CHAPTER - III
SYSTEMS APPROACH TO MANAGEMENT EDUCATION

A SYSTEMS THINKING

Systems approach denotes a specific strategy or set of methods for tackling a particular problem. It involves the application of a scientific method to observe, clarify identify and solve a problem with a special care being taken to understand the inter relatedness between various parts taking into account their characteristics and properties.¹

First a system must be approached properly, then only, we can think about its improvement. Systems approach is a methodology and is characterised by the following properties:

a. Defining the boundaries of the whole system and its environment:

   Defining the system in question, in relation to other systems it deals with i.e., with its environment.

b. Establishing the objectives of the system:

   Objectives must be viewed in relation to the whole system and not to the individual subsystems.

c. The design of the system should be such that the system can achieve the well defined objectives optimally

considering the interactions of the system with environment.

d. For managing the system, we must plan the courses of action accordingly.

The systems thinking is an approach towards scientific thinking. The central idea of systems thinking is visualising the system or organisation as a whole which was initially introduced by Biologists. The pioneering work of famous biologist Ludwig Von Bertalanffy suggested that the system thinking can refer to any kind of whole, not simply restricted to biological systems. Now question is what is a whole? All systems or organisations whether they are plants, animals or collections of matter in the universe are wholes. Atoms, molecules or chemical compounds are also limited wholes. A whole can be visualized as combination or synthesis of its parts or components which are neither lost nor destroyed in the whole but on the other hand the independent functions are grouped and correlated to arrive at the characteristic properties and structure of the whole. The ideas on which systems thinking based upon are:

1. Emergence and hierarchy
2. Communication and control

Although the biologists are pioneers of the concept of holism in systems thinking, the scientists,

2. Ibid., p.49.
philosophers and engineers from other branches of science also made contributions towards the development of ideas of systems thinking. The central concept emerged out of the systems thinking is the organised complexity of the systems as a whole.

Soft systems thinking:

This kind of systems thinking has the objective of developing ways in which system ideas can be used in tackling soft ill-structured problems. The human activity systems which are relevant to these types of problems can be referred as soft systems.\(^3\)

The attributes of a soft system are:

(a) They are complex by nature

(b) Their inner details are not distinct and distinguishable.

(c) A particular technique can not be effectively used.\(^4\)

In case of soft systems thinking, the methodology can be described as follows:

1) The system is to be defined first with the proper hierarchical structure having complex grouping of human beings and/or machines.


ii) The system has to be perceived in such a manner that the engineering of the system will be suitable for solving the already existing problems.

iii) The performance of the system is measured in terms of its overall objectives after designing and implementing the system in operations. \(^5\)

B COMPONENTS OF AN INSTRUCTIONAL SYSTEM

Systems approach to Management education is a rational problem solving method of analysing educational process and making it more effective. Management education system is a process taken as a whole incorporating all its aspects and parts, namely students, teachers, teaching, curriculum, research, instructional strategy, instructional material, physical environment, etc. Hence, it may be seen that the purpose of the system analysis is to get the best equipment in the best place for the best people at the best time and at the best price. \(^6\)

Systems approach is a systematic attempt to coordinate all aspects of a problem towards specific objectives. In education, this means planned and organised use of all available learning resources to achieve the desirable learning objectives by the most efficient means possible. Its purpose is to ensure that the components of

\(^5\) Checkland, P., op.cit., p.48.
\(^6\) K. Sampath et.al., op.cit., p.101.
the organic whole will be available with the proper characteristics at the proper time to contribute to the total system fulfilling the objectives.

The procedural steps in the systems approach in education are as follows:-

1. Defining instructional, behavioural goals and stating them in operational and measurable terms.

2. Determining functions related to the achievement of these goals.

3. Defining learner characteristics and requirements.

4. Choosing appropriate methods suitable for effective learning.

5. Selecting appropriate learning experiences from many alternatives available.

6. Selecting appropriate materials, facilities, equipment, resources, environment and tools required for student experiences.

7. Defining and assigning appropriate personal roles—teachers—team teaching members—supporting personnel—students.

8. Implementing the programme.
9. Testing and evaluating the outcome in terms of original objectives measured.

10. Refining and revising if necessary to improve production and efficiency of the system to improve student learning.

In brief the system approach applied to educational situations involves the following interlinked and inter-dependent stages: a) explicitly stated standards of performances, including sequenced behaviour objectives. b) Planned input and processes involving structural learning materials and methods suitably geared to the needs of a particular group of learners. c) Monitored output which is used to revise, improve and evaluate instructional system providing feedback to the learner and teacher, and d) a degree of in-built flexibility to adjust to individual situations.

The parts of the instructional system noted in Figure 3.1. above can be analysed into their possible components as follows:
Fig. 3.1. Instructional System
Institutional planning - Application of systems approach - an example.

1. INPUT

Pupils: (a) age
(b) minimum prescribed entry qualification, attainments (entry behaviour) decided by (i) curriculum content (objectives) (ii) duration of the course.
(c) Desirable to consider (i) attitude (ii) aptitude of pupils

Cost factor which is a constraint on input should also be considered in terms of its benefits.

(a) Job opportunities after passing out.

(b) Location of the Institute
   | Rural
   | Urban

(c) Hostel facilities - cost - finance involved.

II PROCESS

1. Curriculum
   need-based
   well defined objectives - anticipated behavioural changes in pupils
   Suggested strategy and lines of approach.
   Evaluation procedures laid out

2. Institute (a) Physical environment
   | Urban | Isolated
   Location
   | Rural
   Proximity to living habitat
   Transport
   Adequacy of space
(b) Buildings, well lighted—cross ventilation
Classrooms
etc.
 fixtures and suitable furniture

Books
 Designed and organised for optimum use

Library

Journals
 well equipped

(c) Facilities
 Computer
 sufficient number of workshop equipments
 Society Service
 Centre
 Recreational facilities
 Hostel facilities for boarding pupils and staff

(d) Teachers
 Professional qualification or training
 Industrial experience
 Attitude—job satisfaction

Constraints to get Finance
 suitable teachers Location of institution

III FEEDBACK

(a) Evaluation by public Internal
 organisations, boards, External
 universities Part internal and part
 external performance.

(b) Employees—Initiative—adequacy of knowledge skill—
adaptability and ability to apply knowledge to
practical situations.

For maximum effectiveness, it is necessary to consider the system as a whole remembering the interaction and inter-dependence of the components of the systems. Full details and specifications about the interacting factors should be clearly defined. Systems approach in education
may be applied to institutional planning and development in its varied aspects (Marco level).

C. FRAMEWORK OF UNIVERSITY BUSINESS SCHOOL:

University business school is viewed as a process system having linkages with input system on the one hand and recepient system on the other. Each system is seperately discussed below.

Input System:

The input system consists of all those young men and women aspiring to become professional managers. The size of this system is so large in India that it poses a problem to business schools in choosing their basic raw material. There are no market based guidelines available to the units of the system to help them in decision making while choosing a business school or any other segment. In the absence of guide-lines, they make choices on the basis of opinions expressed by known people, who in turn are guided more by their hunches than by data. There is a need for such information.7

Students entering business schools are the basic raw materials and graduates leaving are the product of that input plus the transformation brought about by the faculty.

7. Ambarish Kumar, "Struggling For Existence : A case of Management Education in Universities", in Pramod Verma et.al., op.cit., p.70.
utilising the curriculum and the various teaching methods. If the student input is of high quality, almost anything the faculty members do will fail to prevent quality graduates from exiting. Conversely, if the input is inferior, it will be extremely difficult to transform low quality students into high quality graduates. Although most business schools face neither extreme, the challenge for all schools and their faculty is to develop further whatever the degree of talent they inherit in entering students. 8

University business school-process system:

University business school is a process system which is a part of a bigger university system which provides both opportunities and threats for its existence and growth. The forces of a university like bureaucracy rules and procedures, resources, structures and culture do influence the process system, to a considerable extent in their performance.

The university business school process system consists of inter-dependant and inter-related items like general policies, leadership styles, faculty, participants, curriculum, research orientation, pedagogical tools, business school relations with corporate sector, management development programmes, infrastructural facilities and culture. Interaction of all these items form into forces which interact with the main system. These items provide

8. Ibid.
linkages to other essential sub-systems. Admissions develop a link with the input system and get the participants; items like research, consultancy and management development programmes provide forward linkages with the recipient system.

Recipient system:

The recipient system consists of various organised sectors of the economy which are in need of potential managers and have the capacity to absorb them. It needs to interact with the process system for its managerial manpower needs and in the process helps the later in many ways. It acts as a laboratory as well as a major beneficiary.\textsuperscript{9}

Management education system is a complex process which involves, curriculum, faculty, teaching, research, management development programmes, business school relations with the corporate community and the graduates. It also involves general policies, leadership styles, resources, social trends, economics and even ideology. In developing a strategy for management education the following points need to be considered.

Definition of the system:

The University business school as a system consists of interdependent and interrelated items like

\textsuperscript{9} Ibid.
general policies, leadership styles, faculty, curriculum, research activity, teaching, pedagogical tools, management development programmes and culture. Interaction of all these items form into forces which interact with the main system. These items provide linkages to other subsystems.

The above system is represented in terms of its relationship between input, instructional strategy and output, by means of the flow diagram in Figure 3.2.

The interaction of business school with various environmental systems and subsystems are shown in Figure 3.3 using an influence diagram.

2. Definition of wider system:

University business school is part of a bigger university system which provides both opportunities and threats for its existence and growth. It operates under the forces of a university like bureaucratic rules and procedures, resources, structures and culture. Thus the process of management education in university business schools is conditioned by the overall situation. Also, business schools depend exclusively on resources provided by the university through their budgets. This system cannot be treated in isolation.

University business school is strongly affected by the culture of that community and has only limited freedom to diverge from the mainstream of the formal as well as the
Fig. 3.2 System Representation of Relationship between input, instructional strategy and output.
Fig. 3.3 Influence diagram of an University Business School.
informal norms and customs of the university. The wider institutional policies affect the selection, promotion and salary decisions that pertain to business faculty, limit the degrees of freedom to set standards of admission and graduation, typically set limits on the extent to which the business school can engage in fund-raising, prescribe the amount of time a faculty member can devote to consulting, and often constraint the schools non degree-programme activities. The level of integration and harmony between business school and other elements of the university community can enhance or diminish the quality of business school programmes.

3. Objectives:

University business schools should have clear-out objectives and work for them. It appears that most of the business schools believe that they are in the profession of teaching and transforming the students entering into MBA programme. Such objectives are short-sighted and do not provide a guiding light. Business schools have many conflicting objectives. A satisfactory feasible plan requires compromise.

4. Functions:

The functions of any system are influenced by its structure. And in the same way the university business school systems are dependant upon their structures. A
strategic plan for effective management education regulates the structure of the business school system in order to facilitate certain academic functions.

5. The environment system:

Being a part of a bigger social system the business school should treat the components of the national and global systems such as corporate community, the university and more closely the other business schools, as its environment. A business school can not exist without the exchange of men, material, energy and information with its environment. Thus these components of environment influence and get influenced by the business school systems.

The business school has important linkages to the business community. The business community is a major stake-holder-among other things, business firms hire the graduates, are a source of part-time and visiting faculty, use faculty as teachers in executive development programmes and as consultants, utilise research findings and may make-major financial contributions to business schools.

6. The ideological system:

This is a system made up of some abstract concepts. It consists of the objectives of the educational activities, norms of behaviour and measures for evaluation. It sets the standards for academic activities. This setting up of standards and ideologies is a continuous process
because the ideology of today may not fit in to the socio-economic framework of tomorrow.

To establish standards for evaluation is the starting point for strategic planning for management education. The standards should include the following.

1. The fit between large scale systems:
   This means
   a) the fit between social, technological and economic development.
   b) the fit between personnel, resources and ideology.
   c) The fit between the university, corporate community and other business schools.

2. Reasonability of structures:
   There should be reasonability of business school system in its internal & external structures in terms of time & space relationships and the balance between the total system and its parts. The basic structures are students, teachers, curriculum, research, pedagogical tools and techniques, graduates and management development programmes etc.,

3. Optimisation of overall functions:
   It is necessary to coordinate the functions of sub-systems and to optimise overall functions. Undue
emphasis on the advantages of one or two functions or components would lead to sub-optimisation of the total system.

1. **Maximisation of utilities and benefits:**

   The system aims at producing maximum utilities to the recipient system and at the same time ensures maximum benefits for producers and also for the products (MBA graduates).

5. **Minimisation of costs and expenses:**

   It is necessary to build up the frame of reference to university level and make comparison with other business schools in order to reduce the academic and administrative expenses.

   The above principles are important in developing systems analysis for strategic planning for Management education. The relationship between the input (students), instructional strategy (process) and the output (graduates) is shown by means of the flow diagram in Figure 3.4.

   A more detailed example showing path followed in general at the macro institutional level can also be illustrated in the form of a flow diagram in Figure 3.5.
Fig. 3.4. Detailed system diagram of relationship between input, instructional strategy and output.
Fig. 3.5 Path followed in macro institutional level planning.
Thus systems approach can be used to view University business school as a system having students as inputs, graduates as output. The business school as a process system transforms the input through its functions and components such as curriculum, faculty, teaching, research, executive development programmes. The business school system must continuously interact with its environment as it exchanges resources energy and information. It has to interact with the University community and also with the corporate world, to perform better.

The programmes of business schools include Post-graduate programme, Research programme and executive development programme. The most important among these is the post-graduate programme offered by the business schools.