education or policy decision to make it so. The capacity in the institution is often calculated by space multiplied by time. But a more meaningful measure is to determine it by the capacity of critical common facility (e. g., laboratory). Possibly this should also be measured as aggregate of capacity of constituent components. The drop-out

syndrome complicates measurement of capacity utilization.

As a measure of 'social' wastage and in that sense inefficiency of higher education some attempt has been made to measure it by unemployment of graduates or over-education for employment index. The former indicates either absence of capacity in the economy to avail of the services for which both public and private investment has been made. This is considered wasteful from the social and economic point of view. The second index, shows that even when employment is available there may have been an over-investment in the education system product. That is also an indicator of inefficiency. These are indicators of absence of proper linkage between education and employment and in that sense in the planning effort of the country concerned.

But observations have been made that when unemployment is on the increase and when standards are low in the education system, the universities in countries where higher education is largely paid for by the government, capacity utilization is not a indicator of efficiency. Inappropriate pricing of higher education, in the absence of appropriate policy planning and standards, cause inefficient utilization of facilities in the institutions of higher education under those circumstances capacity underutilization is an effort to keep standards and economic utilization rate for graduates may indicate higher efficiency for the university and the system.

It brings us to the idea that preservation and augmentation of high standards could be an indicator of efficiency. This could mean in the short run that even if the attrition and failure rates are high, an institution

could be judged efficient if it has been able to maintain and augment academic standards. In other words such unitary measures conflict with each other and an evaluator is faced with a choice problem and should indeed apply a longitudinal view to reconcile the two.

A multitude of factors go to the determination of efficiency in a given educational institution. These are broader system characteristics, input characteristics, organizational characteristics, process input characteristics and managerial practice characteristics. Because of these configuration a number of problems in measurement of efficiency of an organization including, that of a university can be identified.

First, there is a construct validity problem. Even when we recognise the relationship among several variables, we do not know enough about their correlation and additive or subtractive relationships. We have some notions of relationships from observations and greater effort is needed in exploring the nature of configuration of these variables and their impact on efficiency.

Second, there is the criterion stability problem. The notion efficiency of the educational system is dependent on the social expectation about the system itself. In many developing countries output quality in terms of vocational skill may be a more relevant criteria. In a more advanced country, ability to conduct specialized technological research may assume greater importance. This transitory nature of use of education has an impact on efficiency evaluation of a university. In another way, adaptability is seen as a component of dynamic efficiency of the higher education system.

Third, is the time perspective problem. It is suggested that organisational efficiency can only be judged in a given time perspective. In the short-run a university may operate within the dictates of social and economic needs and parameters of a country. But in the long run a university performs as a research and development organ to define these needs and parameters. These two roles need not be inconsistent, in fact in a smoothly functioning stable system with a continuum the short-run parameter are used in an iterative manner to define the long run parameters. Many universities are engaged in meeting short-run necessities of the students and faculty with or without being conscious about the long-run needs and opportunities.

Fourth is the multiple criteria. A major advantage of multivariable efficiency approach is to view efficiency in a comprehensive manner, from various component perspective and to integrate various factors into a unifying framework. But the criteria may be in conflict and there may be a problem of choice and/or trade offs involving management policy and practices.

Fifthly there is a measurement precision problem as measurements involve assigning number to attributes which raises the problem of quantifying efficiency concept in a consistent and accurate manner. Such quantification is made difficult due to the complexity and magnitude of the concept of efficiency.

The sixth problem is that of generalizability. The criterion of efficiency for evaluation of a university is subject to environmental and managerial perspective unless the variability in them are standardised, the

generalization of criteria may be hazardous.

The seventh problem is that of theoretical relevance. A major purpose of any study is to be logical and relevant judged from the theoretical framework. What purposes are served by efficiency criterion? Do they help us to make prediction or formulate policies? Thus an integrative model which subsume the interaction of different independent causative factors is preferable. Such a model should be able to look at the relationships between organizational, environmental and managerial variables within the systems framework for understanding organizational dynamics in relation to efficiency.

The last problem is that efficiency is discussed at the macroorganizational level (e. g., output, goals).³ But such an approach ignores the critical relation between individual faculty behaviour and the larger issues of organizational effectiveness which is the basis of efficiency. The meaningful efficiency measurement model need to take into account the relationships between macro and micro level processes.

The efficiency of a university, like such other organization, can be understood in terms of goal optimisation, systems perspective and behavioural aspect of its members. Optimisation is a process through which multiple and conflicting goals are balanced within the possibility region defined by environmental constraints. In this exercise different goals receive adequate consideration and resources are allocated in recognition of importance to the organization. If this is done only then efficiency can be judged against such construct. This however recognises the fact that such optimum

is a product of 'internal' management and thus defines parameters of internal efficiency.

It may be recalled that output goals for a university are graduates and new knowledge. The teaching-oriented institutions downplay the second, while the research-oriented ones emphasise it. The measurement of these are however complicated by the quality goal of the institutions. In other words these are not mere numbers but adjusted values. Here is where subjectivity may loom large. One would like to define criteria like employer-preference and publication credentials or professional standing. Further, these are influenced by organizational goals in terms of growth and change, stability and progression, and adaptability and flexibility.

Then there are the systems perspective which takes into account organization—environment interaction. The higher education organizations have varied offerings and characteristics. This is manifested in offering of short courses, open universities based on media coverage, multicampus universities, industry related institutions etc. Such diversity is the product of the interaction with the environment and response to current institutional constraints. The objective of such institutions are extension and/or specialization. These institutions cannot be judged by the same criteria; though success rate, employment rate and expenditure per student are often mentioned as measures for comparison; whether these are appropriate measures of efficiency, and even whether the two systems are comparable leaves much for debate and discussion. The organizational efficiency is based on membership behaviour

which is largely determined by the congruence of individual or group goals with the organizational objectives. We have earlier mentioned that there are different types of faculty as well as students. There are differences amongst administrators and their goals. The efficient organization may be one that creates a large enough overlap of such diverse group objectives in a coherent manner. Much of this depends on managerial policy and practices.

The efficiency is affected by the manner in which a university organises its resources for teaching and knowledge generation. Studies indicate broad specialization and moderate size of responsibility-centres promote efficiency though this is contingent upon the impact of other factors. Besides organizational structures, external and internal environmental influences affect efficiency. The external environment of a university is complex and varied, perceived as static or moderately dynamic in a changing socio-political situation of a developing country, and uncertain due to lack of information and analysis on the part of decision-makers. The internal environment in the universities are mechanistic within support administration and organic in respect of academic administration. The universities have been affected by external environment more adversely due to limited perception of the changes in environment. This has forced the management of the universities to act within a much more bounded rationality spaces that constrained its efficiency.

Efficiency in the universities are dependent on faculty attachment and performance assisted by support

services of the administration. The reason for low performance by the faculty and staff are said to be (1) lack of job involvement which inhibits deployment of intellectual energy for task achievement ; (2) inadequate perception of the demands for task attainments because of incompatibility between individual capability and task requirement ; (3) Unappealing reward for task fulfilment which works as a demotivating factor ; (4) weak performance reward linkage which makes task achievement non-consequential and (5) non vigorating work climate, which is a product of environment, technology, structure and management practices, intervene to slacken the task achievement motivation. An efficiency analysis to be meaningful need to integrate all these.

Instead of ending this section on an impossibility note, let me suggest there are univariate indices of efficiency which are helpful. Simple indices for efficiency have been mentioned to be success rate, attrition rate, employment rate, faculty publication index etc. There were others like capacity utilization, benefit ratios and the like. The seekers of efficiency would take these notions and develop complex indices for its use over time and across comparable institutions. Such indicators may be classified into three categories : economic, social and administrative. The economic efficiency is related to the question of allocation of resources commensurate with productivity. The outlay of resources is calculated on per graduating student basis for a discipline. It may be adjusted for variation in technological intensity in order to make it comparable overtime. Between departments it would provide a basis for comparison. A ratio

of such cost to 'economic' potential measured by earning capability within the immediate national environment provide a rough and ready measure of social efficiency. For administrative efficiency the cost is to be disaggregated into fixed, faculty and staff and cost per student-hour against "revenue" or "benefit" and could be used to increase the allocative efficiency between departments. It may be mentioned in passing that use of such ratios should be done with adequate care as to information-base and organizational objectives.

X

How does one plan for efficiency in a university? Planning for efficiency involves to begin with reviews of academic programs, administrative and academic support services, personnel performance, resource use and policy for efficiency.

The review of academic programs in the universities should be formal, frequent and comprehensive for identification of quality and efficiency in terms of academic vigor and rigor as well as actual and potential usefulness and demand. Such a review should be intended to examine how efficiently and effectively resources are used in existing programs including duplication, redundancy, obsolescence, over and under expansion, inadequacy etc. Such a review then identifies programs and courses to be retrenched and those to be developed. The administrative and academic support services that absorb so much resources of the university system should also be reviewed. Unless a review of such services are properly made substantial opportunities for

improved resource management is lost. This is to be done through cost studies of each unit of support services (e. g., computer, student housing, library etc.) undertaking financial management studies for identification of wrong resource use review current standards against changing needs, goals and objectives, and updating unit plans to reduce the gap between what is and what should be adequate with cost effective methods.

It is essential to review personnel performance. Faculty evaluation is essential for raising standards even though it may lead to increased turnover, retirement and lay off. Such evaluation, when properly done by self against a standard, by peers against institutional development needs and by the faculty group against planned and changing program and course requirement, it helps in distinguishing excellence from mediocrity, meritorious from the average, leader from the routine performer, versatile from the non-versatile, productive from the non-productive and so on. The academic program development calls for faculty adjustment. An analysis of field work load, costs turnover, rank etc. provides useful information for resource are in departments and that can be used as input for improving faculty mix for efficiency.

A complementary step in personnel review is administrative performance review. Vice-Chancellor, Deans, Chairmen, members of the syndicate, senate etc. need be selected for distinguished faculty performance and demonstrated academic leadership. In addition they should be under pressure for regular review—as such a review can improve administrative performance. These administrators as a group should be instrumental in defining

output goals, quality goals and system support goals and they should be held responsible for their attainments, with cost-efficient resource allocation,

Review of resource use is absolutely essential. The efficiency criteria for such review are (a) minimum resource use to achieve a level of output of an acceptable quality and (b) maximizing output of a quality for a given level of resources. Such efficiency evaluation generally result in continual improvement in distribution of faculty, funds, space, time, equipment, books, etc. Resource use assessment are linked with program review and administrative support review and has to be consistent.

Finally a review of policy which is an embodiment of guiding principles for courses of action in order to help attainment of objectives, is an integrative process. These courses of action, programs and even guiding principles of management should be subject to routine audit to find out if these policies are in consonance with the objectives.

Further policies should be reviewed along with planning and resource management issues in the context of attainment of objectives. Finally, academic program reviews, administrative and academic support reviews and resource use reviews help in redefining the policies. Care has to be taken to avoid inconsistency and contradiction among policies. Such reviews then help to evaluate adequacy of current objectives in the light of social needs and social trends. Further, it helps in determining the strengths and weaknesses of the university. In addition both opportunities and constraints as defined by extra institu-

tional environment can be evaluated along side the review. The stage is set for planning to attain efficiency in pursuit of the objectives. The next task is to define strategies which is a task to integrate and organise objectives and resources into a consistent whole composed of goals for constituent units over short, medium and long terms and specific policies to attain them. Concious planning of strategy helps to identify important issues, coordination of process for development of institutional resources.

For example to improve attainment of output goal in quality and quantity terms requires a policy for faculty development through allocation of time for research, facilities for publication, growth of professionalism, sabbatical for free interaction outside etc. This also calls for flexibility in faculty resources which means minimum tenured position, lateral entry, retirement for continued non-performance and utilisation of adjunct, visiting and part-time faculty. These options need be evaluated in terms of efficiency and effectiveness over a reasonable time period.

Similarly improvement in the quality of academic program may require a strong core program in broad and related scholarly disciplines as a foundation for professional specialisation and applied programs. This requires creating a coordinated academic program within a faculty in order to use specialised knowledge in broad discipline and ensure continuity of strength and vitality of all these disciplines.

This may call for retraining at midcareer, consortorial arrangement and program for joint teaching

and research program in related disciplines. Again, such options will have to be evaluated for efficiency and effectiveness.

Once the options are identified, the process of education, persuasion and negotiation starts over the program and policy. This process is minimised by adoption of a general planning guidelines which defines clear boundaries, identifies objectives for change, responds to felt need for changes and is administratively viable. As options for constituent units are examined and put together in the package for the institution, there emerges a plan for action which requires mobilisation and allocation of resources and that forces the concept of academic efficiency as a primary criteria for such planning exercises.

XI

We have not separately dealt with policy as the basic policy for efficiency is its constant pursuit without fear or favour. It means reducing academic resource wastage due to obsolescence, overextension or development in basic disciplines at the earliest. It means strengthened support for expansion in those areas where productivity in terms of generation and transmission of knowledge to graduates is socially and economically meaningful. It means constant review of academic progress and of personnel objectivity and flexibility in order to keep abreast with developments in basic disciplines. It means a patient, effective support system. Such issues have been discussed earlier and need no repetition.

The management system in higher education raises questions regarding higher education models. In the centralised planning system the reliance is on efficient administration of an externally planned curricula without significant deviation. Thus the system is more concerned with administrative efficiency i.e., teacher/student ratio, space/student ratio, laboratory/student ratio, etc.

So long parameters are achieved efficiently, the management of higher education is considered to have done its job. Programs and policies are not its direct responsibility.

In a competitive system where higher education units are enterprises themselves the management has to be responsible for mobilising resources—financial, physical and human; allocation of resources between faculties, departments, programs, courses, support services and administration; and evaluation of performance to make plans for the following year. Here the management function is much too wide and generally is shared through administrative bureaucracy and faculty participatory system. The efficiency depends on meaningful interaction between these two segments and selection of right members of the team who have management capability, who enjoy faculty confidence and who provides meaningful support to the top management team keeping the best utilised of the institution always squarely in view. In institutions of higher learning, management of participatory nature seen to have produced good result where democratic values are widely shared where variation in basic academic quality is minimum and where

a code of professional conduct for faculty is adhered to and honoured.

In the traditional system, there exists a midway house where participation is formalised through various statutory committees but the management depends on strong appointed leadership in responsibility position. This system assumes wide variation in professional and management capabilities i.e., a good teacher is not necessarily a good administrator and that efficiency given other conditions, depends on good administration for attainment of output quality and service goals.

There is much to be said for one system or the other. But the system is basically chosen to suit the social philosophy and administrative milieu of the country concerned. Hence a radical change in the management system may be counter productive and an evolution is what may be in order. Such an evolution towards efficiency is hindered by vested group interests and absence of a professional code of conduct. For the system that has been infected by such symptoms, the remedy may have to come from outside the system itself.

It has been observed by an educationist of the sub-continent that 'the real issue in university management therefore is that of accountability. Most people who talk about universities however refer to university autonomy as the real issue. As should be evident this is a clever ploy, and sometimes not so unselfconscious, so as to confuse the issue.'

The Robbins Committee identified five essential components of 'academic freedom' that universities must enjoy. These are staff appointments and dismissals,

the admission and examination of students, the curricula and standards of the courses, the balance between teaching and research and freedom of development. There exists very little interference regarding these outside the centrally planned economics. However, where the government is the main provider of finance there has been external determination of staff salary scales and physical development of the universities. The autonomy in these sphere can only be gained through financial autonomy of the institutions. In countries the university appointments are marks of distinction and which carry the 'sovereigns, patronage legacy, appointments to the universities are formally confirmed by the government %.

The real issue of the universities in the context of the developing countries of the region is whether these institutions are performing well and whether the academic process is taking place as it should be. This raises a question of evaluation and institution of a process of accountability.

The tradition of the universities, before the rapid expansion following the world war II, is one of self-accountability of a community of scholars. A person is there because he wants to be there and he justifies his honourable presence only through active participation in generation and transmission of knowledge. If he fails, he forfeits his right to be there. Even though such self accountability can not be relied upon wholly, the basic accountability in the university system begins here and this is a part of the code of conduct of the teachers.

In the traditional system the accountability was

to the students who came voluntarily to interact and learn. The so called tyranny of the professor was endured so long the student thought that he could learn and was learning from his master. The student was accountable to his teacher who in turn through his professional conduct was accountable to them. We find a resurgence of this in the student evaluation of teachers which has been considered helpful even though a hierarchical society finds it difficult to swallow.

The focal accountability points are the peers in the department and here he still retains his strength of leadership of the chairman. This is strengthened through institution of time-use plan and periodic faculty evaluation system. Faculty then spend time to keep his own performance records and reviewing their colleagues achievements.

The university administration is accountable to faculty council for provision of support services. This forces them to mobilise and allocate resources properly, planshead, formulate policy and take action in consonance with the objectives of the institution.

Besides such internal accountability, the university as a system is accountable to society, for which no formal procedure or forum exists. The accountability of the universities to the government where finance is provided by them is formalised through budget and audit.

An efficient university is systematically accountable and is not under pressure to compromise autonomy. It is when the internal and profession related accountability breaks down in non-observance of proper mana-

gement practices or disregared for code of conduct, only then inefficiency creeps in and autonomy is threatened. Autonomy is best guaranteed by a system of accountability that promotes efficiency.

Reference

Section-I

1. IBRD : *World Development Report*, 1984
2. United Nations : *Statistical Year Book For Asia and The Pacific* 1912

Section-II

3. Grant, Higel : *Sovlet Education*, Penguin 1971
4. Barzan, Jcques : *The American University*, Harper, 1961
5. Comparative Education Society in Europe : *The University within the Educatinal System*, 1967
6. Kobayshi, Tetsuya : *Society, Schools and Progress in Japan*, Purgamon 1976
7. Committee on Higher Education, *Report*, HMSO, 1963

Section-III

8. Livingstone, Hugle : *The University : An Organizational Analysis*, Blackie, 1974
9. Kerr, Clerks *The Uses of the University*, Harper 1966
10. Munitz, B : *Presidential Evaluation : An Assessment of Institutional Leadership* (unpublished) 1976
12. Reisman, D : *The Changing American Campus : Beyond the 60s. The Wilson Quarterly*, Autum 1973.
13. Dressel, P. L : *Handbook of Academic Evaluation*. Sanfrancisco : Jossey —Bass 1976

Section-IV

7. Committee on Higher Education, *Report*, HMOS, 1963
8. Lingstone, Hugh : *The Univrsity* : Blockie, 1974

14. Balridge, J. V. (ED.) *The Academic Governance*, Berkeley, Calif, McCutchan, 1971

Section-V

13. Dressel, P. L. *Handbook*, 1976
15. Hadsey, A.H. and Trow M : *The British Academies*, Faber 1671
16. Single, Amrik : *Redeeming Higher Education*, Ajanta, New Delhi, 1985
8. Livingstone, Hugle : *The University* : Blackie, 1974

Section-VI

17. Abbet, J : *Student Life in a Class Society*, Pergamon 1971
18. Croubh, C : *The Student Revolt*, Broadly Head, 1970
4. Barzeen : *The American University* 1968
15. Singh, Amrik : *Redeeming* Ajanta 1985

Section-VII

7. Barzun : *The American University* : Harper 1968
8. Lingstone : *The University*, Blackie, 1974
19. McCorkle Jr. C. O. and Archibold, S. O : *Management and Leadership in Higher Education* : Jessy Bass, Sanfrancisco, 1982
20. Blake, R. R. Mouton J. S. and Willems, M. S.: *The Academic Administer Grid*: Jessy Bass Sanfrancisco 1982
21. Monney, R. The Problem of Leadership in the Univesity, *Harvard Educational Review*, 1965
22. Shatlock, M : A Changing Pattern of University Administration : *Universities Quarterly*, 1970.

Section-VIII

23. Steers, Richard M : *Organizational Effectiveness* : Goodyear: Sants Monica 1977
19. McCorkle Jr. et al : *Management and Leadership in Higher Education* : Jessy Bass, Sanfrancisco 1982.

Section IX

23. Steers, Richard M: *Organizational Effectiveness* : Goodyear: Santa Monica 1977
18. Mc Corkie Jr. et al: *Management and Leadership in Higher Education*: Jessy Bass, Sanfrancisco 1982.

Section-X

19. Mc Corkie Jr. et al: *Management and Leadership in Higher Education* : Jessy Bass, Sanfrancisco 1982.

Section-XI

16. Singh, Amrik : *Redeeming Higher Education*, Ajanta, New Delhi 1985
17. Committee on Higher Education, *Report*, HMSO 1963.