CHAPTER VII

ALTERNATE HIGHER EDUCATIONAL SYSTEM

Any exercise to evolve a National system need to be comprehensive. This is an attempt in that direction though its comprehensiveness would be within limits.

The following factors need to be taken into account in evolving a system.

The levels of literacy in different states vary and the physical facilities differ and they differ in the stage of economic development. Hence each state can evolve its own pattern, but the economic stream at the secondary level need to be uniform in the country. The entrance to universities need to be after 12 years of schooling. In splitting of 12 years, the concepts of child, adolescent and youth stage would be useful.

Higher secondary education need to have comparable standards at national level. All the students who need to enter university education has to undergo a written test and oral examination. Along with these results, the results at the terminal secondary exams may also be considered.

There are regional imbalances in education. As the development process has contributed to imbalances it would be a contributory factor in this regard. Steps should be taken to remedy this situation.
Technology

Technology has taken rapid strides in the evolution of human civilization. It has moved from a craft to super computer. The operations of the different technologies, raw materials used, the skills required, organisation of production, environment under which things are produced differ. The difference between modern technology has been brought out by E. Suchurrman. They are as follows.

1. In classical technology the people were surrounded by natural environment, while modern environment itself bears the stamp of technology. Our observations have become very instrumentalised, enabling us to separate ourselves from nature.

2. In classical technology they used materials at hand directly from nature. In modern technology we tend to become as independent as possible from materials which nature offers us. The reliance is more on synthetic materials.

3. In classical technology the energy was produced by animals and the muscle power of human beings. They relied on bio-energy. The modern technology relies on non-renewable source of energy from nature.

4. The technological form giving was determined by human skill generally uncrafted objects found in nature. Today, human skill has been objectified in or projected into
5. In the Classical technology it was human intervention that determined the succession of steps in the technological form giving. People merely followed certain rules in handling the materials. The accent was on human beings. To day the succession of steps is determined by automatic coupling and controls. Form giving is concentrated in modern tools, technological operations that work independently.

6. In the classical technology one person created the product. Modern technology is unthinkable without the co-operation of engineers, craftsmen, managers, etc.

7. The old technology was interested in here and now. Its problems and solutions remained highly dependent on the demands of practical life. Intentional form giving (plan) and technological form giving (execution) constantly interacted. Today’s engineer, by contrast, disassociates himself from life around him through his disassociation from practice and by the virtue of its scientific character, technological form giving has thus become independent, from intentional form giving (plan).

8. The modern tools have tended to eliminate people from the process of technological form giving with the aid of energy transformation processes that direct technological operations, it is possible to manufacture objects in a theoretical plan. This is called automation.”

The evolution of productive forces have been from an ordinary craftsman to modern workerless factories which run
entirely on automation. India has diverse technology and they need different financial educational and organisational arrangements.

The universities must concentrate on basic research and pure research. The National laboratories should concentrate on mission oriented research. Scientific research conducted in big Laboratories through huge organisations are called "Big science. They concentrate on developments in science after 1920s. There is Little science associated with it which may be called Little Science Mark II. The Little science before 1920s may be called Little Science Mark I.

There is a need for dialogue between the past, present and probable future, a dialogue among different civilizations especially the oriental and occidental studies. The 1913 Educational Policy did encourage occidental studies. These institutes were organised separately. This has not furthered dialogue between oriental and occidental studies. The occidental and oriental studies need to be brought under one roof.

There is a felt need that Indian Languages should be promoted so that latest literature can be read by wider section of the people. This is not to undermine the role of English, but English should contribute to the growth of Indian languages. Good works from English are translated in many Indian languages and many concepts have also been translated into Indian languages. There are good works in Indian Languages. Each language coins its own words to express concepts, this would come
in the way of communication between Indian Languages. There is a need to evolve a common script and uniform technical terms in Indian Languages. In order to carry forward this objective there is a need for all Indian Languages Council where experts from different languages can discuss and agree to common technical terms.

The types of universities

Knowledge can be classified as Vidya, Shilpa, and Kala. The technical universities must be distinct and all Engineering Colleges should be under its roof. Engineering Industries must be allowed to start Engineering colleges. There is a need for close collaboration between the universities and the productive organisations.

Agriculture and Health Sciences must be part of universities. There is no need for separate universities. These areas depend on developments in pure sciences and close association between them is necessary for rapid progress in the field.

Separate universities to promote fine arts and folk arts be constituted. This can be on regional basis.

Universities

A university is a corporation in search of truth, and its spiritual value should not be undermined. When the spirit is restored, the academic commitments can offer a critique and visualise alternative visions for the society. If all the
efforts are concerned with application, then explorations in new vistas would be blocked. The government funding has become crucial and inevitable. This could evoke demand from the government to make universities as "service stations" since, there is a demand for trained manpower.

The question would remain whether it should be an ivory tower, service station or hand post. While the universities claim to be concerned with truth ignoring other concerns would be unrealistic, and in equal measure any attempt to make it a service station only would be short sighted. The academicians must be an association of spiritually free individuals. This may not be realised, but it must be the ideal.

The organisation of university system has to consider the following factors:

1. What are the objectives of Universities?
2. How to finance the Universities?
3. The internal administration of the university.
4. Co-ordination of various bodies involved in running the system.
5. How to encourage innovations in the system?
6. What criteria need to be applied to evaluate its working?

The objectives of University education are:

1. To transmit knowledge and culture to students and to develop critical appreciation of various cultures.
2. To discover, explore and create new frontiers of knowledge.
3. To train the manpower required for the society.
4. To develop the individual
5. To extend public service to the community.
6. To preserve its autonomy and encourage democratic participation.

The authorities involved are:
1. Central Government
2. State Government
3. Regional electoral bodies

The Central Government should promote co-operative federalism where states must be partners in educational planning. A revitalized Central Advisory Board of Education can play a critical role.

There are areas which concern the Central government like Defence research.

The State government need to promote participation of regional electrical representative institutions. This should also consider these representatives are partners. This can help in the promotion of regional balances.

In regard to regional Boards, they are necessary in the case of polytechnics. These Chambers of commerce, artisans, agriculturists, traders, Teachers and governemnt representatives should form into a board to develop courses suitable for that area. These local boards need to be coordinated by the state Boards. Each local board and each institute need to be given freedom of operations, the state governemnt need to be a clearing
house and if necessary intervene to maintain some standards.

There is a need for an apex national body which would be a clearing house the experiences of different states would be exchanged and may if deem fit evolve guide lines and intervene to maintain standards. These boards needs the representatives from industry, (all the sectors), teachers, trade unions, government representatives. This can help in evolving curriculum for private employment oriented courses.

**Types of Universities**

**Type A:** These universities should combine research and teaching. The facilities for research would be favourable and should be able to attract national talent. The undergraduate and post graduate studies need to be integrated. There would have no extra non work.

They can interact with National Laboratories in the case of basic pure research.

**Type B:** These universities should be state universities which should combine teaching and research. The facilities for research would be less compared to A type universities. The post graduate and undergraduate studies should be integrated. Autonomus colleges which could impart education till graduation, in some cases till post graduate studies need to be set up. They would undertake extension work also.

**Type C:** Polytechnics and colleges which would cater to a host of vocational needs and conduct extension services. This should
The professional students must get not only an independent legal system and a doctor should know indigenous entrepreneurship should have a paper on ethno technology, the lawyer must include different schools of thought for example an educationalists, academicists, academicism in the profession. The syllabus for professional needs to be framed by the students who fail to pass the entrance tests of open universities, these would be extensively organized sector, etc. They would also undertake research activities. Cover vocational needs of industries, agriculture, small scale
skill but an education that could develop his personality. It would be improper to look at professions as only transmission of skills.

There is a need to take an overview of different occupations in a particular field of specialisation. Education of professional Engineers, Technicians and Craftsmen must be viewed comprehensively and the ratio of these occupations need to be worked out. The same applies to medicine, Agriculture and legal profession. The co-operative research should be promoted in small scale agriculture and medium scale sections.

Planning:

Central Advisory Board of Education need to be given more powers since education is in the concurrent list from 1975. Education needs to be planned by this body. The composition for this needs to be worked out.

Internal Management:

The maintenance of standard needs to be through a framework worked out by the government and the teachers. The standard can be maintained by Teachers alone, since they are involved in the working of the university. The governor should be made the visitor, not the chancellor of the University.

Finance:

The recurring expenses and developmental grants need to be financed by the same agency.
The grant-in-aid system need to be dispensed with, instead new management techniques like programme budgets need to be employed.

Central Government should concentrate on Big Science. All the universities need to carry research but the emphasis and facilities would vary. The states should concentrate on Little science and intermediate technology. The Agricultural Education and research need to be decentralised.

C Types of Institutions. There is a need for central Council for National Academic Awards body similar to that in United Kingdom. Each state can have an independent body with branches in local areas. In these jobs the state should think independently, also get to know the experience of other states. Hence the centre need to be a clearing house. The classification of occupations of ILO has been the basis on which the Indian classification of occupation has been done.

The major groups are:
1. Professional, Technical and related workers
2. Administrative and Managerial workers
3. Clerical and related workers
4. Sales workers
5. Service workers
Type C institutions can have flexible syllabus, so that it can be locally useful. These institutions should be involved in extension work.

The chambers of commerce and Industry, trade unions, academicians, professionals must form various a committee to run the scheme. These schemes should take region-specific programmes. Though it would have vocational bias it needs to keep in mind the objectives of education. The teaching community need to be given freedom to run the academic matters. They must be given encouragement in research activities.

Any system needs to divide into sub-systems for functional efficiency and convenience. This does not mean each should be considered a separate territory. There must be provision for mobility of teachers between the various types of universities. There must be academic communication at different levels.

A system that is too rigid obstructs or discourages innovations, and too much flexibility leads to adhocism. The ideal would be managed flexibility.

References
