Study Guide

PLANNING AND MANAGEMENT OF DISTANCE EDUCATION

(Credit Half)

CODE: 832

UNITS: 1 - 9

Distance Non-Formal and Continuing Education Department
ALLAMA IQBAL OPEN UNIVERSITY
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M.Ed./M.A. (Education)

PLANNING AND MANAGEMENT OF DISTANCE EDUCATION

Code No - 832

(Half Credit)

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PREFACE

The term distance education is used to describe various forms of study at all levels. One of its main characteristics is that there is not a continuous and immediate supervision by the tutors, but there is planning, guidance and tuition of an educational organization. Planning starts with quite clearly stated objectives which the plan expects to achieve. These give a clear guide to organizational structure and its programmes. The first objective of any distance education organization is to reach the learner.

The term management refers to the personnel in the organization who have the right and responsibility to make decisions and run the enterprise efficiently within the policies defined for using distance education approach. The primary purpose of management is to make possible the accomplishment of determined objectives with the human and material resources available to the management.

The essential elements required for planning and management of distance education include determining needs and interests of the learner, objective, staffing the organization, provision of good physical resources, financing, the programmes and their implementations. All these elements have been discussed in the study guide.

I am grateful to all the members of the course team who helped me in developing the course. The AIOU acknowledges the contribution of the experts in improving the course Planning and Management of Distance Education. It is hoped that various target groups of distance education will be benefited from this

book which will provide a comprehensive vision to the students. Any suggestion to improve this book will be appreciated.

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OBJECTIVES OF THE COURSE

1. Discuss the concept and characteristics of distance education.

2. Analyze the need for distance educations identify the forms of distance education.

3. Explain various models of distance education.

4. Define basic terms of economics and discuss the economics of distance education

5. Identify basic issues of financing of distance education and compare the cost effectiveness of different educational institutions

6. Develop relationship between education and economic growth of the country.

7. Define planning and differentiate between long term and short term planning.

8. Design administrative procedures

9. Evaluate the planning process.

10. Discuss alternative traditional educational delivery systems.

11. Elaborate and compare different organizational structures.

12. Suggest some tips for preparation for the interview.

13. Develop questions for non directive interview for a specific post.

14. Identify criteria for the design of planning procedures.

15. Plan non formal education at different levels national, regional and programme level. Apply leading tasks in the planning of non formal education.

16. Highlight different steps in planning non formal education.

17. Explain the principles of curriculum development for non-formal education.

18. Discuss about concept of management.

19. Highlight the importance of management.

20. Elaborate distance education with reference to management.

21. Point out the process of production and development of course material.

22. Discuss management.

23. Elaborate specific activities of administrative process.

24. Describe the impact of new technology on the production and management of distance education.

COURSE INTRODUCTION

Doubtless to say that the significance of Planning and Management role in distance education cannot be denied. Without proper planning one cannot achieve the target goals. Its role in teaching learning process is of great importance. Particularly, apart from the policy makes, the teacher must be aware about the planning and management of the methodology he has to use for his students, how to tackle the student's problems? How to teach the class efficiently and effectively? What approach he should use particularly in the system of distance education where the students are far away from the teacher. The teacher should involve the students into the studies by giving some examples, putting questions in the text, giving positive comments on student's assignments? He should be careful in guiding the students through two-way communication mode. A teacher as well as general reader must know all these techniques.

Effort has been made to provide all these important aspect of planning and management of distance education in this book; which is a study guide. It will facilitate the students to expand their vision more by consulting allied materials references as given in the study guide.

Unit one provides the introduction to distance education so that the students should know what is the distance education, its methodology, use and its potential role in the teaching learning process.

Unit two gives the philosophy of distance education so that the students must be clear about philosophy of distance

education. They should be aware about various scholars' view about philosophy of distance education.

Unit three provides various planning and management techniques of distance education so that the students should know about planning and management techniques.

Unit four indicates different modes used in the system of distance education so that the students must be familiar with different modes. The unit also apprises the students about the views given by different scholars about methodology of distance education.

Unit five is important one as it discusses various techniques of writing distance education material. It also provides the format including other requirements for distance education material. It also gives detail discussion with sample reference in the allied materials. The unit is quite useful not only for students but the coordinators and teachers who involved in the system of distance education also.

Unit six is also very important as it gives us the student support services details. It gives us various details of students support services such as guidance, counselling tutorials, role of study campuses and regional offices, libraries and multimedia programme details and opportunity.

Unit seven apprises the readers about the operational system of tutorials. How the system should be made more effective and efficient? What facilities should be provided to the students? All such things are discussed in the unit as well as allied material.

Unit eight deals with the personnel of distance education. What role the personnel have to play in the system of distance education? How effectively a person involved in the system can be more beneficial to the students?

Unit nine is about evaluation of distance education programmes. How one has to evaluate the system and the performance of teachers, students, organization and whole of the programme and various techniques of evaluation used for evaluation?

CONTENTS

Unit 1

CONCEPT AND CHARACTERTISTICS OF DISTANCE EDUCATION

Written by:
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1.1   Introduction

Distance learning is one of the most rapidly growing aspects of education and training in the world today.   The potential impact of distance learning on all education delivery systems, from the primary to tertiary level, has been greatly accentuated through the new developments in information and communication technologies, which has made learners free from the constraints of time and space.

During the last two decades, the world has seen considerable growth in education and training. But the world still suffers from intolerable inequalities both at the international level and within nations. Many countries are struggling with limited access to education and training for children and young people, and at the same time have to address basic needs of the older generation. Inferior quality and insufficient relevance is a concern in many countries. At the root of most of these problems is the problem of financing an adequate provision of education and training.

Distance Education and open learning can be interpreted in different ways. As a result, they are used by some scholars interchangeably, while others distinguish between them and even advocate the superiority of one term over the other. The consensus, however, is that distance and open learning denotes the form of learning process, which does not necessarily involves the presence of a teacher in classroom. The teaching and learning process is, however, facilitated by various kinds of support provided by tutors and organizations at a distance to the learners. Since the 19th century, such mode of disseminating knowledge has been known as correspondence education mainly due to its dependence on print media and postal system of communication.

In the nineteenth century, distance education was developed primarily for commercial reasons to provide alternative access to formal education and training. In the twentieth century, it has however been recognized as an important constituent national educational system in almost every country. Many of the educational institutions have begun to provide of basic teaching and learning supports of various types and levels through non-conventional methods which have made considerable impact on the growth of distance education everywhere. The experiences of different institutions reveal that the successful use of mass media has not only affected economics of distance education, but it has extended the reach of education to the people who for various reasons like physical, economic or social barriers had no access to the network of formal education system. The use of the term 'Open' in the context of distance education stems from this notion of the relative accessibility of education to the public at large as compared, of course, to the relative accessibility of formal system of face-to-face teaching.

The provision of the two-way communication is an essential component of a sound education system so as to facilitate fruitful interaction between the teachers and the taught. The uses of educational technologies which are usually one-way, unidirectional, constitute a major drawback of DLS in ensuring effectiveness of education. The contact programme tutorial sessions and summer schools which are arranged from time to time facilitate the two-way interactions and, thus promote the process of teaching and learning.

In distance education there is quasi-permanent absence of the learning group throughout the length of the learning process so that people are usually taught as individuals and not in groups, with the possibility of occasional meeting for the

purpose of both didactic and interactive as well as educational socialization. In view of the success of this educational experiment in most of the countries, distance education as an instrument of national education policy has been adopted for the following major reasons:

First, the concern for equalizing educational opportunities across the different socio-economic groups has been a dominant consideration for promoting distance education which has increasingly been seen as a means of equalizing the provision of education and reaching the under-privileged sections of the population, who for various constraints, such as, spatial, economic or social are unable to attend class-room teaching; adults who for one reason or another have to discontinue their studies and those for whom the state has been unable to provide sufficient educational infrastructural facilities to meet their demand for higher and continuing education. Second, the need to ensure the encouragement for constructive learning and for changing attitudes amongst the people who are not able or not prepared to become registered students in any formal sense, but who can yet be persuade to adjust and to learn, without any disciplined study for qualifications. Third, the concern for continuing education. As there has been increased recognition. That the knowledge acquired during initial stages of education has a limited life because of creation of new knowledge and invention of new technologies; and that individuals would need to update themselves if they were to keep abreast of their field of study and expertise. Fourth, since a major role of the education system is to provide manpower for the needs of modern sector of the economy, the distance teaching institutions are also seen as the suppliers of skilled manpower in technical and management skills for promoting modernization of the country. Fifth, to alleviate the enrolment pressure on the institutions of higher education and /or to check

the further expansions of CS due to its rigid and expensive characteristics. Lastly, world practice in distance education today has been aided by these motives, which vary in importance from one country to another. Many countries in the world have therefore corporate distance education as an integral part of their national educational policy and planning

1.2   Objectives

After studying the material, it is hoped that you will be able to:

1.   discuss the concept of distance education
2.   explain the characteristics of distance education
3.   analyse the need for distance education
4.   identify the forms of distance education

1.3   Concept of Distance Education

In addition to its reliance on written words, the term distance education connotes the use of communication technologies like radio, tv, telephone and other audio-visual media of imparting knowledge. Moore (1973) defined distance education as 'those teaching methods in which because of physical separateness of learners and teachers, the interactive as well as the pre-active phase of teaching, is conducted through print, mechanical or electronic devices'. Similarly, in Otto Peter's view 'distance teaching/learning is a method of imparting knowledge, skills and attitudes, which is rationalized by the application of division of labour and organizational principles as well as by the extensive use of technical media, especially for the purpose of reproducing high quality teaching material which makes it possible to instruct great number of students at the same time wherever they live. It is an industrialized form of teaching and learning'.

Holmberg's (1989) definition is characterized mainly by non-contiguous communication " the term distance education covers the various forms of study at all levels which are not under the continuous supervision of tutors present with their students in lecture rooms or on the same premises but which, nevertheless, benefit from the planning, guidance and teaching of a support organization". Holmberg's definition is somewhat limited in describing the practice of distance teaching institutions since it relates to a pure form of distance education, which does not involve physical meetings between teachers and students. But the fact is that contiguous education and pure distance education are extremes which rarely exist. Many distance teaching organizations use face-to-face tutorials and summer schools, while conventional educational settings utilize independent study and guided study using media and teachers as resources. It is, however, obvious that there is the physical separation of the learner from the instructor, at least in certain stages of the learning process.

Paine's (1989) states that "there are many definitions of open learning including the association of open learning exclusively with open access, learning opportunities for adults, and the still-prevalent confusion of learning at a distance and open learning as both a process which focuses on learning and access to educational opportunities and a philosophy which makes learning more clientele and student centered. Obviously, there is a confusion among scholars as to the definitions of open learning and distance education and the inter-relations between them". While it is not clear, that what distinguishes them, some attribute to both of them similar characteristics such as providing flexible time schedules and study locations, and extending access to various educational frameworks. For the sake of simplicity we shall however use the terms of distance/open learning interchangeably here in this study guide.

In order to comprehend further the concept of distance education, please read the below referred material.

Garrison, D.R. (1990)	Understanding Distance Education: A Frame Work for the Future. London, Routledge, pp.2-7.	1-1

1.4   Characteristics of Distance Education

The forms of distance education vary greatly owing to both different choices of the media used for imparting knowledge as well as the relevant instructions for facilitating the learning process. Therefore, there is a difficulty in defining distance education in a most precise manner which should represent all its components and characteristics. The most comprehensive general definition of distance education is given by Keegan (1986) who has attempted to identify at least seven principles characteristics which can be regarded as essential for any comprehensive definition: these characteristics are:

a)   the separation of teacher and student;

b)   the influence of an educational organization;

c)   the use of technical media;

d)   the provision of two-way communication;

e)   the absence of group learning, with students taught largely as individuals (while retaining the possibility of occasional seminars);

f)   participation in the most industrialized form of education; and

g)   the privatization of learning (in that learning occurs away from the group).

Obviously, the separation in space time of teaching and learning is a basic feature, though not the exclusive prerogative of Distance Learning System (DLS). In the overall design of

DLS, the role of the teacher and the nature and methods of interaction between teacher and learner are largely conceived on the premises that are different from the traditional mode of teaching and learning. This is precisely what distinguishes it from the conventional face-to-face education.

Unlike private study or learning through one's own efforts, there is an institution that is consciously teaching its students who are for most of the time separated from it. In that, distance education has the structure of an educational organization both in the planning and preparation of learning materials as well as in the provision of student support services. Peters states that the use of communication technologies such as print media, audio, video, TV, computer, etc. in an integrated manner, the mass production and distribution of learning materials, as well as the logistical aspects of administering and coordinating the activities of dispersed populations of students and tutors, involves the application of principles drawn from the industrial sector. The division of labour that revolves around specialized tasks and technologies associated with the development and production of learning materials is a marked feature of some forms of distance education. The skills of production and operations management are needed to ensure that materials are developed and produced and services delivered on time to students. Lastly, 'there is privatization of learning process in this form of education in the sense that a distance system takes the student from the learning group and places him/her in a more private situation.

Proximity implies cultural similarity. To maximize the potential of cross- cultural exchanges, training and cooperation in the area of cultural understanding and communication must occur.

Competencies and Roles

Open and distance education has become a strategic training, education, and new communication channels to businesses, educational institutions, government agencies, and other public and private agencies. Predicted to be one of the seven major growth areas in education (Graham, 1992, p.1) distance educations is critical to our geopolitical status as a means of disseminating and assimilating information on global basis.

Since 1974, there have been eight studies addressing competencies roles for distance education, training and development (American Society of Training and Development {ASTD}, 1974,1976,1978; Civil Service Commission, 1975-76; McLAGAN & Suhadolnik, 1989; ONTARIO society for training and Development, 1976, 1982; U.S. Army, 1974). These studies give insight into the kinds of training programs needed for preparing presenters, instructors, and trainers to make the transition to distance learning environments. A more recent research study identifying distance learning competencies and roles is described by Thach (1994) in perceptions of Distance Education Experts Regarding the Roles, Outputs, and Competencies Needed in the Field of Distance Education.

The core competencies identified as most critical to educational training and development, in these nine studies include the following: adult learning understanding, business understanding, organizational behavior understanding, feedback skills, presentations skills, relationship building skills, and writing skills. Training modules for distance educations built around the competencies identified in these studies are designed in such a way that the participants engage in a variety of activities to gain proficiency in critical teaching competencies. In addition to preparing teachers for the changing instruction,

the competencies must prepare individual's for the changing compositions of the student population, because diverse groups of students are coming together viva technology to participate in cross-cultural exchanges.

Identifying Core Competencies

Identifying the core competencies for all the older and new instructional technologies helps to ensure that they continue to be effective tools in redefining and revitalizing the learning experience for a diverse student populations, including older students who are likely to work and be enrolled part-time.

Any core competencies identified today must be useful in the future for open and distance developers, managers, administrations, educators, and technicians. Additional competencies must be added and tailored to the needs, settings, and the technology model or models being employed. Table 1.1 provides a complete list of the competencies reviewed in the nine studies described. The degrees of agreement on each of the competencies are presented in percentages.

Ranking of core competencies are grouped below:

1. Competencies listed 51% to 99% of the time:
    - Program design and development
    - Adult learning understanding
    - Needs analysis and diagnosis
    - Determining suitable training needs methods
    - Individual proficiency-planning and research

2.	Competencies listed 50% of the time:

- Instructional design techniques
- Identification of job-related training
- Group and organizational development
- Management of training and development
- Identification of competencies
- Communications skills base:

  - ❖ Interpersonal competencies
  - ❖ Group process feedback writing

- Visioning and projecting future trends
- Evaluations
- Computer understanding

Identifying Critical Roles

Just as core competencies identified today must be useful in the future for open and distance education environments, so must critical roles of traditional training and education. Table 1.2 presents the training and development roles most frequently identified by seven of the nine studies previously cited (two studies, the 1974, US Army Study and the 1995 DD&E study provided no such rankings).

Table 1.1 Core Competencies Identified in Training and Development (in percentages):

Need analysis and diagnosis	88
Determination of appropriate training	75
Programme design and development	100
Development of material resources	63
Management of internal resources	63
Management of external resources	63
Conducting classroom training (instructional techniques)	50
Job/ performance related training	50
Individual development planning and counseling	75
Group and organization development	50
Training research	75
Management of working relationship with managers	13
Management of the training and development function	50
Professional self-development	38
Competencies	50
Communication	50
Evaluation	50
Business understanding	45
Computer understanding	50
Visioning	58
Adult learning understanding	60

Table 1.2   Critical Roles Identified by Experts in Training and Development

Role	1974 ASTD	1975 Civil Service	1976 ASTD	1976 Canadian	1978 ASTD	1982 Canadian	1989 ASTD
Task specialist	X	X	X	X	X		X
Team member				X			
Leader/ instructor	X		X	X	X	X	X
Coordinator	X	X	X	X	X	X	X
Liaison/ consultant	X	X	X	X	X	X	
Administrator	X	X	X	X	X		X
Change agent	X		X	X	X	X	X

Open and Distance Learning Competencies

Two research studies completed in 1989 and 1994 looked at competencies for training and development and at competencies for distance learning. The first study in 1989, by MaLagan and Suhadolnik (for ASTD), Models for Human Resource Development Practice (the research report) was carried out by distributing 1,010 questionnaires in the United States and compiling the 473 (47%) returned usable surveys. The second study in 1994 by Carol, E. Thach (in the United States) was Perceptions of Distance Education Experts Regarding the Roles, Outputs, and Competencies Needed in the Field of Distance Education: A Research Model. This study had two rounds of surveys. In the first round, 102 experts were surveyed with 51 (50%) experts completing and returning the survey tool. In round 2, the survey tool was sent to 51 experts. In this round, 36 (71%) responded, and their responses were tallied.

A visual comparison of the competencies and roles identified as critical in the two studies (McLagan and Suhadolnik, 1989; Thach 1994) are presented side by side in Tables 1.3 and 1.4.

Table 1.3 Training and Development/Distance Learning Competencies Compared

Competency	Training and Development (McLagan & Subadelnik, 1989)	Distance Learning (Thach, 1994)
Adult learning understanding	X	X
Business understanding	X	X
Career development theory and technique understanding	X	
Change agent skills	X	X
Competency identification skill	X	
Computer competence	X	X
Cost-benefit analysis	X	
Coaching skills	X	X
Data reduction skill	X	X
Delegation skill	X	
Electronic systems skills	X	
Evaluation skills		X
Facilities skill	X	
Feedback skills	X	X
General education theory		X
Group process skills	X	X
Industrial understanding	X	
Information search skills	X	
Intellectual versatility	X	
Instructional design skill		X
Knowledge of distance learning		X

Learning style and theory		X
Media attributes knowledge		X
Model building skills	X	X
Needs assessment skills		X
Negotiation skill	X	X
Objectives preparation skill	X	
Observing skill	X	
Organization behaviour understanding	X	X
Organization development theories and techniques understanding	X	
Organization understanding	X	X
Performance observation skill	X	
Planning skills		X
Policy making skills		X
Presentation skills	X	
Project management skill	X	X
Questioning skill	X	X
Record management skill	X	
Relationship building skill	X	X
Research skills	X	
Self-knowledge	X	
Software skills		X
Strategic planning		X
Subject mater understanding	X	
Teaching strategies/ models		X
Technology access knowledge		X
Training and development, theories, and techniques	X	
Visioning skills	X	
Videoconferencing skills		X
Writing skills	X	X

Table 1.4   Training and Development/ Distance Learning Roles Compared

Competency	Training and Development (McLagan & Subadelnik, 1989)	Distance Learning (Thach, 1994)
Administrator	X	X
Evaluator	X	X
Editor		X
Instructor/ facilitator		X
Instructional designer	X	
Individual career development advisor	X	
Graphics designer		X
HRD materials developer	X	
HRD manager	X	
Librarian		X
Marketer	X	
Needs analyst	X	
Organization change agent	X	
Programme designer	X	X
Researcher	X	
Site facilitator		X
Support staff		X
Technology expert		X
Technician		X

Recommendations for Present and Future Roles and Team Membership for Open and Distance Learning Programmes and Projects.

Many of the roles and competencies listed in the previous examples overlap, blending easily within common groupings. Michael Moore (1993) a recognized authority in the field of open

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and distance education research who advocates a total systems approach to education and training, describes open and distance learning environments as settings in which he "instruction is no longer an individual's work, but the work of teams of specialists – media specialists, knowledge specialists, instructional design specialists and learning specialists" (p.4). With this team approach in mind, we have synthesized the critical roles and core competencies identified in the previous studies into a matrix. This matrix represents our recommendations of how to apply the findings from years of research into a practical working model for designing and implementing programmes for open and distance learning environments.

Within this mode, the actual instructor is free for focus on content because the production is left to people who are experts at it. These teams are best suited for developing; producing and evaluating today's and tomorrows open and distance learning programmes and projects (Williams 1994).

Critical Role	Core Competencies
Technology expert	Basic knowledge of technology, hardware and multimedia software knowledge and skills, computer networking skills, technology access knowledge, technology transfer knowledge and skills.
Industrial designer	Instructional design for interactive technology needs assessment skills, writing skills, editing skills, graphical design skills.
Instructor/ programme director/ administrator	General education theory, distance learning styles and theory, adult learning theory, teaching strategies/ models, interpersonal communication, facilitation and feedback skills, presentation skills for open and distance learning, modeling of behaviour

	skills, evaluation skills.
Organization change agent	Collaboration and team work skills, negotiation skills, group processing skills, change agent skills, public relations skills
Administrator	Support services knowledge, strategic planning skills, organizational skills, marketing skills, managerial skills, budgeting skills, policy making skills

Specialists within the team might include the following:

Distance Learning

- Instructor as content expert
- Bilingual communication/assessment specialist
- Instructional designer
- Multimedia support staff
- Computer systems technician
- Training specialist

The team objective would be to assist from the beginning concept phase to the final postproduction evaluation phase to make each educational event, project and programme not only a dynamic production but an effective learning experience.

For further details, please read the below referred book.

Anthony, K. & Greville Ruble, eds (1981)	Distance Teaching for Higher and Adult Education. London, the Open University Press, pp.13-14.	1-2

1.5   Need for Distance Education

People need education to acquire a broad base of knowledge, attitudes values and skills on which they can build in later life, even if they do not receive further formal instruction. Such education provides people with the potential to learn, to respond to new opportunities, to adjust to social and cultural changes, and to participate in the political, cultural and social activities. The demand for formal education has increased drastically throughout the world. Erdos, R.F. (1967, p.1) has commented:

> This is due, on the one hand, to the development of literacy and the greater opportunity for leisure, and on the other, the rapid advances in technology.

Parents see the school as a way to the mastery of modern technology and at the same time as a way for their children to earn more money and attain better living standards. In Uganda, for instance, in the late nineteen sixties, the graduate just entering the civil service could expect his income to be fifty times the average income per head. The demand for school places, however, is much bigger than the capacity of many economies to supply them. According to World Bank (1980, p.8):

> .... about a third of children of primary school age in the developing countries are not enrolled in school. Only about a third of those in the 12-17 age group and 9 percent of those in the 18-23 age groups are in school.

On the other hand, increasing numbers of adults in developing countries wish to gain paper qualifications and remedy their previous educational deficiencies, other wish to

improve their basic living skills. There remain others who wish to become more proficient technically and become more skilled in the basic methods of their own special craft, trade or industry. In Pakistan, there are thousands of individuals who have had "... to terminate their studies, due to economic reasons, after completing certain levels of education" (Zaki, 1975, p.63). After firmly establishing themselves in the labour market they often want to improve their academic' achievements and skills by working for higher diplomas and degrees. The formal system of education usually shuts its doors on such individuals. This discourages"... effort at self improvement, blocks the way to promotion and progress, and creates a sense of despair" (Zaki, 1975B: 64). In the opening address of the International Seminar on Distance Education, Professor Adedeji (1979, p. 25) commented:

> The normal traditional school system cannot cope
> with the large demand. It is not effective enough;
> it is too expensive; and the available teaching force
> is not used efficiently.

Even, the personal cost of higher education is quite high, especially when account is taken of the foregone earnings during the period of learning and the high drop-out rates. This implies that higher education cannot reach the whole population unless opportunities are provided for learning while earning. Moreover, the, principles of competition and excellence require that educational institutions should not enjoy unlimited monopoly power if they are to face squarely the challenges of present time; In these circumstances, education cannot become a continuing life-long process so long as "...it remains on the formal plane alone or a closed circuit or a preserve of the elite" (Goel, 1978, p.195).

However, the tremendous developments in communications physically between places as well as for exchanging information, in turn have meant that re-appraisal of the traditional methods of education has become necessary and desirable. These technological developments relating to the field of education have instigated developing countries to search for alternative methods of education which can reach the masses cheaply. This has influenced the development of distance education which can offer some of these possibilities.

The usefulness of distance education can be considered in the light of Bloom's (1956) taxonomy of study objectives. In the cognitive domain, which is concerned with the acquisition of intellectual knowledge, the effectiveness of distance teaching is rarely challenged. Childs (1965, p.81) has stated that"... it is well known by now that the distance study is at least .as effective as any other form of teaching and learning". Skills like surgery or the capacity to handle dangerous chemicals and machinery which come under psycho-motor objectives cannot cover themselves by distance study especially in the developing countries but other skills like drawing, typewriting, can be studied successfully. In some technical subjects, the use of laboratory kits has proved to be successful. In the affective domain, it would seem to be evident that non-continguous communication has less power to influence students than face-to-face meetings. The effectiveness of distance education in the affective domain has been queried, however, though on somewhat uncertain grounds (Holmberg, 1976, pp.17-25).

The following are some of the key advantages of distance education.

1. The traditional classroom is not a necessary pre-requisite for a teaching situation.

2. Distance is not a barrier to education, as it holds a promise of reaching out to categories of groups of people who could not otherwise be reached by special education and training.

3. It is convenient for the student.

4. The student can work during the day and attend his course in the evening and vice-versa.

5. The student can work at his own speed with-out the consequences of a group pressure characteristic of classroom situation.

6. Distance education is suitable for certain categories of vocational training, except in subjects like medicine and surgery, especially in the developing countries, whereas in the developed countries these subjects are being taught through such institutions as the British Open University.

7. Any level of academic work can be covered.

8. It provides the teacher with the means of self-examination as regards to both the content and effectiveness of his techniques.

9. It is flexible, in terms of both the methods and techniques used, and also in meeting the needs of the individual student. It can be an individualized method of teaching.

10. It has the possibility of improving the quality of instruction by assessing the best subject specialists and educationalist available to produce courses for large groups of students.

11. The applicability of distance education to large groups of students as a kind of mass communication is particularly attractive at times when educational institutions are over burdened.

12. It has no age limit for study.

13. Side effects of denial of training for large numbers are eliminated.

14. It is least expensive and fastest method of educating a much larger number of people than is possible through formal education, especially during the constraints of resources particularly of finance and personnel.

Urhobo (1978, p.121) noted:

> ..... the only reasonable prospect for any developing country in achieving its manpower targets is through distance education.

Distance education is not without obvious disadvantages. The major disadvantages can be that it is impersonal, the high degree of self-discipline required, the complex organization necessary to maintain high standards in the preparation of materials, the unsuitability of the study conditions in some home environments and physical inability to study after a hard day's work (Kabwasa, 1970: 276). In addition, distance education is not under the direct supervision of an instructor and the possibility to be dishonest always at hand. The student is more likely to use illegitimate help and to misuse the legitimate than is he who must produce the results of his work in the presence of his colleagues.

1.6   Forms of Distance Education

To come to a contemporary understanding of distance education, it is useful to move within the realm of descriptive definition and examine the historical background. While some would contend that distance education can be traced to the Epistles of Paul in New Testament times, it is generally accepted that 'distance education began in the 19th century, when the education of people at a distance was achieved by letter.

It is usual to trace the origins of distance education of the provision of secretarial courses by Pitman in England in 1840 and of foreign language courses by Toussaint Langenscheidt in Germany in 1856. A historian of the field, Roudolf Manfred Delling, doubts whether these early programmes can really be seen as the forerunners of distance education today and would prefer to trace the developments to the 1870' and 1880's. The German scholar Otto Peters, has claimed that a pre-requisite for distance education is the industrial development of a society to provide either a postal or broadcasting services. It is likely that other beginnings will yet be uncovered, but it seems possible to say that distance education programmes began about one hundred years ago in the urbanized centres of Western Europe, the United States of America and Scandinavia.

Origins of the Term Distance Education

Holmberg identifies the first use of the term distance education, as the Council of Europe Symposium in 1972- Flinck in the early publications of the Lund research series identifies the first use of the term as 1974, The family of terms, distance learning, distance teaching, teaching at a distance, distance learner, were certainly in general use in the early 1970's.

It appears that no-one formally coined the term distance education, unless Keith Rowson-Jones(1974, p.61) the editor of Epistolodidaktika may claim to be its initiator:

> Distance education seems too teacher-oriented and distance learning to be student-based. Distance education contains the two, so in the absence of a better name for the process, I shall use it....

It was not until the 1975 conference of the International Council on Correspondence Education that the term emerged at a formal level and even then it was hastily buried until the next conference in 1978; by which time others had begun to use it freely- The 1982 conference saw the official adoption of the term, thus the ICCE became the ICDE.

According to Rashid, M (1992, p.24);

"Distance education is a generic term that includes the range of teaching/learning strategies referred to as 'external studies' in Australia; as 'correspondence education" or 'correspondence study' at further education level; as 'home study' at further education level and 'independent study' at higher education level in United States and as 'distance teaching' or 'teaching at a distance' by the Open University of the United Kingdom. In New Zealand the term 'extra-rural studies' is used at tertiary level. In French it is referred to as 'tele-enseignement', 'Fernstudium/Fernunterricht' in German; 'education a distancia' in Spanish and 'teleducacao' in Protuguese.

Some allied terms are discussed with their descriptions:

Correspondence education

Correspondence education is that form of education where the learning-teaching process is undertaken by the exchange of written communications between teacher and learner.

It is a term with a long history, and over time, various new practices such as telephone conversations, and occasional visits have been added to enrich the exchange between teacher and learner.

There are today some institutions, for example, Onken Institute in Switzerland, which are still proudly correspondence education institutions. These institutions do not encourage telephone calls or visits from students but contend that by the thorough preparation of printed learning materials and tutors' letters a rich educational experience can be offered to students. The continuing demand for their services is evidence of their success. To survive in today's more competitive electronic world, using only printed materials, a: correspondence education institution's materials must be of excellent quality and its tutorial services superior. (The other side of that coin is to consider how much of the modern media usage in distance education might be merely a compensatory cover-up for poorly-prepared written materials?).

Since many distance educators today feel that 'correspondence education' does not, adequately describe their role, there is a reluctance to see the term. However, with the: public, correspondence education seems to be a term most readily understood. Call it what you will, people will respond, 'Oh! you mean correspondence education'.

What does this professional reluctance to use the term mean for the correspondence Schools that have been important institutions in both Australia and New Zealand for the last fifty or more years? And what of the prestigious International Correspondence School (ICS), Scranton, Pennsylvania, USA, probably the largest, oldest, truly-international proprietary distance education enterprise in the world?

Other questions emerge too. For example, can correspondence education be used to describe courses by newspaper, such as those found in the United States of America and West Germany?

External studies

External studies is a form of education whereby a student receives learning materials and resources from a teaching institution to enable Such Independent Study divisions may exist alongside other distance education divisions within their own institution. For example.

The emphasis in this description is not on the type of activity but rather on the title of the institutional group. Later we will consider briefly the role independence plays at large in education and more thoroughly its particular function in distance education.

Off-campus study

Off-campus study is that form of education where students usually meet away from the institution, as a group, under the guidance of academic staff, to study academic materials prepared by the institution or delivered face-to-face be one of its lecturing staff, in order to attain academic credit from the institution.

North American academic institution have placed great value on the residential element in tertiary study. Thus off-campus study represents a strong challenge to traditional practice. During World War II large numbers of students could not study on-campus because of war service. The students both wanted and needed the stimulation of academic study. To satisfy this need the United States Armed Forces Institute was formed; it is now defunct. Hundreds of thousands of young men and women studied in off-campus groups at air bases, on ships, and in hospitals.

Today their successor meet in halls, other academic institutions, libraries, and personnel training centres, to continue the activities highlighted by the war-time need.

In Australia, to study and live on-campus has been experienced by the minority. Thus the distinction between the on-campus student and the off-campus student has never attained the same dimensions as in the United States. Off-campus groups here have only functioned to service a particular passing need. The term, off-campus, has never described adequately the field of external studies in Australia because so many courses have compulsory or voluntary on-campus learning experiences built into them.

Open learning

Open learning is that form of education where at least one of the constituent parts of the educational enterprise is not constrained by traditional practices; educational enterprise is defined to embrace such factors as students, learning materials, teaching staff, courses, teaching methods, finances, time-frames and efficiency. The term, open education is allied.

Open attitudes and approaches to education have become fashionable since the early 1960's, although many innovators in the past could will be called open educators. As Mckenzie, Postgate and Scupham remind us, 'as an enthusiasms, [open learning] has great potential'. Implicit in the term is the notion that it is good, as opposed to 'closed learning' which is, presumably, bad.

There are many implications in the term's intent, why must all students study at the same rate? (openness in time constraints). Why must all students choose from a circumscribed set of subject? (openness in subject selection and content). Why should education be available only to those who can afford it? (openness through free education). And so the list goes on.

The Karmel Enquiry into Open Tertiary Education, with its ready answer, 'Let them do external studies', on the one hand complimented external studies by acknowledging its creative nature but on the other perhaps damned it by distancing it from traditional education.

Reference was made to the open universities before. You may care to list ways in which the Open University of the United Kingdom is 'open' in relation to its environment, that is, compared with other open United Kingdom universities. But also list ways in which the Open University is also very closed.

There is no necessary connection between distance education and open learning. Distance education can be very closed or very open, open learning can function very satisfyingly in environments other than distance education.

In conclusion, note that there are terms in the general of distance education that we have not bothered to examine, for the list is very extensive and often the distinctions subtle and, therefore, disputed. All we have been concerned to do is to provide a kaleidoscopic, historical perspective, to prepare the way for a more detailed examination of the concept, distance education, so that we may attempt to define it-

Distance Education: a Miscellany of Definitions

On 12 July 1971 the French Government passed a law regulating the conduct of distance education in its territories. This law contains the following definition:

> Distance education is education which either does not imply the physical presence of the teacher appointed to dispense it in the place where it is received or in which the teacher is present only on occasion or for selected tasks.

Otto Peters, Vice Chancellor of the Distance University at Hagen in the Federal Republic of Germany, gives his definition:

> Distance teaching/education (Fernuterricht) is a method of imparting knowledge, skills and attitudes which is rationalized by the application of division of labour and organizational principles as well as by the extensive use of technical media, especially for the purpose of reproducing high quality teaching materials which makes it possible to instruct great numbers of students at the same time wherever they are. It is an industrialized form of teaching and learning.

Moore worked extensively at universities in the United States and Canada before taking up his present position at the Open University of the United Kingdom:

Distance teaching may be defined as the family of instructional methods in which the teaching behaviours are executed apart from the learning behaviours, including those (behaviours) that in a continuous situation would be performed in the learner's presence, so that communication between the teacher and the learner must be facilitated by print, electronic, mechanical or other devices.

Holmberg is Professor of the Methodology of Distance Education at the Fernuniversitat at Hagen in the Federal Republic of Germany. His definition is:

The term 'distance education' covers the various forms of study at all levels which are not under the continuous, immediate supervision of tutors present with their students in lecture rooms or the same premises, but which, nevertheless, benefit from the planning, guidance and tuition of a tutorial organization.

In a paper presented at the Asian Symposium on Distance Education at Penang in Malaysia in 1981, Eric Gough of Deakin University presented this definition:

Distance education is a means of providing learning experiences for students through the use of self-instructional materials and access to educational resources, the use of which is largely determined by the student, for the most part, to choose the time, place and circumstances of learning.

Dr Willen in a distance education researcher at the Department of Education, Uppsala University, Sweden, who has recently published a doctoral research project, 'Distance education at Swedish universities: an evaluation of the

experimental programme and a follow-up study', Almqvist and Wiksell International, Stockholm, 1981. Her definition is:

Distance education is a form of education where instructions has a rather subordinate role and is concentrated to a few intensive period spaces throughout the term or academic year. In between these periods the student works at home on his own, but with the possibility of consulting the teacher by telephone or letter.

From the above definition it is useful to identify the common and different components. For example, in the French illustration you may note:

- no necessary regular face-to-face contact between teacher and learner;
- occasional contact, possible or required.

Attempt to make this analysis for all the definitions offered. In particular examine the practice at institution(s) known to you. It is possible to identify characteristics which are necessary as distinct those that are optional?

In order to get more information on the topic please read the below referred material.

| Anthony, K. & Greville Rumble eds (1981) | Distance Teaching for Higher and Adult Education London, the Open University Press, pp.15-31 | 1-3 |

1.7   Activities

1.   Please prepare a chart indicating the possible components of distance education and hang the chart in your study room.

2.   Write down in the space give below at least four crucial points for the need of distance education in Pakistan.

_____
_____
_____
_____

3.   Discuss the historical background of distance education with any educationist of your area and prepare a report of the outcome of your discussion.

1.8   Self Assessment Questions

Q.No.1 Critically examine the concept, need and scope of Distance Education.

Q.No.2 "In Distance Education there is quasi-permanent absence of the learning group throughout the length of the learning process so that people are usually taught as individuals and not in groups".   Discuss the statement.

Q.No.3 What are the major concern of Continuing Education? Explain.

Q.No.4 Explain characteristics of Distance Education.   Also give examples keeping in view of your situation as a distant learner.

Q.No.5 Keegan 1986 has identified seven principles characteristics which can be regarded as essential for any comprehensive definition of distance education. Please clarify.

Q.No.6 What are the components of distance education? Give examples of their use in developed and developing countries.

Q.No.7 Discuss the open and distance learning competencies.

Q.No.8 How would you make the distance education very effective and efficient?

Q.No.9 Explain the forms of distance education in the South Asian region.

1.9   Bibliography

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Unit 2

MODELS OF DISTANCE EDUCATION

Written by:
Dr. Muhammad Rashid

2.1 Introduction

A number of attempts have been made to integrate the defining characteristics of distance education (such as those presented by Keegan and discussed in Unit 1) into models or theories of distance education. The rest of this unit introduces three of these – the first a systems model of distance education, the second a holistic model of distance education, and the third a transactional model of distance education.

A systems model of distance education

The systems model is one proposed by Kaye and Rumble (1981, pp. 19-22) based on the concepts developed by Miller and Rice (1967) for analyzing organizations as open systems which exist by exchanging materials with their environment. The activities carried out by an organization are divided by Miller and Rice into three categories:

- Operating activities: the specific import, conversion, and export processes which define the particular nature and role of the enterprise.

- logistical activities; which ensure the supply of necessary resources for the proper functioning of the enterprise(recruitment, training, purchasing etc)

- regulatory activities; which ensure the overall coordination and control of all processes within the enterprise, as well as its links with the outside environment.

The operating activities which are characteristic of distance education enterprises can be grouped into two major subsystems (see Figure 2.1), which reflect the separation of teacher and student (or teaching and learning activities) to which reference has already been made.

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The 'materials subsystem covers the design, productions, and distribution of mediated learning materials. Materials development embraces the activities of curriculum planners, teachers, content experts, instructional designers, media producers and other 'transformers' (e.g. editors, graphic designers) who help in the production of 'media products'. The outputs from their activities are prototype materials which, through the materials production process, are turned into finished products, in single or multiple copies, in print, audiovisual, and/or computer software form. These materials can then be 'packaged' together as a course and are broadcasting, or data transmission facilities.

Figure 2.1 A system model of distance education showing the materials and student subsystems

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│              ┌──────────────────────────────┐               │
│              │   REGULATORY ACTIVITIES.     │               │
│              └──────────────────────────────┘               │
│                                                              │
│   ┌──────────────────┐          ┌──────────────────┐        │
│   │   MATERIAL       │          │   STUDENT        │        │
│   │   SUBSYSTEM      │          │   SUBSYSTEM      │        │
│   └──────────────────┘          └──────────────────┘        │
│                                                              │
│   ┌──────────────┐              ┌─────────────────────┐      │
│   │  Materials   │              │  Admission /courses │      │
│   │  development │              │  allocation         │      │
│   └──────────────┘              └─────────────────────┘      │
│          │                               │                   │
│          ▼                               ▼                   │
│   ┌──────────────┐              ┌─────────────────────┐      │
│   │  Materials   │              │  Allocation to      │      │
│   │  production  │              │  service etc        │      │
│   └──────────────┘              └─────────────────────┘      │
│          │                               │                   │
│          ▼                               ▼                   │
│   ┌──────────────┐              ┌─────────────────────┐      │
│   │  Materials   │              │       Study         │      │
│   │  distribution│              └─────────────────────┘      │
│   └──────────────┘                       │                   │
│                                          ▼                   │
│                                 ┌─────────────────────┐      │
│                                 │    Assessment       │      │
│                                 └─────────────────────┘      │
│                                          │                   │
│                                          ▼                   │
│                                 ┌─────────────────────┐      │
│                                 │    Certification    │      │
│                                 └─────────────────────┘      │
│              ┌──────────────────────────────┐               │
│              │   LOGISTICAL ACTIVITIES      │               │
│              └──────────────────────────────┘               │
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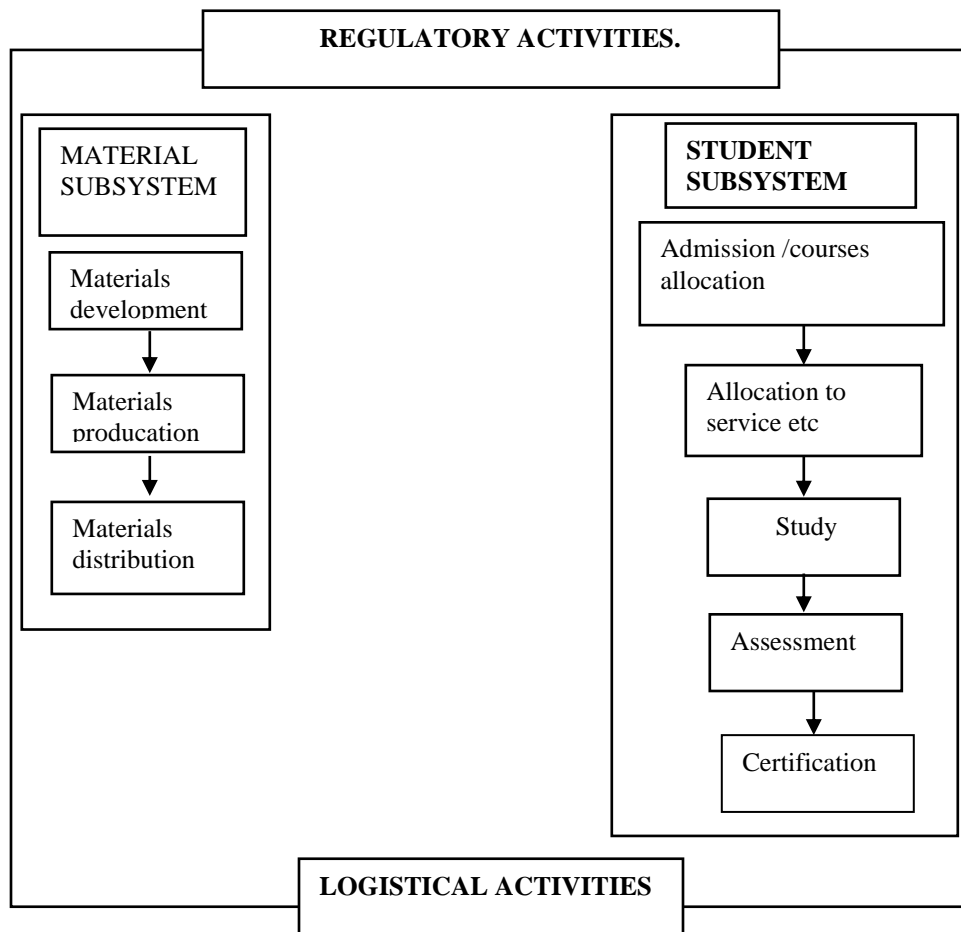
The student subsystem is separate in system terms from the materials subsystem, involving different activities, personnel and resources, all of which are basically concerned with facilitating the students 'learning activities and managing their progress through the institutions. It admits students to the institution, allocates them to course, local centres and tutors and counselors, collects fees, ensures that they receive course materials, assesses their progress, issues certificates, and maintains their records. The point of contact between the two systems occurs when the students receive the learning materials and start to use them.

The value of this simple systems model is that it clearly identifies the principal activities involved in running a distance education enterprise as well as the inter-relationships that exist between them. It underlines the importance of the quasi-industrial processes that characterize the production and distribution of materials, and lays stress on the specialization of tasks and division of labour. It defines the difference between an educational publishing organization (which would only require a materials subsystem) and a distance education institution (which must also provide an appropriate student subsystem). It also helps pinpoint the activities which are independent of student numbers (e.g. course development) and which are therefore susceptible to economies of scale, and is hence a useful starting point for financial modeling. Finally, it underlines the fact that, theoretically and in practice, different groups and organizations can collaborate in providing a distance education system. Each perhaps taking on responsibility for different activities, or clusters of activities within each subsystem.

2.2 Objectives

After reading the material, you will be able to:

1. Explain various models of distance education.

2. Discuss holistic model of distance education.

3. Evaluate Transactional model of distance education.

4. State significance of Institution-centred educational models.

5. Identify the Person-centred educational models.

6. Analyse Society-based educational models.

2.3 Holistic Model of Distance Education

In contrast to the rather technocratic model presented above, which is adequate in its way for helping to understand the activities which define a distance education system, a more global theoretical structure has been developed by Perraton (1981, pp.22-24) which effectively displays the argument in favour of distance education. It is summarized below and in Figure 2.2 as a linked sequence of fourteen elements, the summary is of great value as various elements have brought in a logical manner, thus providing a useful synthesis of cost, access and educational arguments favoring distance education. The summary below is to be read in conjunction with Figure 2.2

Educational media are similar in their effectiveness, but differ in the ways they can readily be distributed (box A). This makes it possible to move away from the fixed staffing ratios necessary for faced-to-face study (box B), thereby changing the role of the teacher (box C) and making possible a reduction in costs (box D). It is then possible to reach audiences different from the traditional ones, through distance teaching, and to do so at a reasonable cost (box E). best resolved by a multi-media

however, presents us with problems of choice (box F). best resolved by a multi-media approach (boxes G and H) which allows for feedback (box I) and encourages active learning box J). In working out the approach to be used. The organization of any face-to-face element is of key importance (box K) and leads us to consider how to use distance teaching to ensure dialogue (box N) something which is facilitated if a concern with new audience and a new relations between education and the community (box L) lead to the use of groups as a basis for adult learning (box M).

Perraton's argument starts with the hypothesis; the different media are similar in their effectiveness for teaching; this is based on the results of comparative studies of the use of print. Radio, film, television, and live teachers as reported, for example, by Schramm (1977). Many such comparative studies have been carried out. The relevance of the content, motivation and interest of the learners, are the significant variables, rather than the particular medium of instruction. The next elements in the argument presented in Figure 2.2 follow on logically from this initial premise: the face-to-face teacher's or tutor's role becomes that of a facilitator of learning rather than a transmitter of information, and the groups becomes a key forum for debate, discussion, and feedback. In fact, Perraton concludes by suggesting that in taking decisions over choice of media, the specific functions to be allocated to group activity should be considered first, within the overall cost constraints applying in particular cases. Use off the various media can then be decided subsequently, in light of the extent and nature of face-to-face and group contact. This conclusion stems from the community – or society- centered orientation Perraton's work, which contrasts with the institution – centered approach found in many distance education systems.

Although much of Perraton's work is concerned with the use of distance methods for expanding education as economically as possible in developing countries, notably in Africa, and often for teacher training and for rural and community work, his conclusions are just as important for the provision of education for adults in the more developed countries. In fact, there are many lessons to be learned from the wealth of experiences gained in this field by a number of African and Latin American countries, particularly in the combined use of local community groups, radio broadcasting, and print materials (see, for example, Perraton (1980, pp.54-61) on the use of distance methods for community education. The importance of Perraton's holistic model is that it provides a convincing argument for the adoption of distance education as part of a general national educational policy.
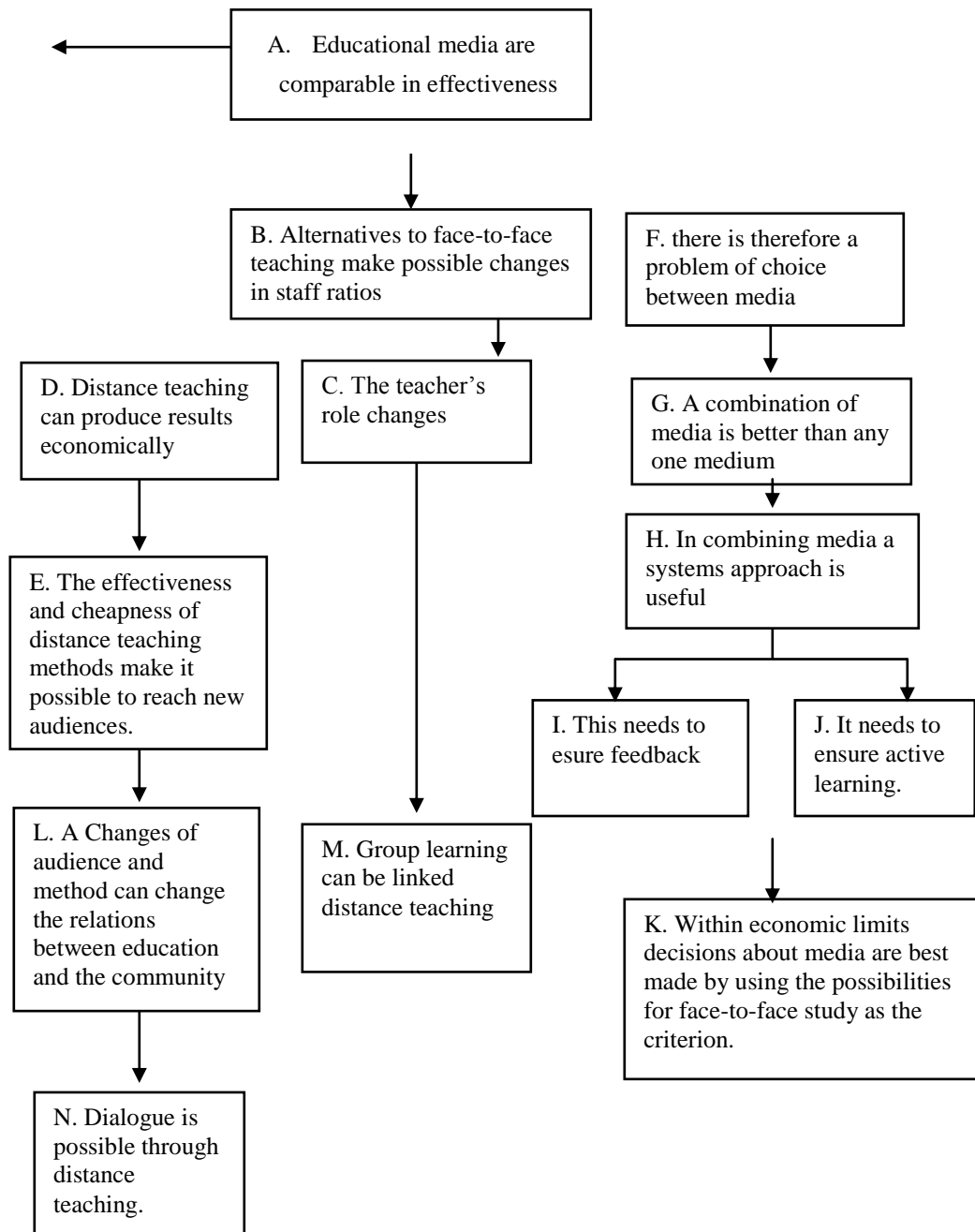
For further details, please read the below referred book.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.20-39	2-1

2.4   Transactional Model of Distance Education

A rather different perspective is obtained by viewing distance education from the sometimes competing perspectives of the principal 'actors' involved in the process, and the relationships or transactions between them (see Figure2.3)

Figure 2.2 A holistic model of distance education


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                    ┌──────────────────────────────┐
◄───────────────────│  A.  Educational media are    │
                    │      comparable in effectiveness│
                    └──────────────────────────────┘
                                  │
                                  ▼
            ┌──────────────────────────────┐    ┌─────────────────────┐
            │  B. Alternatives to face-to-face│    │  F. there is therefore a│
            │  teaching make possible changes │    │  problem of choice    │
            │  in staff ratios              │    │  between media        │
            └──────────────────────────────┘    └─────────────────────┘
                                 │                          │
                                 ▼                          ▼
  ┌─────────────────┐  ┌─────────────────┐    ┌─────────────────────┐
  │ D. Distance teaching│  │ C. The teacher's │    │ G. A combination of  │
  │ can produce results │  │ role changes    │    │ media is better than any│
  │ economically        │  │                 │    │ one medium           │
  └─────────────────┘  └─────────────────┘    └─────────────────────┘
           │                    │                          │
           ▼                    │                          ▼
  ┌─────────────────┐           │              ┌─────────────────────┐
  │ E. The effectiveness│        │              │ H. In combining media a│
  │ and cheapness of   │        │              │ systems approach is   │
  │ distance teaching  │        │              │ useful                │
  │ methods make it    │        │              └─────────────────────┘
  │ possible to reach new│       │                  │           │
  │ audiences.         │        │                  ▼           ▼
  └─────────────────┘           │         ┌────────────┐ ┌────────────┐
           │                    │         │ I. This needs to│ │ J. It needs to│
           ▼                    │         │ esure feedback │ │ ensure active │
  ┌─────────────────┐           ▼         │               │ │ learning.     │
  │ L. A Changes of │  ┌─────────────────┐└────────────┘ └────────────┘
  │ audience and    │  │ M. Group learning│       │
  │ method can change│  │ can be linked    │       ▼
  │ the relations   │  │ distance teaching│┌─────────────────────┐
  │ between education│  │                 │ │ K. Within economic limits│
  │ and the community│  └─────────────────┘ │ decisions about media are best│
  └─────────────────┘                      │ made by using the possibilities│
           │                               │ for face-to-face study as the│
           ▼                               │ criterion.           │
  ┌─────────────────┐                      └─────────────────────┘
  │ N. Dialogue is  │
  │ possible through│
  │ distance        │
  │ teaching.       │
  └─────────────────┘
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Source: Perraton, H. (1981) A Theory for Distance
             Education Prospects
             11(1)p.23

In traditional education, the vast majority of the learner's transactions are with individual teachers who, in addition to actual teaching and assessing, may give personal advice on course choice, help with administrative problems, and generally monitor the learner's progress. These 'transactions' –whether with teachers or with others- usually take place within the physical boundaries of the institutions.
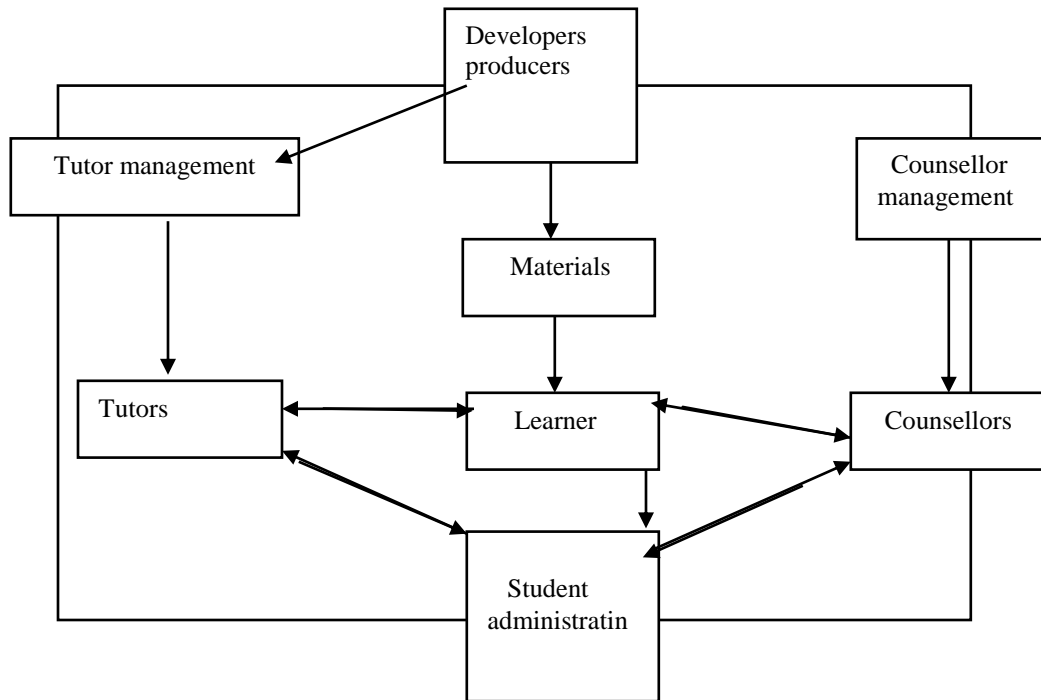
In distance education, however, the situation is quite different. Learners have three principal types of transaction to maintain, and each of these has a different site within the system:

- 'transactions' with the learning materials –reading, viewing, listening, manipulating, selecting, interpreting, assimilating, synthesising, and so on; the tours of these interactions is generally the student's home, but may be a local centre

- transactions with 'intermediaries' such a tutors, counselors and 'animateurs' who are there to help in interpreting and using the course materials, and to promote discussion and interactions with other learners; the locus of these transactions varies: local study centres or occasional residential sessions for group work, the home or place of work for exchange by post, telephone, or other communications channels.

Transactions within the institution – or at least that part of it set up to provide student services and to deal with administrative and general queries and problems. These are of necessity often impersonal, having to be carried out at a distance, and may be perceived by learners as problematic (the 'unfeeling bureaucracy of the faceless institution' etc.) However, the institution may at times deal with students on an individual

basis through personal counselling services and the 'faceless' bureaucracy may be humanised to the extent that such services are available (Henri and Kaye, 1985, pp.124-5).

Figure 2.3   A transactional model of distance education

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                    ┌──────────────┐
                    │  Developers  │
                    │  producers   │
                    └──────────────┘
  ┌──────────────────────┐     │     ┌──────────────────────┐
  │   Tutor management   │◄──  │   ──│  Counsellor          │
  │                      │     ▼     │  management          │
  └──────────────────────┘  ┌────────┐  └──────────────────┘
          │                 │Materials│          │
          ▼                 └────────┘          ▼
  ┌──────────┐      ┌──────────┐      ┌──────────────┐
  │  Tutors  │◄────►│ Learner  │◄────►│ Counsellors  │
  └──────────┘      └──────────┘      └──────────────┘
          │              │                  │
          └──────►┌──────────────┐◄─────────┘
                  │   Student    │
                  │ administratin│
                  └──────────────┘
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Note: This model assumes a certain kind of distance education system similar to that of the British Open University. Other models will have different transactional patterns.

Beyond this circle of transactions in which the learner participates is a complex set of invisible (to the student) activities and interactions which are necessary for providing, coordinating and maintaining learning resources, the network of intermediaries, and student services. These activities were outlined above our presentations of the course and student

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subsystems (see Figure 2.1). The principal agents responsible for these activities include:

- educators and subject-matter experts responsible for selection, organising, and developing the content and curriculum of a particular course.

- 'transformers' of various kinds, who work with the subject-matter experts in developing and producing the specific media products which make up the learning resources. These include editors, graphic designers, media producers, educational technologists, and computer software programmers

- managers responsible for planning, the formulation of policy, organistion and staffing, coordination and control

- evaluators concerned with monitoring the functioning of the system, providing and analysing information for decision–making, and recommending necessary corrective actions. In some cases these will be specific individuals based in an evaluation or management information's unit; in other evaluation may be done by managers and educators as a normal part of their work.

Viewing distance education system in transactional terms emphasises the human relations aspects of management, in contrast to the systems approach of Kaye and Rumble which tends to stress the 'rational' aspects of management.

In order to get more information on the topic, please read the below referred material.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.33-36	2-1

2.5 Institution-Centred Educational Models

In Institution-Centred Educational Models; aim is to increase the efficiency of the institution. Students are made part and parcel of institutions and having no freedom for example in selection of courses etc.

To comprehend the topic in detail the point of view of 'Institution-centred Educational Model' given in the below referred material is very useful which may be read.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.40-42	2-1

2.6 Person-Centred Educational models

In this type of model learner is an independent consumer of the products of the system. The learner has freedom of expressional views. Learner is independent user of educational material, user of an educational service and in a contractual relationship with the institution.

To add further knowledge on the topic, please read reference given below:

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.42-46	2-1

2.7   Society-based Educational Models

Society is a large group which has some common grounds. In this mode, tutor and learner is member of this group. Tutor directs the activities without giving the impression that "he is the Chief in the teaching learning process". Tutor in this model is active member rather than a dictator. He suggests rather than commands. In this model mutual feeling of confidence and respect is developed. In this mode learner participate at a premium. Learner discusses, questions, reports, plans and work in natural style while the study material writer, tutor acts as guide, counsellor, advisor, contributor; students try to discover things themselves instead of listening them. Success of techniques depends upon the tutor who is guide-cum-counsellor-cum-advisor-cum-contributor-cum-director. The main objectives of society based distance education model is to:

- Increase activity on the part of learners

- Teach learner to work in a friendly and cooperative manner

- Reduce the amount of formality which characterizes the traditional lesson

- Make aware the learners about their peers.

- Develop the capacity of clear and responsible thought in the learners

The chief characteristics of this modelare:

1. To provide the learners with the chances of discussion. This may be in terms of informal group plan;

2. Institutional group plan a) symposium b) panel discussion

3. The self directing group plan

4. The seminar group plan.

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These all lead the learners from tutor/teacher centred models. Learner receive training in socialized living, cooperativeness, open mindedness. Every student learn how to adjust in society. Thus reflecting thinking but in this model, critique is there that learner waste their time, discussion may be vague.

In Community based models, aim is to help community to meet the needs of community. Here educator is seen as change agent. The community based model is different from institution centered models as this focuses on institution.

Scholar Greville Rumble has given good ideas on the topic in the below referred material which may please be read.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.46-50	2-1

2.8   Activities

Please do the following activities.

1.   Discuss the Holistic Model of distance education and its significance with any educationist of your area and prepare a report.

2.   Write below at least three similarities of Person-centred models and Society based models in the space provided for:

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_____

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3. Write below a summary of Transactional model of distance education.

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2.9   Self Assessment Questions

Q.No.1: Define the term Systems Model of Distance Education.

Q.No.2   Critically examine the Systems Model of Distance Education indicating the materials and students sub-system.

Q.No.3   Discuss Holistic Model of Distance Education.

Q.No.4   How would you evaluate Transactional Model of Distance Education?   Also give some problems involved in it.

Q.No.5   Why of Institution-Centered Educational Models is important in teaching-learning process?

Q.No.6   What role Person-Centered Educational Models can play in Distance Education?

Q.No.7   Critically examine the Society-based Educational Models.

Q.No.8   You have gone through different models of distance education Which model do you think is very effective in teaching learning process in Pakistan.

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Unit 3

ECONOMICS OF DISTANCE EDUCATION

Written by:
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3.1   Introduction

Economics is a social science which deals with mankind in the ordinary business of life while economics of education deals with the educational system. Educational institutions normally operate within given cost constraints. Usually scarcity is there. In this unit, it is tried to identify some of the fundamental variables affecting the costs especially for mega universities. Appropriate cost-variables are gathered in the form of simple cost-functions.

The classification of costs is the basis of all accounting systems. Total cost is the sum of all costs attributable to the cost unit under consideration. A cost unit is a unit of product e.g. course, service or time i.e. combination of these in relation to which cost may be expressed. A cost center may be a location, person or item for which costs may be ascertained for a budgetary control.

A capital cost is the cost incurred in acquiring goods or services that have a useful life time greater than the budgetary period within which the cost is incurred. All other costs according to Rumble, G, Neil, M. and Tout, A (1981, p.208) are charged and revenue costs which are synonymous with operating cots. Revenue or operating costs may be recurrent or non-recurrent. A recurring cost is one which is expected to recur from year to year while non-recurring operating costs are not expected to recur from year to year.

Cost determining factors in distance learning system are inputs, outputs or rate of conversion of inputs and outputs. Those can be seen as:

- Inputs: human resources, information and ideas, money, material, equipment, buildings.

- <u>Conversion rates</u>: machine capacity, productivity-rates, input: out-put ratios.

- <u>Outputs</u>: students (measured in different ways)

- <u>Courses</u>: (number of courses, number of study hours, number of course components e.g. texts, T.V., Radio programmes, computer disc. etc.)

The economics of United Kingdom Open University being the pioneer Open University in the world has been extensively studied than any other distance education.

Sweeping statements about the economics of distance education are hardly possible. Such statements must be differentiated. They may represent the factual situation that applies in most cases (the private correspondence schools), in well-defined extensive areas (such as the distance-teaching universities), or in applications of distance education to specific functions only (as is often the case in personnel training).

There are different kinds of distance education, and it is important to realize that even seemingly systems include different components and media. The British Open University includes the use of television and radio for it's teaching, whereas the German Fern University does not. Both these universities run a number of study centers where students are continuously provided with tutorials and various media facilities. This is a type of service that is not provided by probably the vast majority of distance study institutions in various parts of the world, the publicity funded and private correspondence schools. These in their turn may or may not make use of the telephone for oral tutorials. Some distance teaching institutions provide video recordings and films to be used during face-to-

face sessions or individually in study centers; others limit their media provision to printed material and audio-tapes (cassettes) and/ or discs. Whereas some insist on bringing students together for concentrated residential courses, others do not organize any activities of this kind. Some institutions work with student bodies limited to a few hundred or even fewer students. Others are mass-education institutions with many thousands. The two, lastly mentioned types of providers of distance education are illuminating.

In one application of the former at the university level, the Australian, New Zeeland system, parallelism with on-campus study is considered valuable and even of vital importance. Periods of residential teaching play an important part. Further, distance students are taught and examined by the same staff that teaches internal students…. They study the same courses as those offered internally… They take the same examinations at the same time as internal students in examination centers (Smith 1975, p.163)

This parallelism has been extended to a requirement that distance study and on-campus study should have the same student/ staff ratio.

It has been found in New England that one lecturer can satisfactorily teach 50 students in one course, where three courses provide a full time year of study. In other words, three lecturers are required to teach 50 students in full time, producing a student/ staff ratio of about 16:1. Allowing for a drop out of about 20 percent for external students, this produces a student/ staff ratio of about 13:1, which is very close to the ratio considered reasonable for Australian universities generally. (Sheath 1972, pp.288-289)

This is very different approach from the one applied by the large correspondence schools and sometimes by the distance teaching universities, when courses are developed for thousands of students and various kinds of technology, labour-saving devices, and division of labour are used to attain economies of scale.

The differences mentioned, and others, show that any reference to the costs of distance education must be qualified by a description of what kind is meant. Evidently, pure correspondence study is inexpensive if it is offered on a large scale, so that the cost of each course can be spread out over several thousand students. More sophisticated systems require higher costs per student, even if large numbers of students are provided with. The problem area concerned with the economics of distance education is surveyed in a profitable way in Parraton (1982); Kaye and Rumble (1981); Rumble (1986).

To understand the economics of distance education, comparisons with other forms of study may be helpful. If we compare the costs of reaching a particular educational goal, for instance a degree, by distance education with the cost of attaining the same qualification by conventional study, we should be able to draw important conclusions. Then it is essential to compare both input and output. The input would be the total cost (students' fees, government or other financing and subsidies, the loss of income incurred by students who give up work for study, etc), whereas the output would be the degree or other study goal reached and possibly even its economic value.

Let us from these points of view look at the most sophisticated distance education system known, that of the Open University in the U.K. Being the first O.U is important as a pattern for other distance education institutions. The economic

of the Open University was thoroughly investigated at an early stage.

A study by Wagner in 1972 of the costs of the Open University in relation to conventional British Universities showed the following results:

1. The average recurrent cost per equivalent undergraduate in the Open University was found to be a little more than a quarter of what it was in conventional universities.

2. The capital cost per student place in the Open University was found to be only six percent of what it was in conventional universities.

3. The average recurrent cost per graduate in the Open University was found to be equal to that in conventional universities, provide that the Open University had a dropout rate of 85 percent. (It is actually less than 50 percent)

4. The resource cost per equivalent undergraduate in the Open University was found to be about one-sixth of that in conventional universities.
   A later study by Wagner (in 1977) confirmed the findings of his first study:
   If the dropout rate in the future does not differ significantly from the past then the average cost per graduate is likely to be below half of the conventional universities.

   Finally, the resource costs measure the cost to the economy and include therefore the output lost by full time students not being in employment.   This of course

increases the Open University's advantage because all its students are part time. The figures indicate a ratio of 5:1 in the Open University's favour. (Wagner, 1977:365)

The fact that the highly sophisticated multi-media system of the Open University compares very favorably with conventional universities would seem to indicate that distance education generally can be very economical. To what extent this applies to all procedures and media applied is less certain. What we do not know, for instance, is whether the costs of study center activities or television programmes or various kinds of face-to-face support, all very expensive in relation to the use of printed and written communication, contribute to the effects of the system in relation to their costs. This is a subject well worth investigating. It has been the subject of some research but there is no conclusive evidence available.

In large-scale systems, the costs per student are normally low. However, some small sample projects have also proved highly cost effective. A remarkable example is the University of Surrey Development Programme for university lecturers in Southern Asia.

Perraton, who has carefully studied the economics of distance education on the basis largely, but by no means exclusively, of experiences of teaching in developing countries, cautiously summarizes his findings by saying that:

> It is possible only to claim that there are circumstances in which distance teaching looks attractive an economic point of view. Economics of scale are possible. But distance education characteristically has high fixed costs and, with relatively low student numbers, its costs can be

higher than those of conventional education. (Perraton 1982, p.61)

For someone who is mainly concerned with the applications that make full use of the potential of distance education will go a little further than Perraton. There can be no doubt that distance education, as applied to large student bodies, is characterized by very favorable cost-benefit relations provided that the distance teaching element consistently predominates. A number of case studies illustrating this are reported on in an earlier book of mine (Holmberg 1985a) and also in the first edition of the present work. It is primarily the arrangements for face-to-face sessions, such as study centers, residential schools, and classes of various kinds that modify or negate the validity of this statement, i.e. non-distance supplements. It is true that use of sophisticated and costly media and technology also in some cases detracts from the favorable cost-benefit relations, but this does not change the overall picture of distance education as economical.

3.2   Objectives

After reading this unit, student will be able to:

1.   Define basic terms of economics

2.   Discuss the economics of distance education

3.   Identify basic issues of financing of distance education

4.   Compare the cost effectiveness of different educational institutions.

5.   Develop relationship between education and economic growth of the country.

3.3 Cost-effectiveness of distance education (Cost-efficiency and cost-effectiveness)

Distance education is claimed to be cheaper than the formal system. It is economical because of its large group approach as the need for residential teaching is eliminated or diminished and study can take place during leisure time. Previous studies have shown that where direct comparisons can be made, distance teaching methods can work out cheaper than their orthodox alternatives. According to Lyle (1967, p. 207) in the Middle East refugee camps:

> …. It was possible to compare directly the cost of producing a trained teacher through pre-service, residential courses and through in service, distance teaching courses. The latter were half of cost of the former.

For detailed investigations of the costs of distance education, it is necessary to look at the economy of the Open University. The costs are differentiated into fixed and variable costs. The former refer to costs which vary in direct relation to the number of students catered for. They include such items as the printing of correspondence materials, the additional aids which go with the correspondence material such as home science kits, and the provisions of tutorial facilities. Expenditure on these items increases with increased student number. Recurrent costs cover those items of continuing expenditure which are the same no matter how many students' centers, the faculties and the library. The expenditure on academic salaries at conventional universities is dependent on student numbers, whereas the expenditure on salaries for the Open University's establishment depends on the number of courses being produced. Only the salary costs of part time local tutorial staff

vary with the student number. However, the specification concerning part time staff differs according to the particular features of individual courses as well as the number of students.

Wagner (1972) provided a useful survey of economic studies into the use of distance education for post secondary education in high income countries. His study (1972, p.169) showed that the average recurrent cost per equivalent undergraduate student in the British Open University was found to be about one Sixth of the cost at conventional universities. El-Bushra (1973, p. 49) commented that:

> …… if this calculation were weighted to take into account the part time nature of Open University studies, the average recurrent cost per student would still only be half that of other universities.

The capital cost per student at the Open University was found to be six percent of what it was in conventional universities (Wagner, 1972, p.174). It allowed for considerable increase in student number with almost no extra capital outlay. This is because the Open University expenditure on items such as classrooms and laboratories, libraries and recreational facilitate, is very small, as its students make use of the spare capacity of existing institutions at a low marginal cost.

The success rates can be achieved by a comparison between correspondence and conventional system. Without having the reliable factual information about drop-out rates at the Open University, it is difficult to compare its costs per graduate with those of other universities. Wagner (1972, p.177) found the average cost per graduate in the Open University drop-out rate of 85 percent. In a later study, Wagner (1977, p.365) confirmed the findings of his first study:

If the drop-out rate in the future does not differ significantly from the past then the average cost per graduate is likely to be below half of the conventional universities.

The resource costs include capital expenditure on buildings, funds for research and the cost of output foregone while students are not in employment. This of course increases the Open University advantage because all its students are part time. The total resource cost per student at the Open University as calculated by Wanger (1977, p.365) to be about one sixth of that at conventional universities. However, the costs advantage arising from the open university system is quite considerable, because the nature of course production techniques and the administrative structure as it is able to take up space capacity in the existing institutions, rather than making fresh capital expenditure. Moreover, as the number of students increases so the cost per student will be decrease. It is evident from the facts mentioned earlier that the costs of distance education can indeed be lower than those of conventional methods.

Financing of Distance Education: Some Basic Issues

The expansion of higher education in Pakistan in the post-independence period has been quite spectacular in quantitative dimensions. The number of universities and colleges of various types has also registered significant increase during this period. Thus expenditure on higher education has been increased to large extent and this progress in expansion of education has been affected by distorted priorities social and regional balances and employment. In spite of the apparent explosion of numbers, the coverage of the relevant age group has not even reached 5 per cent. Even this enrolment is far beyond the absorptive capacity of the Pakistan economy, giving rise to the ever-increasing unemployment among the university-educated populations. Further, the distribution of higher education

facilities remains top–sided. Despite various schemes of incentives launched by the Central and Provincial governments, the socially disadvantaged groups continue to be poorly represented in the college institutions. The enrolment of girls do not exceeded one- third of the total enrolment at the university stage.

Need for Distance Education

There is, therefore, an urgent need for revamping the system of higher education in order to provide access to the underprivileged socio-economic groups, as also to extend facilities to the educationally backward regions of the country. This can be done, among other things by providing facilities under distance education which "augments opportunities for higher education , ensures access, is cot-effective and promotes a flexible and innovative system of education".

a. "to meet the increasing demand for education by utilizing alternative systems of delivery; and

b. to bring about equalisation of opportunity by providing facilities in backward regions as also to the weaker sections of the community , who have to take up jobs owing to their particularly circumstances and for women, many of whom still find it difficult to go to college, as they belong to the tradition ridden families and communities. Distance education which is available on all Pakistan basis, is also an end towards national integration as it exposes student to the cultures of distant regions through personal contact programmes and together forms of interaction".

Characteristics of Distance Education

Before proceeding further, it would be better to see, in brief, the basic characteristics of distance education. Holmberg (1977) defines distance education as the various forms of study at all levels " which are not under the continuous immediate supervision of tutors present with their students in lecture rooms or on the same premises, but which, nevertheless, benefit from planning, guidance and tuition of a tutorial organization. Distance education includes all those teaching methods in which, because of the physical separateness of learners and teacher, the interactive as well as the pre-active phase of teaching is conducted through print, mechanical and electrical devices. Elements of oral tuition and group work (contiguous teaching or face to face teaching) belong here as auxiliary components"

In its application, distance education has come to acquire certain intrinsic characteristics that make it attractive also to people and society, who do not need it as a second chance study opportunity. According to Holmberg (1977) these characteristics are:

a) the applicability of distance education to large groups of students as a kind of mass communication, particularly attractive at times when educational institutions are over-burdened;

b) the possibility of improving the quality of instruction by assigning the best subject specialists and educationists available to produce courses for large groups of students;

c) the effectiveness of methods, proved by the students' acquisition of knowledge and skills;

d) the economy of the large groups approach and of the facts that the need for residential teaching is eliminated or diminished and that study can take place during leisure time;

e) the possibilities of individualisation of the study pace and, to some extent, of study contents; and

f) the students' habit forming experience of work on his/her own, which is felt develop independence and lead to greater autonomy than other types of study.

Studies in Distance Education: The Progress in India

Distance education in India was given a concrete shape in 1962 with the introduction of correspondence education as a pilot project in the University of Delhi. By 1985.32 universities had introduced correspondence education and according to an estimate nearly 2 lakh students were getting instruction at various levels in these universities, This comes to less than six per cent of the total enrolment at the higher education stage. Further, there are vast variations in the enrolment in correspondence courses in different universities. Almost half of the units are academically non-viable, having enrolments of less than 2,500 each it has also been observed that, by and large, the distance education programmes relate mainly to humanities and social sciences rather than Natural and Physical Sciences and professional courses.

Financing Distance Education

Before analyzing the comparative cost-effectiveness of the distance education and conventional education systems, it would be pertinent to mention some of the factors that exercise a limiting influence on the validity of such comparisons. These are as under:

a) Distance education, as it exists today, is predominantly complementary to the conventional system, utilizing the latter 's academic and physical facilities. It would cost more, if it were to exist as a separate entity.

b) The quality of instruction is also a factor to be reckoned with. In distance education, it is likely that the quality of the output would be uneven. This is more so because most of the time the students have to study on their own. Unless the quality of the output is made comparable, it would be difficult to compare, with any degree of authenticity, the cost-effectiveness of the two systems.

c) The number of courses offered under the two systems also affects their costing patterns. To quote Kaye and Rumble (1981): "The conclusion needs to be qualified before it can be applied generally. While distance leaning system catering for high student numbers are cost efficient, their cost advantage is reaped at the expense of limiting the number of courses on offer. What evidence we have suggested that in high technology systems, the investment of resources in learning materials (where these are designed only for teaching at a distance) and the cost of establishing production and transmission systems can only be justified on grounds of cost efficiency if there are sufficient students to bring average cost down. At the higher educational level, where students numbers tended to be smaller, the results of such studies for the development of academic programmes would seem to be the following:

i. "the restriction of distance learning system's academic programme to areas where there is known to be significant level of demand, e.g. teacher training:

ii. "the development of courses in a wider number of subject areas, but with a severely restricted course choice in each discipline, thus, forgoing the possibility of turning out graduates with a singly honors degree; and

iii. "a conscious decision to ignore comparative unit costs and to embark upon a programme for social or political reasons, or because it is the only way of fulfilling specific goals and needs (e.g. to reach previously deprived target populations) irrespective of the cost".

Comparative Cost-effectiveness

Subject to these limitations, we shall compare the cost-effectiveness of the programmes of distance education and also education under the conventional modes of teaching.

Perraton (1981) studied the cost of the multi – media courses using radio in a few countries of Africa. He concluded that at almost all stages of education using radio, the cost per student was generally lower than at those using conventional methods of teaching. His findings are presented in Table 1.

A number of studies have also been made on comparative cost of educating students through conventional and open university systems. The study by Perry (1976) concluded". According to a crude estimate as reported by Perry, the cost per student in the UK Open University in 1973 was 2,749 (which can

be an over-estimate) against a figure of 5.250 per student in comparable faculties of the conventional universities.

In another study, Wagner (1973) calculated the average recurring cost per equivalent undergraduate for the two types of universities. He took the total recurring costs and divided it by the number of equivalent undergraduates. One of the problems in estimating comparable costs was that the

Table 1: Cost of Multi –Media Courses Using Radio

Project & Country	Year	Cost per enrolment (in cons-tants) US$	Education al level	Enrol-ment	Comparison with cost of alternatives.
Malwi Correspo ndence College.	1978	160	Secondary	2.880	Cost per enrolment lower than school. Cost per graduate higher than day school but lower than boarding school
South Korea Air Correspo ndence High School	1977	64	Secondary	20,000	Cost per enrolment and per graduate lower.
Kenya	1977	322	Secondary	790	Cost higher than alternative
Dominic an Republic Radio Santa Maria	1975	5	Primary/ Basic Adult	20.000	Cost per enrolment and per graduate lower than the alternative.

Conventional universities have to bear increased costs on teaching postgraduates. For this purpose, Wagner applies the weightage to postgraduate costs indicted by the British University Grants Committee.

Table 2 sums up the comparative cost estimates of the open and conventional universities. The cost figure of the open and conventional universities are, for the year 1973 and 1968-69, respectively at 1971 prices. As would appear, the average recurrent costs in the traditional universities are more than three times the costs in the open university.

In a similar study of Costa Rican universities, Rumble (1981) showed that the average cost per year of US 795 (at 1980 prices and exchange level) Compared favorably with those found in two of the conventional campus based universities, where they were 301 (universidad de Costa Rica) and 2,033 (Universidad Nacional).

Muta (1985) reported that "direct current expenditure per student" of the University of Japan is 1/4 and 2/3 that of the national universities,

Table 2: Average Recurrent Costs.

	Open University	Conventional Universities
Recurrent costs	10,162.000	284,784,000
Equivalent undergraduates	£36,500	£302,290
Average recurrent cost per equivalent undergraduate	£278	£940

Capital Costs: Open University: 300
            Conventional university: 1200

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public universities and day programme of private universities respectively …"The findings of Otsuka (1984) revealed that the direct current expenditure at the Radio and Television universities in the Peoples' Republic of China is two-thirds that of the full- time students and one- third that of the part time students.

Comparatively speaking, the distance learning programmes are not only more cost-effective than traditional teaching programmes, but also have a tendency to become cheaper over time. This is evident from the observations made by Bates (1984), as under:

> "A C-60 audio cassette, containing one hour of material, can be delivered to an open university student for less than 50 pence Similarly, a 25 minute television programme can be delivered on video- cassette for 75 pence per student – or for just over for an hour's material- if the student returns the cassettes for re-use at the end of the course. 16k microcomputers are now retailing for less than 100 and a video cassette player can be rented in Britain for less than 12 month. All these prices will move lower, print costs are rising faster than inflation and open university broadcast televisions productions were averaging over 35000 a programme in 1983".

Opportunity Costs

The studies of the comparative costs of the various modes of distance and conventional education relate only to the public expenditure. They do not take into account the opportunity costs, i.e. the income foregone by the students undergoing education under a conventional system. According

to the estimate made by Tunstall (1974) 12 full–time students at conventional universities cost the British economy around 200 million per annum. A student under the distance educational system, on the other hand, costs the economy very little in the output foregone and is expected to make similar contribution to economic development as a student from the conventional university does.

In the Pakistani situation, however, the concept of opportunity cost has to be applied with caution. Here, the ever increasing unemployment and underemployment among the university educated persons (Whether from the conventional or non-conventional systems) retard the growth of economy and, therefore, any estimate of income foregone would largely be an exercise in make–believer rather than an attempt at realistic calculations.

3.3.1 Future Policies and Strategies

The cost –effectiveness of two systems not withstanding, distance education is destined to make a major contribution in expanding educational facilities in Pakistan. The geographical, Socio-economical and academic compulsions in this country make it imperative that the distance education programmes should be expanded in a big way so that education can reach the masses, who owing to various constraints, cannot afford to acquire education through conventional methods. This would necessitate a fresh look at the financial and management policies relating to distance education so that the system can become not only cost- effective but also cost –efficient. We shall discuss below some of the policies and strategies that should guide our future programmes of expansion of distance education.

i. The Foremost consideration that should be kept in view is that future expansion of distance education should be a well thought out, integrated plan on all-Pakistan basis. This strategy should take note of the developments taking place under the conventional as well as non-conventional systems of education. The present policy of opening correspondence courses at various universities, regardless of the potentiality of the catchment area, should be abandoned. A policy should be adopted whereby no university, after a specific gestation period, be allowed to run the courses in correspondence education.

ii. The provision for course should be in relations to manpower needs of the country assessed on a long –term basis. Besides traditional courses, provision should be made for need-based, functional and innovative courses which prepare students for entering into useful vocational Further, in order to avoid wastage of scarce academic and financial resources, the universities in the geographically contiguous areas should not, as far as possible , be allowed to offer similar courses.

iii. It may be desirable to set up a Central Board of Distance Education for planning and monitoring of distance education programmes. This Board should study the academic requirements of various regions and advise the University Grants Commission on setting up of distance education centers in the universities. It should also monitor the progress of distance education and advise the

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universities in tackling various problems pertaining to distance education.

iv.   We should be careful in of introducing programmes which cannot be continued with a fair degree of efficiency all the year round. The radio, TV and other electronic devices necessitate proper training of the teacher / operators to keep them operational. Further, they also require an assured supply of electricity and easy availability of spare parts and repair facilities. All these factors should be taken into account while introducing distance education programmes.

v.   Educational TV (ETV) and other electronic gadgets require large investment of time, energy and financial resources. It is, therefore, necessary that these investments should be made keeping in view the academic effectiveness of these programmes. It may be worth mentioning that a large number of ETV experiments in the United States have been evaluated in terms of student performance. Godwin Chu and Schramm reviewed 207 published studies that compared television teaching with conventional teaching. Of the 421 comparisons made in these studies, 308 showed no significant difference in examination score gains as a result of the different treatments, 63 showed higher gains for those getting ETV and 50 showed higher gains for those getting traditional teaching. From this, Chu and Schramm concluded:

"All these summaries show that in the great majority of comparative studies, there is no

significant difference between learning from conventional teaching and that where there is a significant difference, it is bit more likely to be in favour of television than of conventional instruction".

vi) Although it has been established that distance education is less costly than conventional system of education, the cost factor should not be the sole determinant for the introduction of distance education. If distance education has been considered as an alternative to formal system, it should be able to stand on its own and not be a poor relations of the formal system. Distance education has to fill a void created by the ever-increasing demand for education and the incapacity of the formal system to meet it. In such a situation, the fact of its being less costly should not be the decisive element in its expansion.

vii) Distance education should not be considered as a means of augmenting financial resources of the universities. In quite a few universities, it has been observed that correspondence courses are considered as the money-spinning devices. Students are admitted without due regard to the academic facilities that can be provided to them. The result is that there are inordinate delays in the preparation of academic materials and evaluation of response sheets for the students. Further, the personal contact programme and the library facilities are almost non-existent. It is not wonder than that such shabbily organized courses yield

revenues disproportionate to the academic returns of the students.

viii) Distance education programme should not be considered as a poor relation of the formal system with the universities dumping undesirable elements of the academic staff on these courses. Further a sizable proportion of the staff is on a part-time basis, which hampers the growth of organic relationship between them and their institutions. In order to accord parity of prestige to the non-formal system, the academic staff should be on a full-time basis and be eligible for all the privileges available to the regular staff of the university. In order to attract and retain highly qualified persons, the staff may be given some special allowances. Furthermore, all promotional avenues should be open to them.

ix) Universities should encourage researchers in the areas of cost effectiveness and cost-efficiency of the distance education programmes. Moreover, the problems faced by the teachers and students under correspondence education should be subject to review so that prompt remedial action could be taken.

In order to get more information on the topic, please read the below referred material.

Greville Rumble, (1997)	The Costs and Economics of Open and Distance Learning, London, IET Open University, pp.161-180	3-1

3.3.2 Costs Involved in Open and Distance Learning

It is often assumed that open and distance learning is cheaper than others forms of education and training. As general statements, this is far too simple. Usually, the cost structure in open and distance learning is quite different from cost structures in conventional types of education.

It has been demonstrated in a number of cases that large distance learning programmes may produce graduates at considerably lower costs than conventional institutions. This depends, however, on a number of important factors. Although conventional education and training show great variation in costs according to subject area and type of programme, open and distance learning also varies very much according to use of learning materials, other media and technologies, and types and organization of student support services. It is also necessary to consider the rate of completion of studies.

Most costs studies compare the costs of single mode distance learning systems with all of conventional systems, but cost studies of open and distance learning used by conventional or dual or multi model instructions are scarce. The use of advanced technologies for small target groups makes the provision expensive. Most cost studies are also simple cost-efficiency studies that do not take into account broader qualitative and social aspects and perspectives. One such aspect is that open and distance learning systems are often targeted towards other groups, without easy access to conventional institutions. Other benefits are not easily quantified and calculated. Opportunity costs and productivity effects of upgrading the workforce through in-service training should also be taken into account.

In most cases, funding of open and distance learning institutions is different from that of conventional institutions and there are many arguments in favour of this. On the other hand, if open and distance learning is to be used increasingly by conventional institutions, funding for programmes of this type need some harmonization with funding mechanisms for conventional programmes. It is quite usual to assume that students in open and distance learning, who are often working adults should pay a higher proportion of the costs than conventional students do. However, this assumption should be modified according to missions target groups, and other local circumstances.

The balance of funding from government , employers, and individual student should be carefully considered, being aware that understanding may easily have negative qualitative and social effects, as open and distance learning becomes a regular feature in the educational system, care should be taken to remedy any unjustified economic discriminations between groups of students.

The end result has been that technology has become a virtual remedy for educational institutions That have purchased equipment to resolve budgetary crises, improve student access, and share limited human resources. Although educational technologies are no longer on the fringe of education, many institutions are not prepared to deal with the consequences of technology in education. Education technologists advocate that instructional technologies can be viewed as either processes or products but have failed to plan for the process changes.

National reports identify the need to improve teacher use of technology in both K through 12 classes and higher education. The lack of appropriate technology use among

educators is important because education must prepare learners to succeed in this technological and information intensive economy. Billions of education and training dollars have been spent to purchase, install, and maintain technologies ranging from data networks to videoconferencing. When appropriately used, instructional technologies are effective tools to redefine and revitalize the learning experience for a diverse student populations, including older students who are likely to work and be enrolled part-time. When misused, these same instructional technologies can disrupt the educational process and dehumanize teaching.

Technology is not only changing classroom instruction, it is also changing the composition of the student population. Now more than even, diverse groups of students are able to come togather via technology add participate in classes togather. The possibility and ease of cross-cultural exchanges through technology requires that instructions gain a new level of cultural understanding and communication skills. On the North American continent, technology has the potential to link Americans, Canadians, and Mexicans and to enhance the interaction between geographically close countries, however, one cannot assume that close proximity implies cultural similarity. To maximize the potential of cross-cultural exchanges, training and cooperation in the area of cultural understanding and communication must occur.

For further details, please read the below refered book:

Nagpal, C.S. & Mithal, A.C. (1993)	Economics of Education, New Delhi, Anmol Publications Pvt. Ltd. pp.5-9	3-2

3.4. Internal Cost Efficiency and Financial Management

Cost effectiveness analysis is concerned with identifying the least costly way of achieving particular objective. It therefore pre-supposes the existence of a goal or objective. In education, the objective or goal is the development of the human resources. It may encompass equalization of educational opportunities, meeting the educational needs of specified groups like employed people and those who need to update their knowledge and skills because of the rapid growth of knowledge and its application. Because of the limitations imposed by time, space and other resources on the traditional system, and the recent developments in communication technology making wider access to knowledge and its application easier and possible, it is strongly believed that distance education may provide the best way on meeting these objectives. The rationale behind this hypothesis is that distance education involves high fixed costs and relatively low variable costs, while in the conventional system, the cost vary in proportion with the student numbers. The cost function in distance education can be expressed in the following form:

$$TC = F + VN$$

Where TC is the total cost, F is the fixed cost, V is the variable cost per student and N is the number of students.

The average cost (AC) is the fixed cost divided by the number of students (N) plus the variable cost per student (V):

$$AC = \frac{F}{N} + V$$

The marginal cost refers to the cost incurred on enrolling an additional student. This can be expressed by the following formula:

$$MC = TC_{N.1} - TC_N \text{ or } TC_N - TC_{N.1}$$

The marginal cost is also sometimes referred as variable cost per student. The economics of scale operates since the average costs fall as the number of students increases and the marginal costs are lower than the average costs.

With the rise in the enrolment, the average fixed cost declines at a faster rate resulting in a corresponding decline in average cost also. This is the reason that convinced many planners in distance education to believe strongly that it has the potential to reap economies of scale. Unless this condition is met, distance education system cannot be more cost-effective than conventional education.

This assumption however is not as simple as it looks. There is a significant element of opportunity cost involved in both cases. This element will be higher in the case of distance education as most of its students are adult learners engaged in one occupation or another. The time they devote to education will be at the cost of some other pursuit. There are in addition several other relevant factors, namely, wastage, dropouts, graduation ratios, additional earnings from education, and so on. Unless all these factors are carefully studied and methodologically documented both for conventional as well as distance education systems, all comparisons would suffer from limitations.

We have made an attempt to examine some of these basic assumptions in respect of INGOU and compare them with the conventional higher education costs. The average cost falls steadily in the initial stages as student number increases and then the curve gradually flattens when the marginal cost and average cost come closer.

The marginal cost is independent of the student number and the total cost is positively associated with enrolment. For example, Figure 2.3 compares the cost effectiveness of IGNOU with conventional higher education. We will notice that as the student number increases, the per student cost of IGNOU decreases whereas in the conventional system, per student costs remain static irrespective of the student number. Also, the rate of decline in the per student costs of IGNOU is faster for an enrolment of less than 90,000 and thereafter it slows down and the average cost curve flattens out when the student number is over 140,000. From this we can conclude that given the existing costing cost structure, IGNOU will not enjoy any significant economies of scale beyond this level of enrolment. However, the marginal cost is still less than the average cost and therefore the university can enroll more than 140,000 students. If the enrolment falls below the level of 18,000 the costs of IGNOU will be higher than those in the conventional university system. It follows that conventional education is less costly if the enrolments are low, but there is a break-even point beyond which cost-effectiveness of distance education is greater than that of conventional education.

We have noticed from Table 1 that the unit costs per student vary widely among correspondence institutes.

Table 1 Per student unit costs in correspondence institutes and conventional university colleges

St. No	Correspondence Institute/Cu College	Cost per student (Rs.)		
		1987-88	1988-89	1989-90
1.	Punjabi University	856 (28.1)	1026 (28.4)	1075 (26.0)
2.	Madurai-Kamaraj University	434 (14.3)	462 (12.8)	560 (13.5)
3.	Allahabad University	431 (14.2)	476 (13.2)	416 (10.0)
4.	Kurukshetra University	637 (21.0)	763 (21.1)	643 (15.5)
5.	SNDT	231 (7.6)	242 (6.7)	323 (7.8)
6.	Mysor University	831 (27.4)	926 (25.6)	678 (16.3)
7.	Sri Venkateshwara University	278 (9.2)	340 (9.4)	297 (7.2)
8.	Kerala University	338 (11.1)	393 (10.9)	419 (10.1)
9.	CU Colleges	3035	3618	4141
Note:	Figures in parantheses indicate percentage of correspondence institutes costs to CU colleges cost.			
Source:	Compiled from data collected by the authors for a study on costs of correspondence, open university and conventional education in India			

Similarly, Table 2 indicates the variations in unit costs among conventional university colleges.

Table 2: Per student unit costs of conventional university colleges in some selected states

S. No	State	Sample number of colleges	Cost per student (Rs)		
			1987-88	1988-89	1989-90
1.	Jammu and Kashmir	16	3231	4163	4235
2.	Madhya Pradesh	12	1797	2285	2462
3.	Orissa	7	3533	3622	4424
4.	Goa	5	1853	2001	2307
5.	Pondicherry	5	5141	6343	8026
6.	Tamil Nadu	34	3320	3954	4719
	Total	79	3035	3618	4141

Source: Compiled from data collected by the authors for a study on costs of correspondence Open University and conventional education in India.

It was observed that for the year 1989-90, Goa accounted for the lowest unit cost with Rs.2307 per student, closely followed by Madhya Pradesh with Rs.2462. On the other hand, Pondicherry accounted for the highest unit cost with Rs.8026 per student whereas in Jammu and Kashmir, Orissa and Tamil Nadu the per student costs are closer to the average of Rs.4141 per student. Since the conventional university costs are proportional to the student-teacher ratio, the per student cost variations in these states indicates low student density in each class and/or a high proportion of subject specialist teachers in each college.

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In the present context of resource constraints, it will be interesting to see how effectively and efficiently do higher education institutions generate resources internally. This is one indicator of cost efficient management of an organization. For this purpose, one has analyzed the internal resource generation and public subsidy among open universities, correspondence institutes and conventional university colleges. The results are presented in Table 3.

Table 3   Distribution of fee income and public subsidy in open universities, correspondence institutes and conventional university colleges.

S. No.	Universities Institute	Year	Distribution of income and subsidy (%)		
			Fee Income	Public subsidy	Total
A.	Open Universities				
A.1	IGNOU	1991-92	32.3	67.7	100.0
A.2	BR AOU	1991-92	82.5	17.5	100.0
B	Corre3spondence Institutes				
B.1	Madurai-Kamaraj University	1989-90	47.6	52.4	100.0
B.2	Punjabi University	1989-90	92.2	8.8	100.0
B.3	Allahabad University	1989-90	106.1	-6.1	100.0
B.4	Kurukshetra University	1989-90	93.6	.6.4	100.0
B.5	SNDT	1989-90	92.8	10.8	100.0
B.6	Mysore University	1989-90	89.2	10.8	100.0
B.7	Sri Venkateshwara Unjiversity	1989-90	155.2	-55.2	100.0
B.8	Kerala University	1989-90	143.3	-43.3	100.0
C	CU Colleges	1989-90	4.5	95.5	100.0

Source: Compiled from data collected; by the authors for a study on Costs of correspondence, open university and conventional education in India.

It will be seen that conventional university college raises only 4.5 per cent of their income through student fee. One the other hand, most of the correspondence institutes and BRAOU manage to recover most of its revenue expenditure from students whereas IGNOU recovers from its students about 32.3 per cent of its operating costs. Among the eight correspondence institutes for which data are available, three institutions, viz, Allahabad University, Sri Venkatewhwara University and Karalla University have shown surplus income.

The general expectation is that a distance education system would be cost-effective. It will do so only if it can attract an optimum enrolment in each programme offered by it. To examine this aspect, we have analysed the costs of IGNOU programme for the years 1989-90, 1990-91 and 1991-92. The analysis presented in Table 4 reveals that the variations among the Programmes are significant. The concept of portfolio management (constant review of the basket of courses on offer involving selective expansion and withdrawal depending upon the enrolment) becomes very relevant to policy makers if they have to use scarce resources more efficiently.

Table 4: IGNOU Programmes* : Annual cost per student (Rs.)

S.No.	Programme	1989-90	1990-91	1991-92
1.	Bachelor's preparatory programme	438*	519*	779*
2.	Bachelors Degree Programme	1842	1644	1997
3.	Bachelor of Library and Information Science	2315	2260	3118
4.	Management Programmes	1839	1702	1780
5.	Diploma in Distance Education	2059	3149	5672
6.	Diploma in Creative Writing in English	5190	7638	6247
7.	Diploma in Computers in Office Management	-	4459	4599
8.	Diploma in Rural Development	-	-	2302
9.	Diploma in Higher Education	-	-	3662
10.	Certificate in Food and Nutrition	768*	731*	780
	Total	1771	1699	2046

Note: * For six months (duration of the programme)

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Conclusion

The concepts of quality, efficiency and effectiveness in the context of education are not easy to define. Perceptions about these concepts very depending upon the levels of involvement of different participants in the process of education. For instance, while the providers of education may perceive quality in terms of the resources available to them their optimal utilization and the efficiency of the management, the perceptions of quality and effectiveness for the students and their parents might be in terms of easy employability, improvements in earning capacity and wider social acceptability. Because of these variations in perceptions, any value judgment on the quality of education and its effectiveness could arguably be controversial, if not misleading. Nevertheless, certain major concerns emerge and the system tries to focus attention on them.

A significant trend that is emerging is that education is gradually moving away from the classical notion of a noble pursuit for enlightenment; it is being increasingly perceived as a service provided to cost-conscious and outcome oriented consumers. It is this perception that gives education a truly global orientation and it is also from this perception that major concerns about quality, efficiency and effectiveness arise. The higher education systems across the world have been making efforts to address these concerns and in recent times several new initiatives have been taken in this direction. These measures include rigorous academic audit of the performance of institutions and systems; assurance of quality of the process involved in the design and development of Programmes of study and courses, teaching, learning and communication; performance assessment of students/ graduates, linkages with external agencies views of professional bodies, and so on. The distance education system in India is conscious of these

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concerns and is making efforts to address them is a significant development.

To add further knowledge on the topic, please read the reference given below:

| Greville Rumble (1983) | In David Sewart, Desmond Keegan & Borje Holmberg (1983) Distance Education: International Perspectives, London, Croom Helm, pp.425-438 | 3-3 |

3.5 Making Distance Education Viable Suggestion (with respect to Financing)

Just as the nature and content of expenditure and the final 'production' matter more than the amount spent, so where financing is concerned, we have admittedly to cope with increased expenditure, but more importantly we have to seek the most appropriate ways and means (economically, socially and politically) of mobilizing both national and foreign resources.

Internal financing

Education being considered everywhere as a service of national utility, most of the financing comes out of the fiscal resources of governments and provincial and local authorities. The direct contribution made by families varies depending on whether public education is free or free paying. The contribution of companies is mainly in the area of vocational training. Trade unions and religious bodies also make a contribution, several questions arise:

Is there an optimal distribution of cost contributions between the state and the various public authorities? This distribution depends firstly on whether the structure of

the country is federal or unitary and on whether the administration is centralized or decentralized. Decentralization makes it possible to gear education more closely to the interests of the population. But the state must always intervene to 'level out' to some extent, otherwise the quality of education would differ from one region to another, according to the resources at their disposal.

Is free education always democratic and effective? It is not if the privileged classes benefit most from secondary and higher education, bearing in mind the taxes they pay, specially since those with higher qualifications earn higher incomes as a result. This is particularly true in the Third World. Free education may also mean that the learner does not make so much effort. Various economists have studied the implications of a system of loans for students in terms of efficacy and equity.

What are the redistributive effects of education? Theoretically, to study these effects we should compare, for each social category, the charges (taxes and social security contributions) levied by the State, and the benefits provided by the state (expenses and aid of all kinds), taking account on the one hand of various costs (schooling, etc.) and opportunity cost, and on the other hand of the resulting income accruing to the individuals concerned.

Researchers' concern has been mainly with higher education. In France, Horriere and Petit (1973a, 1973b), confining their attention to the ratio between benefits and 'immediate' levies, found that it is:

Positive for teachers, members of the professions, senior-and middle-grade executives, people employed in the commercial sector, the clergy, the army and the police.

Almost zero for shopkeepers, manufacturers, technicians, supervisory grades in industry, office employees, artisans and farmers.
Negative for blue-collar workers, wage-earning farm employees, service personnel and people not in gainful activity.

The category benefiting most from the redistributive effects of higher education is that of teachers, who receive benefits amounting to almost three times the contributions they pay. By contrast, the benefits of unskilled labourers represent only 30 per cent of their contributions.

In the United States, several studies have shown that low-income families derive less advantage from public expenditure on higher education than high-income families; in other words, the system redistributes the incomes of the poor in favour of the rich. But these studies are based on transverse data-in reality the benefits of higher education are felt later and are enjoyed by individuals who are not as yet paying taxes. Since statistics taking this into account are not available, we can construct only theoretical models. Everything depends on how progressive taxation is, on the magnitude of income differentials due to higher education, and the participation of different social categories in higher education. The more this participation depends on parents' income, the lower the intergenerational modality and the more public spending on higher education tends to favour social categories that are already favoured (Blaug, 1982).

External Resources

Developing countries receive capital in varying amounts from external sources, only a part of which consists of aid proper (donations and low-interest loans). This capital may be provided on a bilateral or multilateral basis, and is usually accompanied by personnel (experts, teaches) and equipment.

The cost of aid to the country that provides it is not equivalent to its value to the beneficiary, except in the case of direct transfers such as scholarships and grants. There are several reasons for this: the 'tied' nature of the aid: savings effected by the staff sent; and indirect imports of consumer goods-the more so since aid always entails accessory costs, for example housing and transport. It is estimated that only 20 per cent of technical assistance accrues to the country that receives it, the remainder benefiting companies and nationals of the country providing it.

Here, as in the economic field, it is not so much the amount of the resources that matters as their composition and the effectiveness with which they are deployed. The limited effects of aid show the persistence of this problem, which has many aspects: waste and corruption; low absorption capacity; lack of qualified personnel on both sides; non-integration of the various kinds of aid; lack of information, more often on the beneficiary's side than on the donor's; errors in planning, organization or execution; administrative inertia and delays; lack of continuity for political or other reasons; and the absence of evaluation.

From the economic angle, we may define effective aid as that which tends to make itself redundant. It must step up the production capacity of education rather than its consumption;

train teachers rather than teach pupils; improve content and methods; and assist in planning, management and research.

But efficacy can run counter to democratization, independence and cultural development, if the foreign teacher emphasizes the value of his own culture to the detriment of that of his host country, or if the use of sophisticated teaching materials increases technical, ideological and financial dependence on the countries and firms which provide both the hardware and the software concerned.

It would be naïve to imagine that aid is not a policy instrument of states and transnational companies. This does not mean that at a particular time and in a particular place national interests and external interests may not converage. But it does mean that a country should rely mainly on its people, and that it is in some cases preferable to refuse rather than accept aid (Le Thanh Khoi, 1976).

Education, Growth and Employment

As we have already seen, the impossibility of explaining economic growth only in terms of the factors of production (capital and labour), considered as homogeneous, has led economists to study the role of other factors: education, information, health, organization, etc.

No satisfactory method of measuring the contribution of education has yet been found; moreover, findings differ considerably from one study to another. None the less, its contribution is substantial in industrialized countries. This conclusion cannot, however, be transposed to developing countries, particularly as statistics for them are even less reliable. Education in developing countries may hinder as well

as help growth and development, as evidenced by graduate unemployment and the 'brain drain'.

Education and Economic Growth

The simplest method of measuring the effect of education on growth is to compare the development of education and that of the GNP over a given period. It is also the least satisfactory method, because correlation is not the same thing as causality. The expansion of education may be due to that of the GNP, or vice versa.

Direct Evaluation of the Effects of Education

This method consists of considering education as an investment for both society and the individual. We compare expenditure on education with the resulting increase in the product. But we must distinguish between the Marxist and the liberal view-points.

Marxists take as their starting-point the idea that complex work creates more value than simple work, and consequently increases the national income. This greater complexity of social work is achieved through public expenditure on education, which enables skilled workers to be trained. The coefficients measuring the degree of complexity of the work are calculated on the basis of either wage differences or expenditure on training, or again the length of training. None of these techniques is satisfactory-the argument is tautological, going round in circles and finishing at its point of departure. The effect of education on productivity is assumed, but not demonstrated; no account is taken of the incidence on productivity of natural abilities, the job itself, or the sector of activity.

However this may be, many authors regard the growth of the national income as being due to two factors; the growth of the labour force and the increase in its productivity. The latter results from providing the worker with more equipment and raising his level of education and qualifications (factors such as the organization of work are not taken into account).

Estimating that the average coefficient of complex work is 1.3 in relation to simple work (the coefficient increasing in accordance with the time spent on training) Komarov calculated that between 1960 and 1963, 23 per cent of the rise in the national income in the USSR was due to the increase in the labour force and 77 per cent was due to the rise in productivity. Productivity in turn was broken down into 38 per cent for the raising of the level of qualification (44,100 million roubles) and 39 per cent for improved equipment per worker. Over the same period, expenditure on education brought in four roubles (Kostanian, 1979 ,pp. 83-7).

Liberal economists take the view that wages reflect marginal productivity under conditions of perfect competition, which, like that of the Marxists, involves a circular argument (apart from the fact that such conditions are nowhere to be found). In the United States, Schultz has evaluated the stock of instruction of the working population on the basis of the cost of one year of studies at different levels, taking loss of potential earnings into account. The rate of return of this stock is estimated on the basis of earnings differentials according to levels of education in the period 1929-57, according to the hypothesis adopted for the return, the rise in the level of education accounted for between 17 per cent and 33 per cent of the increase in the national income.

This method is based on the theory of human capital, criticisms of which we have already discussed.

Scholars David, S., Desmond, K & Holmberg, B. have given good idea to the topic in the below referred material which may please be read.

David, S., Desmond, K & Holmberg, B. (1983)	Distance Education: International Perspectives, London, Croom Helms, pp.398-423.	3-4

3.6   Activities

1.   Discuss with your colleagues the significance of Economics of Distance Education and prepare a report for workshop.

2.   Visit the nearby Regional Centre of Allama Iqbal Open University. Ask the Regional Director to brief you on the Financing of Allama Iqbal Open University and develop notes for your peer group.

3.   Use of Educational Technology can affect the cost of open learning system.   Prepare a comparative statement of any open learning system using educational technology for its courses and that of conventional institution.

4.   Conduct a small scale survey in your community to know whether the low income families derive less advantage from public expenditure on higher education than high income families and also write a report on the survey.

5. "Decentralization makes it possible to gear education more closely to the interest of the population". Discuss this statement with your local Executive District Officer (Education). Whether District Government has contributed towards this or not and develop a report.

3.7   Exercise

Q.No.1   Discuss the term economics of distance education.

Q.No.2   Analyse the result of study of Wagner (1972) of the costs of the open university in relation to conventional British universities.

Q.No.3   Explain some of the factors that exercise a limiting influence on the validity of studies on financing of distance education.

Q.No.4   "Distance education programmes have tendency to become cheaper over time". Elaborate the statement.

Q.No.5   Use of technology can affect the cost of the distance education. How?

Q.No.6 $M_C = TC_{N.1} - TC_N$. Explain the formula.

Q.No.7   "The cost of aid to the country provides it is not usually equivalent to this value to the beneficiary". Discuss the implications on the education.

Q.No.9   Analyse the simplest method of measuring the effect of education on growth.

Q.No.10 Make viable – suggestions with respect to finances for making distance education more cost effective.

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ESTABLISHING DISTANCE EDUCATION INSTITUTION

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4. Establishing Distance Education Institution

4.1 Introduction

Planning usually refers to the activities categorized for long term future organization. While those activities which are referred to achievement of current activities are known as administering. In this one explores various people can do set about preparing themselves and their organizations for different possible but yet uncertain future. As plan is a scheme for accomplishing a purpose. Result of this is that most plans are denominated by descriptive factual summaries of current situation and perceived needs point usually little evidence of serious analysis of probable alternative future and consequently less exploration of possible of future options. Main focus of plan may be needs of students expectations of parents demands of world of work. Teachers perceptions, aims of the state.

Systematic analysis is the classic approach to planning. System approach has two parts. Strategic positioning –a review of the organizations current place, in its own, external and internal, working control. 2). System analysis–a step–by–step examination of the organizations objective and the various processes by which it currently seeks to achieve these. Systems analysis begins with the defining objectives to be achieved moves through alternative ways of reaching these objectives, cost and resources required to implement the objectives, Contingency.

Evaluation is integral part of planning it is a process by which one can have powerful control over administration but for this it is necessary that reliable and valid assessment procedures may be made integral part of planning.

4.2 Objectives

After studying this unit it is hoped that you be able to:

1. Define planning.

2. Discuss the significance of objectives in planning.

3. Differentiate between long term and short term planning.

4. Design administrative procedures

5. Evaluate the planning process.

4.3 Planning Phases

Planning is a rational approach to accomplishing an objective, the process can be illustrated as shown in Figure 4.1. In this diagram, progress (toward more sales, more profits, lower costs, and so forth) is on the vertical axis, and time is one the horizontal axis. Indicates where we are (at t_o), and y where we want to be – a goal for the future (at t_n). Since we ordinarily have to study where we are in advance of t_o, particularly with the lag of accounting and statistical data, we may actually have to start our study of the future at X_1 (at t-n). The line xy indicates the decision path, which will take us from x to y.

If the future was completely certain, the line xy would be relatively easy to draw, however, in actuality, a myriad, of factors in the environment in which a plan is to operate may push events away from the or toward the desired goal. These are the planning premises. Again, because we cannot forecast or consider everything, we try to develop our path from x to y in the light of the most critical premises.

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The essential logic of planning applies regardless of the time interval between.
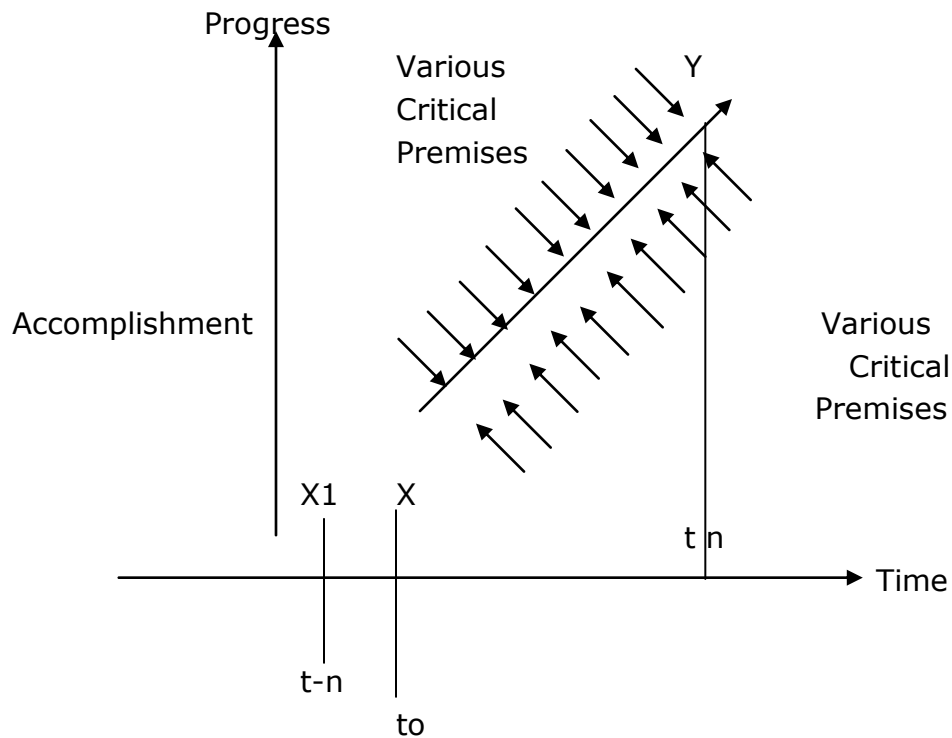
Figure 4.1 Progress time, and critical planning premises.

t_o and t_n, whether 5 minute or 20 years. However the clarity of premises, the attainability of goals, and the lessening of other planning complexities are almost certain to be inversely related to the time span.

Decision making may be the easiest part of planning, although it involves technique of evaluations and approach and considerable skill in applying these. The real difficulties arise primarily form sharpening and giving meaning to objective (preferably verifiable), spelling out and giving meaning to critical premises, seeing the nature and relationship of the

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strengths and weaknesses of alternatives, and communicating goals and premises to those throughout the enterprise who must plan.

The Planning Period: Long-Range Planning.

Shall plans be for short period or a long one? How shall short-range plans be coordinated with long-range plans? These questions suggest a multiple horizon of planning-that, in some cases, planning a week in advance may be ample and that in others, the desirable period may be a number of years. Even within the same firm at the same time, various planning period may exist for various matters.

In 1962, a study by the American management associations reported that 5 years seemed to be the norm of long-range planning although planning periods ranging to 25 years and more did exist. In analyzing case studies, the AMA report concluded that companies seemed to base their period on a future that can reasonably be anticipated. Yet, in 1973, a study made for the planning Executives Institute and involving a sample of nearly 400 firms disclosed that 86 percent of the firms having long-range plans used a time period of 3 to 5 years, and only 1 percent planned for longer than 10 years. Moreover, it was surprising that 19 percent of the firms surveyed had no long-range plans.

There should be some logic in selecting the right time range for company planning. In general, since planning and the forecasting that underlies it are costly, a company should probably not plan for a longer period that is economically justifiable; yet it is risky to plan for a shorter period. The answer is to the right planning period seems to lie in the "commitment principle". Logical planning encompasses z period of time in the

future necessary to foresee, as well as possible, the fulfillment of commitments involved in decisions made today.

Perhaps the most striking applications of this principle is the setting of a planning period long enough to anticipate the recovery of costs sunk in a course of action. But since other things than costs can be committed for various lengths of time, and because a commitment to spend often precedes an expenditure and may be as unchangeable as sunk costs, it seems inadequate to refer to recovery of costs alone. Thus a company may commit itself, for varying lengths of time, to a personnel policy, such as promotions from within or retirement at age 65, or to other policies or programs involving commitments of direction and not immediately measurable in terms of dollars.

One can readily grasp the logic of planning for enough in the future to foresee, as well as possible, the recovery of capital sunk in a building or a machine. Since capital is the lifeblood of an enterprise and is normally limited in relation to the firm's needs, its expenditure must be accompanied by a reasonable possibility of recovering it, plus a return on investment, a though operations. For example, when lever brothers sank $45 million into a new factory on the West Coast, they, in effect, decided that the detergent business would permit the recovery of this investment over a period of time. If this period was 20 years, then logically the plans should have been based upon a projections of business for such a time. Of course, they might have introduced some flexibility and reduced their risk (as they did) by spending extra funds to make the plant useful for other purposes.

What the commitment principle implies is that long-range planning is not really planning for future decision but rather

planning of the future impact of today's decisions. In other words, a decision is a commitment, normally of funds, direction of action, or reputations. And decisions lie at the core of planning. While studies and analysis precede decisions, any type of plan implies that some decision has been made. Indeed, a plan does not really exist as such until a decision is made.

Under these circumstances, then, the state manager will recognize the validity of gearing longer-term considerations into present decisions. To do otherwise is to overlook the basic nature of both planning and decision making.

Applications of the commitment principle

There is not uniform or arbitrary length of time for which a company should plan or for which a given programme or any of its parts should be planned. An airplane company embarking on a new commercial jet aircraft project should probably plan this programme some 12 years ahead, with 5 or 6 years for conception, engineering and development and as many more years for production and sales in order to recoup total costs and make a reasonable profit. An instrument manufacturer with a product already developed might need to plan revenues and expenses only months ahead, since this may represent the cycle of raw material acquisition productions, inventorying sales, and collection of accounts. But the same company might wish to see much further into the future before assuming a lease for specialized manufacturing facilities, undertaking a program of management training, or developing and promoting a new product.

If a commitment appears to a manager to be for a longer period than can be foreseen with reasonable accuracy, and if it is not feasible to build enough flexibility reasonable cost into a plan, a manager may decide arbitrarily to shorten the period of

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commitment. In many cases, particularly those involving capital expenditures, the actual recovery of cost is determined by accounting or tax practices. In these cases it is possible to decide (Regardless of whether the tax authorities would agree for tax purposes to write off an investment faster than would normally be the case. A West Coast aerospace company president was faced a few years ago with the purchase of some special purpose machinery for performance under a government contract. The machinery would normally be written off in 10 years, but, in his opinion, the contract would probably last only 2 years, and the machinery had not apparent use for other purposes, he argued correctly and logically (but not successfully) with government contracting officers that he should be allowed to include in his costs a 2-years write-off of the machinery by doing so, he would shorten the commitment period for a highly inflexible investment to the length of time in which he could foresee fulfillment of his commitment.

The planning period will be longer or shorter depending upon the extent to which flexibility can be but into the plan. Thus, a company might be willing to lease a factory for 10 years, even though it is impracticable to plan for longer than 3, because of the possibility of subleasing on a 1-or 2-years notice. But where there is not practicable flexibility, or where flexibility is too costly it is desired to plan for the entire period of commitment. This almost surely explains why certain major oil companies have led the nation's business management in the excellence of their log-range planning and the many years they have been doing, it, since there is probably no investment quite so inflexibly committed as that of developing an oil field, building pipelines, and constraining refinery facilities.

Although this principle indicates that various plans call for various planning periods, those used are often compromises,

the differences are shown in Figure 4.2. The short range tends to be selected to conform to quarters or a year because of the practical need for making plans agree with accounting periods. The somewhat arbitrary selection of 5 years or so for the long range is often based on the belief degree of uncertainty over longer periods.

TYPICAL KINDS OF THE COMMITMENTS

Materials procurement					
Operating expanse budget					
Capital budget					
Engineering recruitment					
Major financing					
		New product development			
		Plant production facilities.			
years	1	2	3	4	5

Figure 4.2 planning areas and time periods. Various management decision areas typically involve planning ahead of different periods of time. These periods also vary according to the kind of business. For instance. A large public utility may plan new power production plants 25 or 30 years into the future, while a small garment manufacturer may plan new productions facilities only one year ahead.

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Comprehensive planning

As the commitment principle indicates, there may be different time spans for any plan and planning decision, depending on the nature of the commitment involved. Therefore, it has never been logical to look at short-range medium-range, and log-range planning as essentially different processes. As pointed out above, planning is planning, regardless of the time span of the commitment involved.

As a result, an increasing number of companies and other organization have been characterizing their major enterprise planning effort as simply "comprehensive" or "strategic" planning. This makes considerable sense because the core of major overall planning is setting major objectives and determining the basic direction to be taken in accomplishing them. It is likely, therefore, that such planning is comprehensive in nature and oriented to strategic planning.

Flexibility in Planning

The above discussion has indicated that the commitment principle must be considered in the light of flexibility of planning. If plans can be changed to meet future requirements which either were not or could not be foreseen, the planning period can be shorter then otherwise would be the case. Because of future uncertainties and possible error in even the most expert forecast, the ideal of planning is to be flexible-the ability to change direction when forced to do so by unexpected events, without undue cost.

Building Flexibility into Plans: the Flexibility Principle

The more that flexibility can be built into plans, the less the danger of losses incurred by unexpected even but the cost

of flexibility should be weighed against the risks involved in future commitments made.

The flexibility principle applies to the building into plans of a practical ability to change directions. As in the case noted above in the discussion of the commitment principle Lever Brothers did actually spend some $5 million in extra construction cost in building a soap and detergent factory so that it could , if the company later decided to do so, be changed into a chemical manufacturing plant, it is not unusual, also, for companies to spend more for movable partitions that for fixed partitions in office building to maintain the flexibility of more easily changing space arrangements. Likewise, a company introducing a new product might use temporary tooling rather than more expensive permanent tooling, even though manufacturing costs are increased thereby, in order to avoid the risk of larger lose if the product does not succeed on the market.

To many managers, flexibility is the most important principle of planning. The ability to change a plan without undue cost or friction to detour, to keep moving toward a goal despite changes in environment or even failure of plans, has great value. Flexibility is critical when the commitment is great and cannot be discharged in a short time (for example, in retrieving outlays for major capital facilities plus return). But is almost invariably true that built– in flexibility involves cost, and the most inflexibility plan is likely to be the least costly if later events prove that the ability to change direction was unnecessary.

Flexibility is possible only within limits. In the first place, a decision cannot always be put off long enough to assure its rightness. This is exemplified by the decision of the Mobil Oil Company to build a refinery in the Pacific Northwest. The financial point of no return was reached several years before the

management could be completely certain that this would be an economical venture.

In the second place, built-in flexibility of plans may be so expensive that the benefits of hedging may not be worth the cost. Whether a company spends extra money to modify a special purpose plant so that it can be used for other purposes, if the original program is not successful will depend on the costs of doing so and the risks to be avoided. Some companies have felt, as apparently the top management of Montgomery Ward did for several years after World War II, that they could buy flexibility by keeping their resources in that most flexible of all assets-cash-only to have Sears, Roebuck step forward with aggressive expenditures and capture much of the market.

Under the leadership of Sewell Avery, Montgomery Ward built up cash reserves exceeding $250 million by 1953, but saw its share of business fall from 40 percent in 1942 to 28 percent in 1952. Sears, Roebuck, on the other hand, under the leadership of Robert E. Wood, adopted an expansionist program and increased its share of the business from approximately 50 to 66 percent in the same period. Sears also increased its profits relative to Ward's. Although Sears stock rose during this period, that of Ward fell. Had a depression occurred during this immediate postwar period, however, Montgomery Ward would have been in an excellent position to capitalize on its liquidity, and Sears might have been in a very vulnerable position.

A third major limit to building flexibility into plans is the fact that there are often cases where flexibility either cannot be built into plans at all or can be only with such great difficulty as to be impracticable. A special purpose machine may be useful only to produce or package a particular product, and to change it for other uses would be impracticable. An oil refinery can

hardly be used for any other purpose than refining petroleum, and there is no reasonable possibility of doing anything to make it useful for any other purpose. These should be compared with a typical manufacturing plant or warehouse that might be used for a number of purposes.

Reviewing plans Regularly: The Principle of Navigational Change.

The more planning decisions commit for the future, the more important it is that managers periodically check on events and expectations and redraw plans as necessary to maintain a course toward a desired goal. Unlike the flexibility principle, which applies to the adaptability built into plans themselves, this principle applies to flexibility in the planning process. Built-in flexibility does not automatically revise plans; manages, like navigators, must continually check the course and redraw plans to meet a desired goal.

Coordination Short with long-Range plans

Often short-range plans are made without reference to long-range. This is plainly a serious error. The importance of integrating the two can hardly be overemphasized, and no short-run plan should be made unless it contributes to the achievement of the relevant long-range plan. Many of the wastes of planning arise form decisions on immediate situations that fail to consider their effect on more remote objectives.

Sometimes these short-range decisions not only fail to contribute to a long-range plan but actually impede or require changes in the long-range plan. For example if a small company accepts a large order without reckoning the effect on productive capacity or cash position, it may so hamper its future ability to finance an orderly expansion as to require a complex reorientations of its long-range program, or, in another

company, the urgency of obtaining small additions to plant may utilize vacant property so haphazardly as to what its longer-range use as the site for a large new plant. In other instances, the decision of plant superintendent to discharge workers without adequate cause may interfere with the company's longer-range objective of developing a fair and successful personnel program.

Responsible managers should continually scrutinize immediate decisions to ascertain whether they contribute to long-range programs, and subordinate managers should be regularly briefed on company long-range plans so that they will make consistent short-range decisions. It is far easier to do this than to correct inconsistencies, specially since short-term commitments tend to engender further commitments along the same line.

Developments in Traditional Institutions: Towards a Mixed Mode Approach

Governments, the world over are seeking to lower the unit costs of education. At times, this is accompanied by pressure to increase the number of places available. In such cases, total expenditure on education may rise even though the unit cost falls. At other times, cuts are accompanied by falling rolls. However, even here, the pressure is on to reduce unit costs. As unit costs fall, so traditional institutions have to seek more efficient ways of teaching students.

Distance educators have never had a monopoly on media. Educational technology of one form or another has been used in education for years, as an adjunct to face-to-face teaching. Hawkdrige (1983) provided a snap-shot of its widespread use in education at the beginning of the 1980s. Technology has also been used by a wide variety of profiders of open learning and

flexible training. Precisely what 'open learning' is, is a matter of debate but to the extent that it has been used to describe a form of technology-based training 'providing choice at the level of the individual learner', it has shown itself to be a cost-effective way of training staff and improving their effectiveness, and of embedding learning within organizations.   At the European level, the importance of what the European Commission calls 'flexible and distance learning for meeting the forecast shortage in skills, and the role of technology in its provision, is a major concern in the Commission.

The potential value of technology-based approaches to education and training is therefore acknowledged. By the mid-1980s, different authors discussed the ways in which the efficiency of UK universities could be improved, identified increasing class sizes, and adopting programmed-independent study, programmed learning, the use of learning packages, and distance learning. More recently a Working Party of the Committee of Scottish University Principals (CSUP) has reported. Pointing to the new emphasis on quality and performance in teaching, the perception that higher education should serve the needs of the economy more effectively, the demand that it develop and sustain closer links with industry, and the pressing need to increase efficiency and provide economies in the processes of teaching and learning, the report draws attention to the advantages of and potential for using technology-based teaching and learning and distance learning. While traditional methods will continue to be used, resource-based learning and self-instructional materials, at times packaged into courses suitable for distance learning, will help [traditional] institutions provide a more open system and achieve the necessary economies of scale to cope with expansion in particular distance and computer-based learning methods will enable them to develop 'asnychronous location-

independent teaching'. The creation of distance learning courses by consortia, and the adoption of existing distance education courses from another institution, can both complement campus teaching and enable additional courses to be offered.

The University College of Southern Queensland approached the same outcome from a rather different direction. The College has adopted a mixed mode approach which integrates 'conventional face-to-face teaching and distance education techniques' (Taylor and White, 1991: Executive summary). As Taylor and White explain:

> The concept of mixed mode seems to have when Students studying full-time in the on-campus mode found it useful to undertake a number of units of study via the distance education mode to cater for timetable clashes and/or personal reference. The success of the distance education mode …. Led to initiatives which resulted in an integration of the aforementioned modes of study. Thus instructional materials originally prepared for use in the distance education mode have been adapted to supplement and modify conventional on-campus teaching (p.1).

The College had already developed and was offering distance courses (i.e. was a dual mode institution). This enabled it to take the decision to provide the packages to on-campus students and, at the same time, reduce by about 50 per cent the amount of face-to-face teaching content. Not surprisingly Taylor and White indicate some resistance to the changes, given a survey that indicated that the teaching staff had a distinct preference for conventional on-campus teaching.

On the other hand, the students favoured the mixed mode approach.

It seems clear that traditional institutions have an incentive to adopt technology-based and distance learning methods to teach on-campus students, expand their provision off-campus, and cope with general expansion both on-and off-campus. Dual mode institutions which already produce distance learning materials have an incentive to use them on campus as well as. The danger is, of course, that both dual and mixed mode systems merely 'added on' distance learning – which is why some systems fail to achieve a quality product. I would suggest, however, that mixed mode institutions are most likely to succeed, provided they adopt a strategic, holistic approach towards open learning, choosing teaching strategies to meet the needs of their students, and enabling students to move between the various modes at will.

Resources

The early literature on the economics of distance education stressed the cost-efficiency of distance education relative to traditional, classroom-based face-to-face education. In fact, as subsequent studies have shown, distance education is not necessarily cheaper than traditional education. It all depends on how the systems are designed, and how many students there are being taught. As Rumble, G. (1992, p.36) points out, relatively few studies compared the cost of distance education with the increasing number of part-time day and evening courses, and correspondence and distance education versions of courses, to be found in 'traditional' universities. A study by Muta and Sakamoto (1989), however, showed that the revenue costs of the Japanese University of the Air, while lower than the costs of traditional provision, were higher than the costs of both evening and correspondence programmes at

private Japanese universities. Distance provision within a dual or mixed-mode context can be very cost-efficient relative to single-mode distance education. The significance of these figures is not that this will necessarily be the case everywhere, but that in looking at the economic advantages of distance education, one needs to compare the costs of single-mode distance teaching institutions with other alternatives to traditional education, including dual-and mixed-mode solutions.

Taylor and White (1991) reported on the costs of mixed-mode provision at the University College of Southern Queensland, in comparison with that of its off-campus distance and on-campus traditional face-to-face programmes. The relative costs of the different modes are influenced by 'the basic philosophy of the University College … that approximately equal budget allocations should be made to the teaching of all students, notwithstanding whether they are taught in an on-or off-campus mode' (p.27), so that the teaching cost per learner of three modes is comparable (on-campus, Australian $700, distance mode off-campus $693, and mixed mode on campus-$803 – the latter assuming no cost recovery from students for the materials provided them) (Taylor and White, p. 33; Rumble, 1992, p. 37). However, the amount of face-to-face teaching in the off-campus (23.8 hours) and on-campus mixed-mode (28.2 hours) remains quite high in comparison with distance programmes in other institutions, and could probably be reduced by half to save perhaps 15 per cent of the total cost of each of these two modes. It seems clear that mixed mode provision need be no more expensive than traditional face-to-face provision, particularly if the costs of developing and producing the materials are also being off-set by their use in off-campus distance programmes.

Distance teaching, like campus-based teaching, can be as cheap or as expensive as is wished. He also points out that campus based institutions 'will discover that if they choose to teach in the distance mode as well as face to face they will first have to overcome the hurdle of producing quality multimedia instructional materials… if their efforts are to be taken seriously… to compete will be so costly and time consuming on their part as to require a significant redistribution teaching universities have an existing lead in the quality of their products and, I would add, in relevant expertise, and that campus-based universities entering the field 'will have to divert a lot of resources to set up the necessary distance teaching infrastructure or they will market a product of inferior quality'. While this is true if their purpose is to compete at a technological level, by trying to emulate the quality and breadth of materials of distance teaching institutions, many part-time students will settle for poorer quality materials coupled with a reasonably high level of face-to-face teaching. This may well be what the students want-many UK Open University students ask for increased levels of tuition – but it will, of course, tend to restrict the geographical reach of the programme. Nevertheless, provider-led estimation of quality are not the final determinant of sales. Ultimately what matters is the customer's perception.

Strategies for the future

Campus-based institutions are beginning to widen their markets by teaching off-campus. It follows that institutions teaching at a distance, whether single – or existing dual mode, are facing increased competition. Most campus-based institutions have a wide range of courses which they can turn into distance-taught versions relatively cheaply. The quality may not be very good, but in the competition for students this may not matter much. In terms of recruiting students, the institution's 'brand name' may well be more important than the quality of its distance teaching products relative to other, better, distance providers. Such competition is serious of distance teaching institutions. While many of them appear monopolistic, their problem is one of 'relative superiority' (Ohmae, 1983, p.50). Relative superiority arises where one institution or a group of them have a dominant market share (as traditional institutions have in respect of on-campus teaching). Such institutions can afford to enter a new market (distance education), offering the incentive of low prices to would be students. They can do this because their distance education offering is often small in scale. One or two such providers are unlikely to have much impact on a monopoly supplier, but as the number of providers increases, and as they grow bigger, so they can eat into the latter's monopoly position. The latter's ability to compete is made difficult by the fact that they are not normally competing against the mixed mode institutions' primary markets (on-campus studies), but in their secondary markets (off-campus studies). They can therefore be undercut by dual mode institutions using marginal costing as a basis for placing (p.52). While there are various strategic options open to distance education institutions to counter this threat (see Rumble, 1992, pp.41-3), apart from competing on quality one of the more fruitful counters would be to gain the advantages of dual mode institutions by taking over or setting up their own

campus-based operations, and then by offering real customer choice in the form of mixed mode provision.

Pascale (1991, p.11), commenting on Peters and Waterman's book, made the point that 'nothing fails like success../ great strengths are inevitably the root of weakness. … the golden adage "Stick to your knitting" becomes an epitaph. This is because our fixation on "what is" obscures that other aggravating necessity of worrying about "what isn't "and might be". Of the forty three excellent companies which Peters and Waterman identified in 1982 as having demonstrated at least twenty years of superiority over their competitors, financially and as industry leaders in innovation and adaptability, two-third had slipped from the pinnacle only five years later (Pascale, 1991, p.16).

The distance teaching universities have been a remarkable success. But if one defines the business one is in as 'education' rather than 'distance education' or 'traditional education', then a rather different perspective emerges, in which one uses the methods of both modes to meet the needs of their learners. There is little doubt that the world of education is changing. The methods perfected by distance educators are now being used in other settings – in flexible and open learning, and within the campus, to cope with expansion, and as a means of meeting the needs of more and more varied customer bases. The synergy arising from a mixed mode approach seems obvious. As the differences between face-to-face and distance education providers becomes less obvious, it becomes more attractive to contemplate the merger of the modes, to their mutual benefit. The age of the single mode institution (and indeed of the dual mode one) may well be coming to an end.

In order to comprehend further the concept of distance education, please read the below referred materials.

Anthony, K. & Greville Rumble eds (1981)	Distance Teaching for Higher and Adult Education London, the Open University Press, pp.200-204	4-2
Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.86-92	4-3

4.4   Objectives/Goals

A statement of aims and objectives clearly defining the purpose of the institution is essential as a blueprint for the Plan of Operation.

Statements of objectives vary widely in scope according to the purpose of the institution. Two contrasting examples can be seen in Botswana and Tanzania. In Botswana the aim of the Teacher's Training College, established at Francistown in 1968, was to improve the quality of teaching in primary schools teachers in permanent positions who had not any teacher training. This was a specific aim planned to be completed within five years and, therefore, it was for a terminal project. In Tanzania the scope of the aim was much wider. In 1970 Tanzania decided to establish a permanent National Correspondence Institution to help achieve mass adult education. The aim and objectives were:

a)   to help Tanzanians to understand the nation's policies and, thereby, be equipped to participate more fully in carrying out national policies and programmes;

b) to equip Tanzanians to fill jobs which meet the manpower needs of the country; and

c) to supplement efforts being made by leaders and adult educators in various departments of Government to bring economic and social development in rural areas.

Such statements of aims and objectives are briefs for those given the responsibility of preparing a plan of operation to implement a government's decision to establish an institution in accordance with national philosophy and needs; they must be precise and explicit enumerating, without ambiguity, the overall aim of the institution and the specific objectives to be achieved so as to fulfill the aim.

For further details, please read the below referred book:

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.92-95	4-4

4.5   Development Process

To ensure smooth and uninterrupted progress in establishing such an institution, or teaching service, a programme of action must be prepared and recorded in a plan of operation. The preparation of this programme will require making a number of decisions and fixing realistic targets and deadlines. Here again the expertise of the practitioner in correspondence education is needed. Sufficient time for adequate and careful preparation is essential; deadlines can be estimated only in relation to the availability of resources for the preparation and production of teaching material.

The plan of operation usually deals with the following:

- location of the institution or service;
- line of communication and responsibility;
- staff recruiting and training
- educational target;
- course recognition;
- equipment and supplies;
- administrative procedures and
- finance and estimates on costs.

The plan of operation is the blue point for those whose responsibility is to establish the institution. The plans and time schedules it contains must be governed by reasonable expectations of what can be achieved with the available resources and the circumstances within which it must be implemented. It must be a document aiming at a practical reality, not a theoretical ideal. If its programme cannot be achieved, a discouraging impression of failure arises, whereas what has been achieved in the circumstances may have been encouragingly successful. It is better to found an institution on a limited programme within which initial experience can be gained, rather than on a too ambitious target which can lead to unreasonable pressure and sometimes to confusion. The staff appointed usually have little or no experience of correspondence teaching or administering correspondence education and by the time the institution is established, and working efficiently, they will have acquired techniques and routines which will enable them to develop an expanded programme smoothly.

To comprehend the topic a detailed point of view of 'Development Process' given in the below referred material is very useful which may be read.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.95-98	4-5

4.5.1 Strategies

Various strategies needed to be adopted in the development process. The planner has to look firstly the location for the institution, communication styles, staff establishment and development of materials to be used. Then, the planner should design the accommodation and general layout of the institution.

(a) Location

The location of the institution or service and the line of communication and responsibility are interlocked, and it will depend upon the nature and scope of the institution. Sometimes it will be an independent autonomous institution; sometimes it will be a department of a ministry of education, a university, or an institute of adult education; sometimes it will be a department of a college of education or a technical college.

There is a tendency, when establishing correspondence education to centralize it in one institution. We see this in the development of institutions known as correspondence course units, or national correspondence institutions. This centralization usually arises from the belief that all instruction involving the techniques of correspondence teaching and administering correspondence education must be handled by the one institution specializing in this method. Also, if the institution establishes a production unit to print its teaching material, it is usually considered more economical

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to install the equipment in one place. These reasons, however, are not valid in all cases, there may be more suitable. It is customary for correspondence teaching departments for university studies to be established within universities as in many American, Australian, and Indian universities.   To locate teacher education in colleges of education, and technical training in technical colleges would have many advantages.

Colleges of education are concerned with the education and training of teachers. They are staffed by educators trained and experienced in the principles and practices of teaching, thus fully qualified to prepare teaching material and to teach correspondence students. Although it would be necessary to increase the training college's staff for both resident and correspondence students, it would facilitate the coordination of pre-service, in-service and refresher courses of training through resident and correspondence teaching. If the projected correspondence teaching service is for the purpose of teacher training and education then it may be best to locate it within a college of education where the expertise required is centralized and where the service can be developed as part of the entire college's programme. Technical colleges have the expertise for the development of technical training by correspondence, and they also have the specially equipped laboratories and workshops to accommodate correspondence students for short resident practical work sessions.

Increasing emphasis is being placed today on using combination methods in order to achieve the best educational result so that it is desirable to bring correspondence teaching out of its traditional isolation. It

is one of many teaching methods and experience has shown that it has much to contribute to the total system of education. Decentralization can give more educators the opportunity to gain expertise in correspondence teaching as an added skill.

Many specialized teaching institutions have facilities for production of duplicated or printed material, or, if additional equipment has to be installed, it does not necessarily mean that its decentralization increases the total amount required.

When considering geographical location of the correspondence education institution both the advantages and the disadvantages of possible alternatives must be investigated and weighed against each other. Constant and direct contact with experienced specialists and the use of established equipment and services can all greatly contribute to the correspondence teaching service's efficiency. When the same educators are responsible for both resident and correspondence students, so that they are taught the same syllabi by the same teachers, and examined by the same examination, it becomes possible to maintain uniform standards of instruction and achievement, and to make valid comparison of performance. If, however, the correspondence teaching service is to be located in a resident institution, teaching loads must be realistic in allowing time for the efficient teaching of both resident and correspondence students.

If the institution is to provide a varied programme involving any disciplines and different levels it is impossible for it to have full-time staff fully qualified and in all aspects of its work. A nucleus of full-time staff will

organize and supervise the work of the institution, but they will need part-time help in some specialized areas. Consequently it is essential that the site of a large correspondence teaching institution with a varied programme should be close to other educational institutions such as a university, college of education, technical college, business college, schools and libraries. If it is to provide courses for manpower training, consultations with ministries and institutes of such specialties as management, finance and transport may be needed. An example of a national correspondence institution placed in a large educational and commercial centre is Tanzania's National Correspondence Institution in Dares Salaam. The fact that the headquarters of a correspondence teaching institution are in a large city does not mean that it serves only, or even mainly that area. Of the 10,000 students who had enrolled in Tanzania's National Correspondence Institution in the first two years of its operation only eight per cent lived in the city of Dar es Salaam, the remaining ninety-two per cent were dispersed throughout the nation as far as its coastal and lake islands. This is an example of a centralized institution in an urban site being truly a national institution.

(b)   Communication and Responsibility

The line of communication and responsibility will be largely determined by the location of the institution. The head of the correspondence teaching establishment may be responsible in the case of an independent institution to a ministry, or, if established within another educational institution, he may be responsible to a university senate, board or council, a director of an institute or a college principal.

To the head will be entrusted the organization and running of the institution. It will be his duty to report to the authority to whom he is responsible on its service and progress.

Within the institution the line of communication and responsibility will be through section leaders of sub-section.

Sub-sections will report to section leaders, and the section leaders to the head, so that he will be conversant with the situation in each section of the institution, thus enabling him, when in consultation with section leaders, to make informed policy decisions.

c)   Staff Establishment

The staff establishment is planned on the basis of the interdependent sections of the institution. There will be variations according to the location of the institution, or service. Correspondence institutions are usually established to provide mass education and their tendency is to grow rapidly beyond anticipated demand.

The positions of head and deputy head provide for continuous leadership in policy making and development. In the day-to-day running of the institution four experienced and responsible assistants co-ordinate the activities of different sections of the institution. As the term assistant has a different meaning in different organizations, the title "Educational Assistant" is defined, for the purpose of this discussion, as a highly qualified and experienced educator who can contribute ideas, initiate plans' make decisions and guide staff engaged in carrying out the educational programme. One educational

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assistant is responsible to the head for supervision of the whole operation of the preparation of teaching material, the other for supervising the whole process of teaching the students. Together they are responsible to the head for developing and maintaining an educational programme, which fulfils the objectives of the institution. An experienced counselor supervises, a student counseling section and work closely with the teaching sections. An experienced administrative assistant is responsible to the head for management and administration of the ancillary services. Each of these four equally responsible senior officers leads a group of staff. The actual number in each group will finally depend on the size of the educational programme, and the number of active students.

The appointment of staff, to implement the plan of operation, must be planned so that the necessary staff becomes available as each step is taken in building the institution.

Any institution teaching by correspondence will have three basic tasks.
1.   the preparation of the teaching material.

2.   the distribution of teaching material

3.   the correction of students written and practical work.

The student service of enrolment and correction cannot come into operation until there is at least one correspondence course ready for the enrolment of students. The ideal time for enrolment is when the whole course is written and printed or duplicated, so that there will be no delay in the students progress once they can be enrolled. Certainly no students can be enrolled until the

whole course is written and illustrated, at least half of it duplicated and no interruption to further production likely. Usually there is great pressure for enrolment once it is known that a correspondence teaching institution is being established. It is, therefore, unwise to have premature publicity, which will lead to the frustration of students who must wait for enrolment. Again, ideally, there should be no publicity until at least one course is ready for release otherwise the necessity to answer many enquiries made in person, by telephone and by letter only delays the preparation work.

At least one whole year should be allowed for the writing and production of the first subject, or subjects. Therefore, the first staff to be appointed should be only those people required for this preparation. Although many of the staff appointed may be experienced teachers and administrators. They and the ancillary staff may not have had previous experience of the particular techniques of teaching by correspondence and administering correspondence education. Consequently the preparation period will techniques of teaching by involving staff training? If the staff appointed for this period is for their previous experience in teaching by correspondence, their local counterparts should be appointed and come on duty at the same time for the following two reasons:

(a)   the expatriate staff need the guidance of their local counterparts to ensure that what they plan is acceptable to the people to be served by the institution;

(b)   the counterpart staff should he involved in the decision making for the institution for which they

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will soon have to assume full responsibility. Only their participation in the process of building the institution will make it possible for them fully to understand its operation.

Planning for the appointment of additional staff will depend on the response in enrolment figures to the release of initial subjects, and the estimated schedule for the release of further courses. Below the head, deputy head, and their educational and administrative assistants, probably all staff will need increasing by 100% by the beginning of the third year. This staff should be budgeted for appointed, and on duty before the volume of work grows so great that bottlenecks in the work in various sections delay the service to students. In-service training continues as newly appointed staff come in on duty.

In building an institution, which is to teach by correspondence, it must be realized that students cannot be enrolled and then not taught regularly. This situation would be analogous to students coming at an appointed time for face-to-face teaching and not supplying them with a teacher.

By the end of the second year an institution teaching by correspondence should be fully staffed for the needs of its third year, fully equipped, and fully operative. If the first two years are well planned, and the plans are fully carried out the institution should be running smoothly and be ready for further development in its third year. It will probably grow in size and importance to a point which its planners could not have envisaged, that is what usually occurs.

The staff appointed to implement the plan of operation in the first year are all needed on duty immediately and at the same time, because they are all required to initiate basic activities which should begin simultaneously if the institution is to be established without delays arising form being unable to proceed form one step to the next. Concurrently with the preparation of the teaching material the use of accommodation must be planned, equipment chosen, purchased and installed, materials secured and procedures designed. In addition, the administration must be planning the procedures for implementing the second stage of the institution.

(d)   Preparation for the teaching Materials

The teaching material to be prepared includes all the material, printed or recorded, for whatever channels of communication are to be used in teaching the students-illustrated correspondence courses, radio broadcasts, television tape-recordings, films and slides. The choice of media must be related to the circumstances in which both the institution and its students must work. The cost of production must be within the financial resources of the institution. The cost of the study material must be within the student's reach. Pen and paper is still the least costly equipment for the student, and it may well be all he can afford. The use of radio and television depends on facilities for transmission and access to receivers. The use of tapes makes oral communication between correspondence students and their tutors possible, but, while it is not difficult for the institution to prepare cassettes, it may be impossible for the student to have access to a cassette player. When deciding upon the media to be used, it must be realised that the combination of media requiring the student to have

technical equipment may limit the number of people who can receive instruction from the institution. For this reason the traditional printed correspondence course with illustrations is often still the sole medium of instruction, although supporting radio programmes are becoming more frequent.

The writing of the correspondence courses should begin as soon as the staff, appointed for the first year of preparation, come on duty. Writers, either full or part-time, are appointed, syllabi determined and writers given continuous in-service training in the techniques of correspondence teaching. The responsibility for this training will rest upon the head of the institution, or an educational assistant, who will need to have had some correspondence teaching experience. If the two educational assistants have had experience in teaching by correspondence the task will be easier, but, if not, as educators, they will not find it difficult to apply their knowledge and experience of methods of teaching and learning to the situation of correspondence teaching.

If the appointed writers are training teachers, who are teaching the subjects they are writing for, their task will be based on knowledge of the subject matter and their teaching experience, and, again, the techniques of teaching by correspondence will come more readily than if the writers have had no teaching experience. In some specialized technical fields, however, writers with the required technical knowledge but without teaching experience have to be appointed. In such cases all the educational staff must work much more closely with the writers.

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At preliminary briefing sessions the head, educational assistants, radio tutor (if a supporting radio programme is to be prepared), and the editor should be present. All are aware of the content of the syllabus and can contribute to the discussion of planning the approach and presentation (for all the matters to be considered when planning a course to be taught by correspondence).

It is helpful to prepare a brief and simple Guide for Writers. The most effective guidance will come, however, after a writer has made his first attempt at writing and so becomes aware of the challenges and problems. His first lesson should be read immediately it is delivered. If there is delay he will feel unsure of himself, and delay writing further, or may go on writing lesson after lesson perpetuating unsatisfactory forms which will require later revision of all his work at great cost of time both to him and the institution. Immediate reading and consultation will enable the institution to show the writer any unsatisfactory features. He can immediately revise this one piece of work and submit it again. As soon as he knows his presentation is acceptable he will continue with confidence, and the course when finally completed may need little editing. Time spent in guidance at the beginning together with continuous consultation with the educational staff of the institution, will save much time of both the writer and the editor.

The main difficulty in teaching by correspondence is that many writers feel they have only to write uninterrupted pages of factual information. The main task for the institution in guiding writers is to show them, by demonstration and example, that the same principles of teaching and learning apply in correspondence teaching

as in face-to-face teaching. Students must be active participants in other ways than in passive, uninterrupted reading, from which their attention will soon wander. Skillfully introduced questions about what they are reading, or small exercises asking them to extract and write down a list of key points, or facts, or reasons to sent to their tutors, will keep them alert and help them to assimilate salient points. They can be asked to enter information from the text to outline maps or diagrams. Visual aids should be introduced as part of the teaching text. What a teaching would usually draw on a blackboard can be included in a correspondence course. Visual aids will enliven the course, particularly if humour is introduced when it is possible to do so and when it is certain to be understood.

Short self-check objective tests can be given at the end of natural sections in a lesson enabling the student, as he works through the lesson to test himself on what he has read. The one-word answers are given at the end of the lesson. These self-check objectives exercises give the student immediate reinforcement, as in programmed learning.

There should be an assignment for the student to be sent to his tutor as an integral part of the lesson. The questions in this assignment should not be such that they can be answered by one word which could be corrected by the student himself from the answer key but they should call for an application of the knowledge and skills the lesson and self-check tests have helped him to assimilate. They should be sufficiently diagnostic to reveal to the tutor, who reads his answers, whether or not the student has understood and assimilated the

material studied. They must provide the basis for any additional individual teaching the correcting tutor can see the student needs, and will give him through written comments.

The writer should be guided in the matter of layout, which is important in teaching. In the classroom a glance at a teacher's blackboard will show if he understands the importance of layout. Clear, neatly set out work including attractive sketches and with material displayed and spaced for emphasis or for pauses will help students grasp and remember the content. In a correspondence course also, careful layout is an effective teaching aid, but this task should not be left entirely to the editor. The writer should be encouraged to see each lesson he writes as a teaching instrument, and to set it out neatly and clearly in what he considers the most effective layout. There should be a discussion about format and layout with the editor and illustrator before the writer begins to work and agreement about general principles should be reached at this point. If the writer is trained in tests principles, the editor will receive manuscripts which are much easier and quicker to edit.

Finally, writers should be encouraged to introduce and present their own ideas. Just as the personality of a teacher can be a powerful influence in the classroom, so a lively, imaginative, friendly personality will come through in a correspondence course. If the writer is made to feel he is doing a piece of original and creative work he will be far more interested and less likely to produce stereotyped lessons monotonous to both himself and his students. From his freshness of approach the educational staff of

the institution will absorb many new ideas which they will pass on to others.

Preparing correspondence courses is challenging, exiting, and time consuming work. Experience has shown that it takes about a year to write and produce the equivalent of one year's instruction to students. During this time all members of the team – writers, editors, illustrator – should work continuously and in consultation with each other. Good correspondence courses are prepared more easily if the work progresses steadily and without interruption. It is important to plan a time schedule for writing, illustration and production, and to estimate realistic deadlines, but until the writing is finalized the course should not be advertised. The writer may meet with an accident and time will be lost either in waiting for recovery or in seeking a replacement. There may be a breakdown of the printing equipment, or power restrictions. All these interruptions have been experienced. It is embarrassing for the institution, and disappointing for students,if a date has been suggested for the release of a course and it is not ready by that date. It is better to make no announcement until the course is ready for students enrolment.

If the printed correspondence course is to be supported by some other medium, for example, radio or cassette tapes, the course can not be considered complete until all the teaching material is ready. Therefore, radio or tape scripts must be prepared, recorded and ready for broadcast or dispatch before the course is released. If the study of the course requires the reading of prescribed books, the course cannot be released until the books are available in sufficient supply,

either through booksellers, to whom the students have access without difficulty, or through the correspondence teaching institution. These books may need to be ordered many months ahead to ensure their availability. The coordination of all these details is the responsibility of the educational assistant supervising the preparation of the study material. At the beginning of the preparation it is wise to make a checklist of all the actions to be taken, timing them to ensure that all the material is ready by the projected release date of the course.

(e) Planning Accommodation and Layout of the Institution

The location of the institution will affect its accommodation facilities. If it is to be located as a department of an established institution it may be allocated accommodation within a building of that institution. Alternatively an extension to the existing building may be built for it. If, however, the correspondence teaching institution is to be autonomous and housed separately, it will either be allocated space in a vacant building, or it may have been decided to erect a new building for it, whether it is to be housed in an existing or newly erected building, it is wise to consult a person, who has had the practical experience of working in an institution teaching by correspondence, about both the amount and layout of the accommodation required.

In estimating the amount of accommodation needed, the size of the educational programme must be taken into consideration and calculations made of the physical volume of material it will produce, the number of personnel who must have space to work, and the amount and size of the equipment to be installed.

Merely to state that the institution will develop five areas of study does not give a true indication of the size of the target. These areas of study may expand into numerous subjects when the courses to cover them are structured. Each area of study should be carefully examined on the basis of some common denominator to appreciate its full implications in volume. If a correspondence course in management and administration, and a subject, equivalent in content to one year of resident study of about 100 lecture hours, are taken as examples, then this course, to meet the local needs fully, could require the writing of several basic compulsory subjects and several elective subjects.

The explosion of this area of study into many "subjects" helps to give a more realistic appreciation of the amount of storage space required. And storage space cannot finally be estimated without calculating the number of students for whom a course is to be printed and the rate of usage.

2.   Structured course of study

"Area of Study" -   Management and administration

Proposed correspondence course structure

STAGE 1 (approximately one year's study)

Compulsory subjects

1.   Basic accounts -- 100 hours

2.   Basic accounts – 100 hours

3.   Man in organization – 50 hours

STAGE 2 (approximately one year's study)

Compulsory subjects

1.   Principals of management – 100 hours

2.   Introductory legal aspects of management and
         administration
         -    50 hours

3.   Either, one full subject or two half subjects form
         the following:

<u>Full Subjects</u>	<u>Hours</u>
Financial management	100
Marketing management	100
Personnel management	100
Public administration	100
Transport management	100
Wholesale and retail management	100

Half Subjects

Banking and insurance	50
Co-operative management	50
Exporting and import	50
Industrial management	50
Office management	50
Production management	50

1. To indicate the content and weight of a subject the estimated approximate number of lectures hours has been shown. Full subjects are those of 100 hours; half subjects are those of 50 hours. The course has been structured in two stages each of two-and-a-half subjects, giving a total of live subjects.

Demand is usually estimated on the population of country, the number of indigenous institutions teaching the particular study by correspondence, requests from employers, an industrial survey, which may have followed, and the number of inquiries form the public. For example compare the situation in the different countries listed below:

	Population (millions)	Name of Institutions	Number of inquiries
Australia	13.0	10	2,000
Botswana	1.0	1	30
Tanzania	14.0	1	1,000
Zambia	4.5	2	130

It is clear that the one Tanzanian institution will need to produce more copies of the correspondence course to meet the total Tanzanian demand than any of

the institutions in the other countries. For economy in production, and to ensure adequate time for re-vision and re-printing, it is usual to print at least two years supply.

An example of the calculation to be made for each course is the following, made for a four years professional course in Accountancy:

Structure of course

Stage 1   Commercial Correspondence
           Introductory Accounting
           Commercial Law I

Stage 2   Financial Accounting
           Introductory Auditioning
           Commercial Law II

Stage 3   company Law and Accounts
           Monetary Theory
           Taxation Law and Practice
           Introduction to Data Processing

Stage   Advanced Financial Accounting
           Auditing and Investigations
           Management Accounting

Total: 13 subjects

It is customary to print each subject in a number of units, or booklets, each containing about two week study material for the student. The average number of booklets in a full subject of one year's duration is about twenty. The calculation will then be:

Intake of students each year	1,000
Copies of course for two years supply	2,000
Subjects in the course	13
Booklets in each subject	20
Booklets to be printed (2000x13x20)	520,000

A calculation like this, for each correspondence course in the initial target, will be essential to estimate the amount of accommodation required to store the total volume of material, which will be produced. It must always be remembered that, although the initial volume will be reduced when dispatch to students begins, reprinting for replacement must begin before supplies are exhausted to keep the course operating continuously. Moreover, these calculations have taken into consideration only the volume of printed material, which is calculated for study material printed outside the institution. If the institution has its own printing unit it must accommodate also the incoming paper to be printed, and space for these supplies must be calculated on quantity and frequency of delivery.

All these calculations are essential when estimating the total amount of accommodation needed. Once the initial target has been implemented, further courses will be developed so that possibilities of expansion must be considered. One of the difficulties which usually besets the setting up of a correspondence teaching institution is the inadequate and unsuitable accommodation.

Sometimes a plan of operation expresses accommodation requirements merely in estimated square meters. But, how is this estimate to be provided? If it materializes as a number of small rooms spread over

several floors in a multi-story building, it is very difficult to organize an institution in which large volumes of work must flow continuously from one section to the next. An institution teaching by correspondence has a workflow pattern, which is different from other educational institutions. The lay-out of the institution should be planned as closely as possible on the pattern of the work-flow, whether the accommodation provided is in an existing building, or in a building to be designed and erected for the institution. Large open areas are more convenient than number of small rooms.

A correspondence teaching institution can be comfortably accommodated in an expansive factory-type building. Kind of lay-out in a single-storey, factory-type building requires a large area of land, so hat it usually has to be built in a rural area where land is less expensive. This has been found inconvenience because of the difficulty of maintaining contact with other educational institutions, which are the sources of advisory and part-time help, and the difficulty of securing office workers and supplies of material. The expenses involved in continuously overcoming these difficulties may offset the initial savings on the land.

It may be much more convenient to establish the institution in a large, closely populated urban center, with easy access to various educational institutions, consultants, libraries, bookshops, suppliers of material, and a large post office. It is, however, too expensive in land, and often prohibited, to build an extensive factory-type building in an area reserved for high-rise buildings. If the site chosen dictates a multi-story building the

principle of planning it according to workflow scan be implemented.

On the ground floor are all the heavy materials and machinery with provisions for unloading incoming material at one end of the building and dispatching lesson martial at the other end. The store from incoming paper and other supplies for production feeds into the production unit, which feeds the store of printed material. From the other end of this store there is outward dispatch of lesson material. Thus all heavy bulky material follows the work flow.

On the top floor, which will be the farthest from interruption, and have good lighting, the educational work of writing, illustrating and editing can be accommodated. This lay-out would allow for easy conference between all educators – those preparing the course of instruction and those correcting the students work. If radio supports the correspondence courses the radio tutors and technicians, and the recording studio could also be on the top floor. Some institutions teaching by correspondence plan for seminars and practical work. Such institutions may need lecture and seminar rooms, a library, laboratories and workshops. Unless they can use these facilities in other educational institutions, they will need more floors in a multi-story building supplied with an adequate number of elevators. However, the suggested principles of layout can be followed – all heavy work handling bulky material and all noisy machinery on the ground floor, and all work needing maximum light and minimum interruption on the top floor.

Designing Administrative Procedures and Record Systems

The designing of administrative procedures and record systems must be carried out during the preparatory period in readiness for the enrolment of students, and for maintaining a continuous service to them. This preparation requires consultation between educational and administrative staff and the in-service training of all in the use of the procedures and records upon which the smooth and efficient organization of a correspondence teaching institution depends. Not only, enrolment procedures and student progress records are involved. An efficiency organized store and efficient procedure for ordering and taking delivery of supplies, are essential to ensure that there is no break in production and consequent interruption of service to students. Once a student has enrolled he must not be delayed in his studies by any interruption in sending him study material.

So many procedures are interdependent that it is important to make a list of all the matters, which can be foreseen as needing decisions and to arrange them in order of priority. For example, the method of distributing study material and corrected workbooks to students may have considerable effect on running costs. As the method planned may involve the format and cover design of study material, it must be considered and decisions made before any study material is printed. If the postal service is to be used, early consultations should be held with the postal authorities. The institution will have a large and continuously increasing load of outgoing and incoming mail flowing through the postal system. It must be fully informed about postal charges and schedule. And the most satisfactory procedure of delivery to and collection from the post office. It must ensure that any method designed for postal handling conforms with postal regulations, as good relations and cooperation with postal authorities will help both organizations.

In some countries reduced postal charges are available for student papers. This possibility should be explored.   In Australia such papers are carried, as second-class mail if they are posted in envelopes endorsed "student papers only" and left open, secured only be a staple. In Holland, one correspondence teaching institution was able to arrange for reduced postal charges by pre-sorting outward mail bags for special areas, so that mail left the institution ready for direct delivery to the railway station.

In some countries, for example Botswana, the official government mail is carried without charge. As the Teacher's Training College of Francis town is an institution of the Ministry of Education it was issued with an Official Free Stamp. Enclosed in each unit of study material was an answer booklet in which the student wrote his assignment of written work. It had the return address printed on it and was stamped with the Official Free stamp.

Tanzania's National Correspondence Institution estimated that by the tenth year of its operation it would be teaching at any one plan of operation to supply its students with stationery and consequently a workbook cover was designed. This design was planned to save time spent on addressing envelopes, to reduce the cost of envelopes and to keep postal charges to a minimum. The framed space for the student to fill in his name and address both identifies the booklet as his, and at the same time addresses it for returning it to him. This saves the time spent on addressing thousands of envelopes in the institution. In the second year of its operation the institution is returning over nine thousand corrected booklets a month, and the load will continue to increase as more and more courses are available. This design for the students to self-address their workbooks ensure that the workbooks are correctly addressed,

and with no extra work to the student, lifts an enormous time consuming burden from the institution.

When a student enrolls he is sent a packet containing his first study material. Enclosed in each of the first five units of study material is a workbook for the answers to the student's assignments. Each work book contains an envelope addressed to the institution for him to use for posting the completed work book. He is asked to return each workbook for correction as soon as he has completed it. When each corrected workbook is posted back to him a new kit of study material is enclosed. In a twenty-unit course the new material is sent as follows:

Corrected work unit	New work unit
1	6
2	7
3	8
4	9
5	10
6	11
7	12
8	13
9	14
10	15
11	16
12	17
13	18
14	19
15	20

Thus the student has received corrected workbook and he has received all his study material.

When prepared for posting, the corrected work books are folded in half with the address on the outside, they are franked above the address, the new unit is placed inside, and the booklet stapled at both ends on the open side. By this method envelopes are used only one way – from the student to the institution, having the cost of envelopes; in a large institution this can mean a considerable saving. Tanzania's expenditure on envelops in the first year of its operation was 39,000 Tanzanian shillings. If the workbook cover had not been designed to travel one way without an envelope, the expenditure would have been 78,000 shillings. Moreover, posting the new units inside corrected workbooks instead of separately saves an average of one shilling fifty percents course postal costs. This does not appear a great saving until it is calculated that, in posting one course to each of 10,000 students, 15,000 shillings have been saved.

Correspondence education is proving less expensive than resident instruction. A cue study of the in-service training programme provided by the UNEWA/UNESCO Institute of Education in Beirut, was carried out jointly by the International Institute of Educational Planning and UNESCO, and the report was published in New Educational Media in Action – Case Studies for Planners, Vol. 2, Paris, UNESCO: IIEP, 1967. The average cost per student per year in the in-service programme was found to be $341, which was less than half the cost of $820 per student per year in the pre-service training colleges. A comparison of the cost of 366 Tanzanian shillings to teach face-to-face and 144 Tanzanian shillings to teach by correspondence the same subject content again shows a cost of less than half for correspondence education. Encouraging, as these figures are, it is nevertheless important to keep the running costs of a correspondence teaching institution as low a possible while maintaining a high standard of teaching and service. The

designing of a postal procedure and cover to save work time and cost is but one example of the importance of the early planning of administrative procedure.

Every institution teaching by correspondence will develop its own procedure and design its own record systems to meet its own particular needs as they become apparent, so that the examples which follow are only illustrations of some systems when have been found useful.

The section dealing with the preparation of study material will need to maintain an upto date record to the preparation of each subject. A card system is useful for quick reference provided all entries are made on it regularly so that the information is upto date. The cards should be designed for a box of drawers, the identification being at the top of the card. They should be printed on both sides so as to accommodate one subject easily thus contributing a complete and permanent record.

Some institutions set up a well board on which the planned schedule of preparation, for at least one year ahead, is displayed. A superimposed spelling indicator, advanced daily, will show at any time if the preparation is falling behind the planned schedule. These record systems of progress can be established for all types of material to be prepared – printed study material, radio programmes and cassette taps. Any member of the staff should be able to find out immediately, by reference to these records, how far preparation has gone, and where there are any delays, which are likely to set back the whole schedule.

One cause of delay can be failure to get/secure early and regularly sufficient supplies of the consumable materials required for production, such as paper, printing chemicals and

inks, films and tapes. One of the earliest steps to take is to calculate, on the basis of the size of the educational programme, the quantities of each item, which will be needed. Orders should be placed immediately for all items, which are not perishable. Items likely to deteriorate should be ordered as early as possible within a safe time limit. Ordering time will depend on the reliability of delivery time. If the institution is being established in an area where consumable items are in short and irregular supply they should be ordered as early as possible in sufficient quantity, to hold a reserve stock of at least on year's supply to meet the need if caused by a delay in delivery of later orders. Running out of one item can bring the whole printing programme to a standstill.

Stock records can also be kept on cards. In this system one card is used for each item and shows the location of the item in the store, the minimum quantity to be held, and the maximum quantity to be ordered. The figure of the maximum quantity will be calculated on the rate of usage and delivery time. When the institution has been in operation for some time the average range of usage will be established, and the estimate of the quantity and frequency of ordering can be realistically calculated on actual figures. The entry of the supplier's name, address, and phone number on the card is not only time saving when orders are prepared, but ensures that, when staff changes occur, newly appointed personnel will have all the information they need in one place on one place on the permanent record when Restocking.

As soon as printed or any other study material is ready for storage, a similar stock card should be prepared to show location in the store, the minimum quantity to be held in stock below which supplies must not be allowed to fall without re-

printing, because there can always occur a sudden unexpected increase of enrolment or an unexpected delay in printing.

The cards should be designed for use in the type of cabinet containing pullout trays so that entries can be made without removing and replacing cards. If cards are designed for holding in box cabinets the name of the item should be at the top of the cards. Therefore, to ensure that information is conventionally placed on cards the kind of card cabinets to be installed should be decided before the cards are designed.

When the stock of study material is put on the shelving in the store, a colored marker placed to indicate physically the level at which re-printing should be initiated would be helpful. The estimate of the re-printing level, both on the card and self, should allow ample time for re-printing before stock is exhausted, so the institution cannot fall into the embarrassing position of having enrolled students interrupted their studies because the study material is out of stock.

In a correspondence teaching institution, the administrative assistant and store man are key personnel in ensuring an uninterrupted flow of preparation and teaching.

The store man must be efficient in signaling re-ordering and pre-printing needs; the administrative assistant must ensure orders are placed promptly and regularly, and he should follow these upto secure delivery by the required dates. The procedures and record systems for ordering, storing and stock taking, should be designed and implemented at the beginning of the preparation period so that all personnel concerned learn by experience while the load is still small, and so that accurate records are kept from the beginning of the operation. These

records supply the basic information of costing and future budgeting, so that their accuracy is extremely important.

The initial budget estimates for the institution will require an amount for capital expenditure and an amount for running costs. The amount for capital expenditure can be estimated, with reasonable accuracy, from the retail prices of the items to be bought. However, as there is a tendency for prices of the items to rise steadily, an allowance of about 33% should be added to cover rise in costs during the time interval between the listing of the items of capital expenditure and the time of purchase. If a building is to be erected the same percentage should be allowed for a rise in building costs. Running costs are more difficult to estimate, because, before enrolment begins, it is difficult to estimate student demand accurately. It is usually greater than expected, because, once a correspondence course is released, it is often found to be useful to a wider public than the particular sector for which it has been prepared, thus it is wise to budget generously for running costs. Salaries of fulltime staff, fees for part time staff, building maintenance, equipment and furniture, consumable supplies, transport and postal expenses are the main categories. In the preparatory period there will be no fees to be paid to part time tutors employed to read and comment on the student's assignments. There will, however, be double demented of initially ordering two years supply so that there will, hereafter, always be a year's stock in store to meet an emergency, which might arise before the regular annual orders are delivered. Then a correspondence teaching institution is fully established, budgeting will become straightforward as estimates of annual needs to be based on actual figures of quantities consumed, rates of age and increase of demand.

Accounting procedure must be established, not only for the payment of equipment and consumable supplies, but for fees to writers and tutors and the acceptance of fees from students, if tuition fees are to be charged. If the institution plans to employ some part time tutors, who will mark student's written assignments at a fee per workbook or paper, a procedure will need to be designed in readiness for the beginning of the teaching period. If the procedure involves printed documents, it has to be designed early enough for the documents to be available when teaching begins. A simple method, used in several institutions, is based on a docket book issued to part time tutors. On the inside cover of this docket book are printed the following instructions to tutors.

1. On the yellow docket write a list of the corrected workbooks or answer sheets being returned in a packet, and place the docket in the packet on top of the corrected work.

2. The carbon duplicate on white pages remains in the docket book as your record of work corrected.

3. If there are more than 10 units returned in a packet you will need to use more than one docket.

4. If you spoil a docket write CANCELLED across it, and return it with the next docket used. All dockets are numbered, and must be available for the auditor's check.

5. Immediately after the end of each month, complete in duplicate a claim for payment for the number of units corrected from the first to the last day of the month.

When each docket book is received with a packet of corrected units a records clerk checks that the packet contains the units listed and refers the docket to the accounts clerk. When at the prescribed intervals, the tutor makes his claim for

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payment, the accounts clerk checks it against the filed dockets and, if it is correct approves it for payment. When a docket book is being designed it is very helpful to have the original and duplicate pages printed on strongly contrasting colours. If the institution uses a large number of part time tutors the periodical payment of tutors can be a time consuming task and will require efficient procedures and well-trained staff.

Those sections concerned with the preparation of the educational programme, finance and management, all come into operation in the preparatory period. The enrolment of students, when all the essential preparation has been completed, brings the institution into full operation and involves the student services and evaluation and all the activities under the heading Teaching Students. In preparation for this second stage of development, simple procedures for enrolment and for maintaining student records must be planned. The planned correspondence teaching institutions, being established today, are aware of the importance of research and evaluation to ensure their work in fulfilling its objectives. Records should be designed in such a way that they can be used as a pool of information for future research.

The student's application for enrolment form is an important basic document, if it is designed to find out information the institution will need. To plan future developments the institution will want to know as much as possible about its students: their average age, their occupations, their educational background and their reasons for undertaking the studies for which they are applying. Each institution will design its own application form for its own purpose. It must be remembered that some applicants may not have much experience of completing written forms and it will help them if the form asks for the answers to its questions to be

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shown by crosses in prepared blocks. Moreover, forms designed in this way are quick to process.

Large institutions find it useful to give each student, when he enrolls, a registration number. This overcomes the difficulty of identification when two or more students have the same name, or when students use different forms of their name on different occasions. A convenient system is to use seven figure numbers of which the first two numbers are the year of enrolment, for example, 7500000 would be the number given to the first new student to enroll sufficient figures within the same system, for example the last enrolment in 1975 might be 7514682. The first two numbers will always show at a glance the year of a student's initial enrolment, if the same number is given to him for all subsequent enrolments for additional courses. This is easily controlled by putting his number on each new enrolment form issued to him, which will lead also to quick retrieval of his previous records. A pre-numbered register, in which each student's name is written against the next vacant number when he enrolls, will become a valuable record, particularly if date stamped at the beginning of each day. All volumes should be preserved and will show the record of enrolment year by year from the date of the opening of the institution.

It is also very useful to keep a record in a journal showing the weekly total enrolments and the total annual enrolment. The figures for each year can be recorded on a double page and in time this journal becomes an invaluable document showing up trends and annual patterns. It provides most useful and indisputable evidence for the additional staff needed and can be maintained without any additional work based on figures, which the accounts section maintains. It is a very quick action for an accounts clerk to make one entry each week, enter a total and

cumulative total at the end of each month and the grand total at the end of each year. Similarly, quickly maintained cumulative records can be kept in other sections for example in the dispatch section for out going mail.

A card system will be needed to maintain a record of student progress. To save time in making entries as much information as possible should be pre-printed on the cards. In each of the three years of the course, a pre-printed card of a different colour could be used to record the dispatch dates to a student of new study material, the receipt from him of a completed workbook, and its return to him corrected. Thus, at a glance, such a card shows in each year, at any time, his exact work position, the rate of his progress and whether a particular piece of work was with him or his tutor. Filed in front of this card is another card of another colour, which shows the mark he has gained in each piece of work in each year of study. Progressive recording on this card shows the standard of his work, and when the course and record is completed, puts before the principal on one card all the evidence he may need for his official report. These two cards should be designed to be filed together in a box hold with the student's name and college number placed at the top of the card for quick reference.

For each subject each student has one card containing the combined record of material dispatched to and received from him, with his marks indicating the standard of his work. The average number of units of study material per subject is twenty but the card provides twenty-five spaces for those subjects, which may have more than twenty. It also provides space for any notations, which may be necessary and for recording the number of the certificate of completion sent when the student has completed all units of work at a satisfactory standard. This card has been designed for filling in card

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cabinets. When planning a large institution with thousands of students, for whom thousands of entries will be made daily, this type of card cabinet in which entries can be made without removing and replacing cards is most desirable. When designing cards for this cabinet the student's name and number is put at the bottom of the card so that it can be read through the clear plastic holder which keeps the card in place, and projects beyond the card above it so that it can be quickly located.

In most, but not all, institutions, the enrolment papers and all correspondence to and from a student are filed in a personal file, with his name and number on the cover. There are various ways of storing these personal files. In a large institution there will be some thousands of active students who will need frequent references to their files, so that a system must be planned by which a file can be quickly located. Sometimes in pockets, which hang on rails. Whatever type of equipment is used, a difficulty arises both in the file storage and in the card system for active students if they are arranged in numerical order of enrolment. As early enrolments complete their course and their files and cards are withdrawn, the fixtures will progressively become empty at one the other end. This periodically requires the time-consuming task of moving all the files and cards back. A very simple way of overcoming this difficultly is to file by the last two numbers; for example, in a pigeon hole or cabinet labeled 87, place the files beginning with the '87' numbers in the first year of enrolment, for example, 7500087 for the year 1975. Continue planning all the '87' numbers in order ending with the latest current year.

For this system a fixture is required with one hundred places large enough to hold the files of the active students. Each place must be numbered. The numbers run from 00 to 99. The convenience of this system is that files of students who

complete or discontinue courses are withdrawn at an even rate throughout the fixture, thus leaving space in each numbered space for the files for new enrolments. Thus the work of moving all the files periodically is eliminated.

This method of arrangement by the last two numbers can be applied throughout the records of the student service section. At the end of each number are some spaces for newly enrolled students. As students who have enrolled earlier complete their courses and their cards are withdrawn, the later cards can be moved up leaving spaces ready for new cards. It is very useful to colour code cards using a different colour for different categories of students. For example, then corresponded courses are used for army education; military authorities often require reports on the number of army personnel enrolled and their progress. Such a report can be prepared quite quickly if the cards are signaled by a special colour so that each tray can be drawn out and scanned quickly for the cards required.

The same method can be applied in filing the cards of students who have completed courses. As only occasional reference is made to these cards they are usually filed in boxes or cabinets with drawers.

As students complete their course and their files are withdrawn from the trays of active students, they are field in their correct positions I the number group to which they belong. It is a great advantage to install a uniform method of filing student files and record cards because it reduces staff training to the operation of one method.

It is necessary to establish an alphabetical index of students' names as they do not always put their numbers on

letters and work books. Occasionally, too, a student may accidentally use a wrong number. In all such cases the alphabetical index will indicate the number, and so give ready reference to all other records filed by a card system on small cards in which only the student's name and number are recorded as it is no more than a key.

The first step in training the staff required for the maintenance of the institution's records is its design by applying the following general principles.

1. Keep the system as simple as possible.

2. Do not overburden the institution with unnecessary records.

3. Avoid the duplication of records, every time information is copied errors are likely to arise unless a photocopier is used, copying takes time, try to make one record card serve all purposes as in the case of the stock cards.

4. Use colour coding whenever possible, but before you introduce it ensure that you will be able to secure continuous supplies of the coloured card or paper you want. Also ensure that the colour coding is applied consistently.

As plans to organize the routine workflow are outlined, a job description can be prepared for each member of the staff. The procedures and job description will reveal nature of the activities interdependence through which the work flows of an institution teaching by correspondence passes. No member of staff works in isolation. He receives work processed by a colleague through an earlier operation; and another colleague's work depends upon his carrying out the responsibilities set out in his job description. It is extremely important that each

member of the staff realizes his individual responsibilities in the whole operation of the institution, and that he appreciates the importance of cooperation, and immediately informing his section leader of any difficulty which arises which would prevent the processes for which he is responsible.

In addition to job descriptions, a written daily routine for each section, issued to all personnel working in that section, will help to establish awareness of individual responsibility to the whole section. Simple, clear organization and flow charts, displayed on the walls of the sections to which they relate, help in the in-service training of the staff.

Only when sufficient study material, in all media to be used, is ready for students to work without interruption, and the staff has been briefed in their responsibilities, only then is the institution to begin the work for which it has been established. This is the time for an official "opening" of the institution. If one is aspirations of some can immediately by satisfied. Premature publicity should be avoided. Unfortunately, announcements, through mass media, are often made much earlier, resulting in a flood of inquiries arising from highly motivated potential students, expecting to be able to begin their studies immediately. The general public does not know that it takes at least one year, and possibly longer, to prepare study material. This lapse of time leads to disappointment and loss of confidence in the institution, which, to the outsider, appears to be doing nothing, while actually it is making steady progress. A continuous stream of inquiries and follow-up letters of complaint throughout the preparation period seriously delays the work and adds to postal expenditure, due to the necessity of replying at least by circular when enrolments can be accepted. This additional lead of unproductive, time-consuming work can be

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avoided by withholding publicity until the institution is ready to teach some students.

An information brochure for potential students should be printed setting out the studies available, what fees are payable, how to enroll and what recognition will be gained by completing the studies offered? It is important that all decisions should have been made and accurately announced, so that there can be no misunderstanding. The dissemination of sufficient and reliable information is vital in gaining the confidence of the student body and the general public in the service of the newly established institution.

The Enrolment and Teaching of Students

The enrolment and teaching of students brings the institution teaching by correspondence into full operation. Before entering this stage of its development – the first testing phase of the planning and organization – all the staff for counselling, enrolling, recording and teaching should be appointed and briefed. Their full training will come only with experience, in-service training is a continuous activity in a correspondence teaching institution, because, not only must the initial staff be trained, but as the institution grows, additional and replacement staff must also be trained.

The correspondence teachers, both those preparing the content and presentation of the study material and those reading and commenting on student assignments, are usually trained teachers with an understanding of the principles and practices of teaching and with teaching experience in other media. Their in-service training in the correspondence teaching institution amounts to acquiring the teaching techniques by a different method. All those who prepare study material must tutor some of the students using the material they have

prepared. From student reaction they will readily see where and how the study material needs revision in readiness for scheduled re-printing. It may even be necessary to take immediate remedial action by preparing supplementary material for distribution to all enrolled students until the revised course is printed.

Some correspondence teaching institutions have an adequate number of full time staff to meet the full teaching load of preparation and tutoring, but others find it necessary to seek the assistance of part time tutors of particular subjects. If this is the case, before enrolment begins a panel of tutors, with knowledge of the subject to be released, must be appointed and briefed. Again, it is valuable to have a prepared booklet stating their responsibilities and duties. A Guide for Tutor, like the Guide for Writers, must be prepared by each institution for its own particular conditions and objectives. It is important that part time tutors are briefed in detail about the aims of the institution, the nature and aspirations of the student body, and the procedures operating in the institution, so that they are fully aware of their own function and of how their work fits into the total pattern of the organization.

Once the teaching begins full time subject supervisors should review the correction of tutors, and they should discuss with them any features of their work, which are not satisfactory, until such time as they are giving their students all the help they need. Therefore, the work of all tutors should be spot-checked by subject supervisors to ensure that high standards are maintained. Tutors should also be asked to bring to the attention of their subject supervisors any feature of the study material, which is proving to be unsatisfactory so that it can be revised. It is the tutors who read the students' written assignments, who are in closest touch with the student body,

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and through whom will come a growing knowledge of its nature and needs.

To add further knowledge on the topic, please read the reference given below:

Anthony, K. & Greville Rumble eds (1981)	Distance Teaching for Higher and Adult Education London, the Open University Press, pp.204-209	4-1

4.5.2 Implementation

The installation of equipment is urgent because as soon as writing begins the means of duplication should be available. The term "duplication" is used here not in the sense of copies of material produced by the machine usually called a "duplicator", but in the sense of producing multiple copies produced by any type of machine.

There are different methods of arranging for production:

(a) Contracts can be made with a government, university, or commercial printer, provided they have staff and equipment, to ensure regular delivery in accordance with required delivery dates. Sometimes, on the assurance of a regular volume of world a printer can negotiate an agreement satisfactory to the institution for cost and delivery, and can give satisfactory service. This removes the whole burden of production from the institution and may not prove any more costly then productions by the institution; and

(b) The institution may set up its own production unit. If the institution is to have its own production unit, the equipment chosen will depend upon the scope of the

educational programme and, therefore, the amount to be printed, the amount of finance available, and the kind of personnel available to handle the equipment. Printing is not work for amateurs. In printing establishments machine-minders have to be trained, and unless the people to be trained are available, complicated means of duplications should not be installed. A simple method of duplications is an electric duplicator fed by a typewriter (electric if possible), and an electronic stencil- cutting machine. This equipment can be used economically if the pages with typed text only are cut on wax stencils and pages with illustrations are typed, and illustrated, on paper, than cut on plastic stencils on the electronic stencil-cutting machine. Provided only black and white work is needed the process is very simple. Colour work can be produced with use of colored inks in the duplicator. Duplicator which will duplicate two stencils simultaneously can now be bought. However, the maximum speed possible on a duplicator cannot produce the same volume of work as that produced by an offset press with a plate-maker to feed it. An offset press can produce at least 5,000 impressions an hour and several paces can be run on one side of a sheet, according to the size of the press.

It must be remembered that if one is dependent on only one duplicator or press, then any breakdown, any failure of supply of spare parts, and the time required for servicing, will interrupt production, one should never try to be wholly dependent on only one machine.

Before any machine is bought, its capacity to produce should be related to the volume to be produced. This requires calculations based on the number of courses to be produced, and the average number of pages in each booklet. The calculations, already given of the number of booklets to be printed for a course in accountancy for 2,000 students showed that a total of 520,000 booklets were needed. If each one of these booklets contained an average of ten pages, the estimate of the total number of pages would be 5,200,000. In a working day of seven hours the press will run an average of five hours, as the average time of two hours a day is estimated for setting up, cleaning and servicing. For the production of 5,200,000 pages, the calculated duplicating or printing time according to the size of the duplicator or press is approximately:

Impressions	Impression	Printing time.		
Per hours	Per Pages	Hours	Days	Months
5,000	1	1,040	208	8
5,000	2	520	104	4
5,000	4	260	52	2
5,000	8	130	26	1

Two examples of the relation of the capacity of printing equipment to volume to be printed are the in-service teacher training course conducted between 1968 and 1973 at the Teachers' Training college in Francis town, Botswana project. A total of 609 teachers were enrolled for a period of three years. Each student-teacher received in-service training by correspondence following short resident sessions in the College. The total number of pages to be printed for each student over a period of three years was approximately 2,000. This counted to a project total of 1,218,000 pages. An offset press and plate-maker, single foolscap size, proved adequate for this project.

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The first printing equipment installed in Tanzania's National Correspondence institutions was an offset press and platemaker, doubt foolscap size. Printing began on this press as soon as the first booklet was ready for production, and printing has been continuous. However, when the 'areas of study" prescribed by the plan of operation were analysed, courses structured, and the demand estimated, calculations of printing time showed that it would take nine years to print the initial target. Consequently by the second year, when the volume of the study material to be printed exceeded the capacity of the first press installed, another press, double the size of the first, was installed. The educational programme grows, it is anticipated that a third press identical to the second will be needed. It must always be remembered that the printing of study material of correspondence teaching does not end with the initial printing of a course. Every course will need regular reprinting according to rate of distribution and as each new course is introduced the volume for future reprinting increases.

The kind of equipment needed for making the printing plates, depends on the process to be used. In photography is involved, a darkroom with a process camera is necessary. Possible methods of plate-making should be investigated and the simplest, quickest and most economical method capable of producing the essential result should be chosen.

The type of equipment needed for handling the paper will depend on whether or not it is delivered to the institution cut to size for printing. If it is cut, it is easily handled. However, paper press cut to a uniform size will restrict production to a uniform format. This may not be a disadvantage depending on the kind of study material to be printed. If the courses are very varied it may be educationally important to be able to produce each course in the form most suitable to the nature of its material. If,

for this purpose the institution buys paper in bales, a guillotine will be essential. It must be large and powerful enough to cut the volume of paper needed to keep the duplicating equipment running continuously. All the paper will pass twice through the guillotine-first when the paper is cut the size for printing, and second when the printed booklets are trimmed. Where an educational programme exists, work the guillotine being continuous and heavy, an electric guillotine should be installed.

Bales of paper are very heavy to move and life, and careless handling will cause waste of paper. It is possible to buy a flat, low trolley on wheels and a small battery operated fork-lift for moving bales of paper. It would be an advantage to obtain these two pieces of equipment as they will simplify the work of moving and lifting heavy material, which will be a daily feature of the work.

All the printed study material has to be collated and stitched; if it is printed on sheets containing two or more pages these will have to be folded, which can be done by hand. However, whether or not it is practicable to fold and collate by hand or machine will depend on the size of the educational programme. In a small institution, teaching only a few hundred students., able to employ and accommodate sufficient workers to keep pace with the production of the press , folding and collating by hand will be satisfactory. But if some thousands of students require study material a folding machine will be necessary.

The folding machine should be chosen in relations to its capacity and the kind of material to be folded. If the press is printing four or more pages on each impression, folding machine with a long and cross fold is helpful, but should be simple enough for the operators who must handle it. It is useful if the

folding machine has a perforating device on it, as it may be desirable to perforate pages to be easily detached by students.

Various collating machines are available. If a folding machine with a long and cross fold is installed, a collator, which will collate the folded leaflets into each other, will be required.

A stitching machine which will do both side and saddle stitching is essential. It should be chosen for its capacity to stitch the required volume in the required time, which should be estimated by calculations.

When choosing any piece of equipment for the production unit, it is important to ensure that spare parts, servicing maintenance and consumable supplies will always be readily available. Also it should be simple enough for the operators who must use it burden the production unit with sophisticated, complicated equipment can lead to waste of money and time if it stand idle through inability to use it.

In the section where study material is prepared for printing, the skilled typists will need typewriters with the typefaces, keyboards and the length of carriages required for special work. For example, if courses in mathematics and engineering subjects are to be typed, a typewriter with a keyboard having the necessary symbols will be required. Experience has shown that a dual keyboard, operating on a long carriage, enabling the typist to type the symbols as they occur in the text, is the most satisfactory. Such typewriters can be custom built, and, if some of the correspondence study material is highly specialized, the expenditure will be justified.

For uniform work it is wise to install identical typewriters, so that, while any typewriter is being serviced, the work can be

continued, without interruption, on another. Before, deciding upon the typewriters to be installed, it is most important to ensure that servicing, spare parts and consumable supplies are available for that particular typewriter.

Illustrators will need drawing boards and instruments. Equipment typists and illustrators should be ready as soon as the editorial section has study material ready for production.

As well as production equipment, office equipment must be installed. The basic requirements are typewriters, a duplicator, a franking machine, a stapling machine, and scales large enough to weigh heavy parcels. If sufficient finance is available it is desirable to have also a photocopier dry process, an electronic stencil-cutting machine, an addressograph, a letter opener and a calculating machine. These machines will prove to be an economy, because they are time and labour saving, cabinets for files and card record systems will be required in accordance with the administrative procedures designed.

A vehicle will be essential to collect and deliver the incoming and outgoing mail which may amount to many bags daily from the post office.

The installation of equipment should begin as soon as the staff appointed for the preparatory period to implement the plan of operation, are on duty. It is important, therefore, for the printer and the administrative assistant to be among the first appointments. The printer's technical knowledge and experience is essential in making decisions about the equipment to be bought for the printing unit, in planning the layout of the unit, and in supervising the installations of the equipment and adequate supplies of power and water. This preparatory work will take some months and should begin immediately. The

writing, editing and illustration of the first study material will be developing concurrently so that the printing unit should be ready for production as soon as material for printing begins to flow through it.

There should not be any delay between processes: Smooth progress depends on careful planning. The administrative assistant will be needed to handle all the business arrangements for equipment and supplies purchase, not only of the printing unit but for the stores the records and dispatch sections as well, to be organized in readiness for the second stage of setting up the institution.

The storage area will require shelving sufficient to hold the printed study material. If obtainable, painted steel shelving which is rustproof is more satisfactory than wooden shelving; it can accommodate a greater volume in less space; it is lighter to move if re-arrangements is necessary; it is not subject to destruction by termites. The height of the shelving and the depth and width of pigeon holes should be calculated to accommodate the format of the study material so that no space is wasted. The store room will also need cabinets to hold the card system of records of stock supplies and location.

The scholar has given good idea to the topic in the below referred material which may please be read.

| Greville Rumble, (1986) | The Planning and Management of Distance Education, London, Groom Helm, pp.99-101 | 4-6 |

4.5.3 Evaluation

In a distance education institution, evaluation is an essential continuous process, if the institution is to remain

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sensitive to the changing educational needs of the community and of the student body.

The instruction must be assessed in relation to the objectives of the institution. Is the performance of the students showing that these objectives are being fulfilled, and fulfilled without difficulty? Research should investigate the efficiency of management. Are the administrative procedures working smoothly? Have these produced any difficulties? What modifications are necessary to overcome any difficulties and improve efficiency? Is the use of revenue providing the best possible educational service? What improvement and development do the research findings suggest?

An institution teaching by correspondence is particularly well-placed to carry out the research essential for evaluation. Almost all the teaching material, both written and oral, must be recorded for communication to students by one or more media. Most of the reactions from the students are recorded in writing or on tape. The operation of the student service requires the recording of student progress and achievement. Indeed, in the normal daily work routine, there is progressive accumulation of the raw material for research. With today's growing recognition of the need for evaluation, finance is being more readily allocated for research personnel and equipment. Consequently, today's planned institutions being established to teach by correspondence will want to provide from the beginning for a continuous programme of research and evaluation.

Although the institution will have been planned to give educational services to particular categories of people, the nature of the potential student body cannot be defined as clearly as the nature of the actual student body, which only comes into existence with enrolment. The institution will want to find out

who its students are, what their ages and occupations are. Where do they live? What is their educational background? If an enrolment form has been used, much of this information is recorded on it. Simple and not too expensive fact-finding machines are available today. All the information from the enrolment form is punched on to specially designed cards which are kept in boxes labeled for regions. The machine can be programmed to give the information required by placing cards in it and is mechanically vibrated to select the cards. This fact-finding machine has proved quick and simple to operate, computer can also perform this function. When the first 7,000 students were enrolled in Tanzania's national correspondence Institution, it was possible to find out their regional age and sex distributions, their occupations, and their educational background. The facts that 92% were fairly evenly distributed in rural areas, and that 16% gave occupation as farming, indicated that the institution was achieving its aim of reaching the rural population who had fewer educational facilities than the urban population. It was found that the majority of the student body were adult men between the ages of 20 and 34, occupied in teaching or farming, and having an educational background of standard 7 or a Teacher's Certificate. The very small percentage of women indicated the need to find out why women were not seeking further study, and how to encourage them to do so.

To test the effectiveness of the courses it is necessary to find out how many students complete courses what is the average completion time. Drop-out numbers must be found. A high percentage of drop-out at a particular point in the course is a matter requiring immediate investigation. Why are students dropping out at that point? Is there some difficulty in the course? How can it be overcome? The same punched cards can be used to find out completion numbers and drop-out rates.

Ideally correspondence teaching institutions will test their prepared study material on average groups of students before releasing their course to the public. The reactions of these test groups will provide the information needed for evaluation; final production and release of the study material will come only after this evaluation and the desirable modifications have been carried out. In actual practice there is usually so much pressure on the institution to begin teaching students that there is usually so much pressure on the institution to begin teaching students that there is no time for test groups to work the course; the early enrolments become the test groups. This means that immediate evaluation of study material should begin as soon as a course is released. The release of study material does not mean the end of a task, but the beginning of another one: the research and evaluation in order to test the effectiveness of the study material, and to prepare for its revision. All study material should be reviewed and, if necessary, revised and re-printed at least every third year. Sometimes, changing syllabi, new regulations or developments in technology may require more frequent revision.

Every course of study material prepared and released must, thereafter, be regularly maintained at a satisfactory standard, and it is only by a continuous process of self-evaluation that a correspondence teaching institution will maintain its standards.

For further details, please read the below referred book:

Koul, B.N, Bakhshish, S & Ansari, M.M. (eds.) (1988)	Studies in Distance Education, New Delhi, Indira Gandhi National Open University, pp.73-81	4-7

4.6   Activities:

1. Visit the office of Executive District officer (Education) and discuss how they plan for long term targets.

2. Visit a printing press of your area, and prepare a detailed report of the printing process.

3. Arrange a semi-seminar of your peer group. Discuss the objectives of and their implementation strategies; then prepare a report for the course workshop.

4. Visit internet and Websites and prepare a paper on "How different distance education institutions exist.

5. Arrange a discussion session with your colleagues on "How evaluation system of AIOU" can be improved and also write a report on this discussion.

4.7   Self Assessment Questions

Q.No.1:   A statement of aims and objectives clearly defines the purpose of institution. Discuss its implications on planning process.

Q.No.2   Elements of distance education are interdependent. Elaborate this.

Q.No.3   Discuss "Comprehensive planning".

Q.No.4   After studying Botswana, give some suggestions to reduce postal charge along with their justification in Pakistan.

Q.No.5   Elaborate general principles of staff training for the maintenance of institutions record.

Q.No.6   The distribution of teaching material is an important task of distance education institution.

Discuss the case of AIOU and suggest how the system can be improved?

Q.No.7 "Correction of student written work is task of tutor". Elaborate it.

Q.No.8 Why services of part time tutors is desired? Discuss in detail.

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ORGANISATIONAL AND STAFFING FOR DISTNACE EDUCATION

Written by:
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5.1 Introduction

It can hardly be overemphasized that a correspondence course institute is an inevitable part of a modern university. A university, to be modern, should be able to fulfill its commitment to the modern society. Society is fast changing. Aspirations of the people are growing. The old ideal of a university, viz., disseminating knowledge, needs to be viewed with redefined concepts of knowledge. Value-based education has assumed secondary importance, giving place to information-based training. While education in the words of Robert Throblat, is the process of finding solutions not known, training is the study of problems the solutions of which are known. We could only hope that such training is imparted to the trainees with the motive that education shall occur in them after they undergo the training. Certain things are also obvious. The enormous growth rate of population, more of working adults coming to the university demanding new types of courses, a large number of private educational bodies offering a wide range of attractive job-oriented courses in competition with universities, new types of delivery systems like television, audio and video cassettes, all these pose new challenges to the new traditional courses and traditional classroom delivery systems which are followed in most of the Pakistani universities. The monopoly of the universities and other equivalent centers of learning will soon be questioned by the society unless they introduce courses and techniques of education.

It is in this context that a correspondence course institute, or more appropriately a distance education institute, can assume a role which was not taken so far by any university, to start such an institute within its fold with different problems and different purpose. Let us pin point some basic areas where distance education institutes can be organized to cater to the

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needs of a large chunk of the society in comparison to the formal educational institutes.

1. The students in the university are an important limb of the society. The changes that have come in the society with all the fast changing phenomena of the modern age have naturally affected their minds and attitudes in varying degrees. The average age of a student in the university campus has now increased. There are now working adults who want to take a university certificate not only for the sheer pleasure of its possession, or for a status in the society but also for more gaining professional competence and eventually for promotion in the job. They, however, want to earn the same at the cost of a few hours of study in their spare time. These working adults or probably the housewives who had been denied such opportunities earlier are in general motivated groups and would like to move rapidly through the educational experience and have as much learning as possible for sure certification of such learning. They would desire a broader range of offering in their spare time – evening, early morning or weekend through courses, independent study or audio or visual cassettes. They would want courses of shorter duration and more focused normal college courses. This necessity means the designing of courses by the university to suit the special needs of the clientele for example, those which would require 5 to 6 days at 12 hours a day. Apart from the adults, the younger students are also reluctant to devote more time to classrooms and would prefer such high input courses of shorter duration.

2. A distinct feature in the next few decades will be the growing number of non-traditional educational delivery system. Entire degree programmes will very possibly be run through different types of delivery systems offered through radio, television, computer, video and audio cassettes which would of course supplement the printed material. It will be felt economical by institutions and universities to use their modern media and to cater to a large clientele drawn from different sections of the society, the un-served or the underserved sections – spread over the entire sub-continent. The distance education programme for graduates, postgraduates and probably doctoral programmes will therefore continue to demand a fresh look from a closer distance. An immediate consequence of these far reaching changes would be that those universities, which fail to adapt themselves to the situations, would meet inevitable doom. Funding problems will of course be a major hurdle. External agencies like the Higher Education Communication, the government or other external agencies will have to increase their grant or donations if education is viewed by them as an ultimate necessity of the society that is to emerge.

3. Another important and probably the inevitable thing that should not be lost sight of, is the training of the teachers who would be called upon to handle the students. There would be a vast change in the role of the teacher of such a society that is emerging. The teachers will have to devote considerable time to collect information and present is to students viz., new technologies. Diagnosing students' needs and prescribe in

individual courses of study; as per their needs by regularly updating the same would be necessary. The role of the teacher would be more like the manager of a team of students. This would be like a mini-educational system within the university. All the modern communication technologies – the hardware and the software would be available to meet the academic goal.

To sum up one can visualize exciting opportunities and perplexing opportunities that await the Pakistani universities in the next few decades. In the highly competing world the managers of the universities and educational institutions will have to prepare themselves for situations of very complex nature. The faculty members will have to understand their roles and prepare themselves accordingly. Education would be those of the future society whose needs would prompt the universities to reorient their objectives.

In the above paragraph, we have dealt, in brief, with a general future picture of a Pakistani university as studied from our present experiences with a suggestion that any planning of the university curriculum should necessarily take cognizance of this distant view in the horizon. This is a theoretical projection into the future. The actual management of a distance education institute in the larger framework of a university is however a problem of the immediate present and cannot be set aside for tomorrow. Further, any outline of the management is necessarily linked up with our own experiences in the limited context of our environment comprising the university, the state government and the region to whose need the institute is creating. As an inevitable necessity, the style of functioning of the institutes will differ and should also be appreciated by other

sister institutes where favourable environments might lead them to different conclusions or theories.

5.2   Objectives

After the study of this unit, you will be able to:

1. Discuss alternative traditional educational delivery systems.
2. Elaborate different organizational structures.
3. Compare different organizational structures.
4. Suggest some tips for preparation for the interview.
5. Develop questions for Non-directive interview for a specific post.

5.3   Organisational Structure of Distance Education

Organizing requires both differentiation and integration. The process of differentiation is setting up the arrangements for an individual job or task to be undertaken effectively, while integration is coordinating the output of the individual task so that the whole task is completed satisfactorily. There is no one best way of doing either. The organizing of the individual job will vary according to the degree of predictability in what has to be done, so that the organizing of manufacturing jobs tends to emphasize obedience to authority defined tasks and much specialization. Jobs that have constantly fresh produce frequent redefinition of job boundaries, a tendency to flexible networks working relationships rather than a clear hierarchy, and a greater degree of individual autonomy.

The integrating process will be influenced by the degree of differentiation. The greater the differentiation, the harder the

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task of coordination. Also Lawrence and Lorshch (1967), in probably the most influential work on organization written, have demonstrated that the natures of the integration problem with the rate at which new products are being introduced. Galbraith (1977) has further shown that the variations in the level of predictability that require different forms of organization depend on the capacity of the organization to process information about events that cannot be predicted in advance. As the level of uncertainity increases, more information has to be processed with organization being needed to provide the processing capacity.

We can now see how differentiation and integration are put into action in face of uncertainity to produce a working organization. There are three fundamentals:

Task Identity and Job Definition

A job holder or task performer has a label or title which provides the basic identity of tasks the job holder performs, the job content and boundaries. Some of the titles are explicit and understood well enough to meet most organizational requirements. Hearing that someone's job is Dean of a Faculty, i.e, marketing director, office clearer, commissionaire, plumber, photographic model or postman provides you with a good initial understanding of that person's role in the organization. Other titles imprecise or confusing. A single issue of a national newspaper includes the following among the advertised vacancies: clerical assistant, jazz assistant administrator, plastic executive, administrator, information specialist, third part products manager, sub tilter, editorial services controller and (most intriguing of all) best body. Some of these are general titles, which are widely used to cover jobs without highly specific content, others probably are precisely understood by those with experience in a particular industry, and others may be full of

meaning for those in a particular business, even though they puzzle those who have no inside knowledge. However what are the job title, there are still many question to be answered so that other members of the organization, and those outside, can understand the job holder's status, power, expertise, scope of responsibility and reliability. These questions are specially important where jobs adjoin each other. Where does A's responsibility finish and B's begin? Do areas of responsibility overlap? Are there matters for which no one appears to be responsible?

Review topic 5.3
Write down job titles in your organization that you do not understand, or which you regard as confusion. How would you change them so that they become more effective labels? How many job titles are there that have words like 'senior', 'principal' or 'manager' in them, which have no significance other than to confer a spurious status on the job holder?

The standard devised for clarifying task identity and job definition is the description, but this is frequently seen as the epitome of stifling, irrelevant the job description is as central to the work of the personnel's specialist as are case notes to a doctor, but in matter of organization it is a problem. It is an essential device for allocating people to jobs and tasks to people in a way that can understood and to avoid gaps and duplication, but there is always the risk that becomes a straitjacket rather than a framework. In our research we found the only one respondent in four used job analysis for any aspects of organization work, compared with one in two using job analysis for recruitment and selection, two in there for payment arrangements, and one in five for training. Remembering the significance we have already seen of unpredictability as a

variable in organizing, there is a further emphasis on the difficulty of using descriptions. Here are some typical objections:

`I couldn't possible to write down what I do. There is always something new'. 'If all my staff had job descriptions, I would have even less authority than I've got already. They would refuse to do anything unless it was specified in the job descriptions.

'Issuing job descriptions is inviting pay claims. As soon as new duties come along they are seen as justifying more money'.

'A job description ties you down and makes you anonymous. I want job that I can put my own imprint on, making it distinctively my individual performance. I'm not a machine'.

In stable organizations, the job description is probably an acceptable mechanism for clarifying the boundaries and content of jobs. In organizations where uncertainty is the only thing that is certain, the job description will be less acceptable and appropriate, but identifying the task and defining the job remain a fundamental of the organizing process.

Identify first with the group and may feel estranged from the rest of the organization.

When groups are formed, their activities are then linked with those of other groups to aid the necessary co-ordination of activities. This will partly be achieved through the hierarchy with its formal allocation of authority at the various crossover points so that departments are connected and differences of view

between them can sometimes be resolved by this means. Another device is planning, whereby loan elaborate plan of interconnecting activities is developed with detailed consultation and agreement, so that different groups are committed to an overall design of their activities over a future period. If each group then goes off and meets that set of objectives, theoretically the output of each fit together according to the prearranged plan and the organization is a corporate success. The cynical laugh you probably produced in reading those last few lines illustrates the shortcomings of the planning approach. There are few examples of corporate plans that succeed in fitting together the activities of disparate groups, and sometimes obsession and conflict about the plan become more important than monitoring the progress of the business. However, some plan is better than no plan at all, and a few plans are very successful. Furthermore, the desire to control some aspects of the future is such a deep-rooted human drive that we shall undoubtedly continue trying to improve our planning methods and the relative autonomy that they provide.

A third way of linking the work of different groups and departments is by meetings. If our reference to planning produced a cynical laugh, this reference to meetings probably produced a hollow groan. Managers dislike meetings and tend to disparage those of their colleagues who seem to enjoy them (without actually admitting to enjoyment). That distaste is usually for the routine, dry as-dust meeting where Akram always goes on and on, Aslam tries to be too damned clever, Ahmed hasn't read the papers, and as for Blankenship…Meetings frequently deteriorate to that stereotyped nightmare, but lack of meetings leads to mistrust of colleagues whose motives are misinterpreted, as well as to simple ignorance about what is happening. Meetings that are properly conceived and well run improve understanding of other people's problems, provide the

opportunity of helping to solve those problems, and help to produce decisions and plans of action to which individual members of the organization are committed.

Decision-making complexes

Organizational affairs are pushed along by decisions being made, some by individuals and some by collectives. The scope of decisions thus made by individuals is usually determined by their labeling or by their position in the hierarchy. Some matters, however, are reserved for collective decision. The strategies that emerge form the boardroom have to have majority support among those taking part in the discussion, even if one person may dominate the discussion through ownership influence or personal status. Policy on acquisitions is other example that usually emanate from discussion. The organization designer is interested in determining the nature of the groups that make these decisions and resolving matters.

We use the term decision-making complexes, as the decision is made on the basis of much more than the face-to-face discussion in the meeting, which produces the decision. In large undertakings a decision-making group is surrounded by working parties, aides, personal assistants, special advisers and secretaries, who provide position papers, draft reports, mediate between factions and prepare the ground. All these preliminaries partly shape the decision that is eventually made. The increasing number of personnel directors who have effective control of management manning levels are well placed to influence this aspect of organization design by judging which of the endless requests from their colleagues for more staff could put this decision-making process out of balance by increasing the assistance available to one decision maker at the expense of others.

Alternative forms of organization structure

Charles Handy (1985) drew on earlier work by Roger Harrison (1972) to produce a four-fold classification of organizations according to their basic culture, which has caught the imagination of most managers who have read it. Here we present a slightly different explanation, but we acknowledge the source of the main ideas.

There is no single organizational form, no single best way of doing things:

> Organizations are as different and varied as the nations and societies of the world. They have differing cultures-sets of values and norms and beliefs-reflected in different structures and systems. And the cultures are affected by the events of the past and by the climate of the present, by the technology of the type of work, by their aims and the kind of people that work in them. (Handy 1985, p.9).

Despite this variety there are three broad types of structure found most often and a fourth type that is becoming more common.

The entrepreneurial form

The entrepreneurial form emphasizes central power. It is like the spider's web, with one person or group so dominant that all power stems from the center, all decisions are made and all behaviour reflects expectations of the center.

There are few collective decision, much reliance on individuals, and with actions stemming from obtaining the approval of key figures. It is frequently found disorganizations

where matters have to be decided quickly and with flair and judgment rather than careful deliberation. Newspaper editing has enter preneurial form in its organization and most of the performing arts have strong centralized direction.

This type of structure is the form of most small and growing organizations as they own their existence to the expertise or initiative of one or two people, and it is only by reflecting accurately that originality that the business can survive. As the organization grows larger this type of structure can become unwisely because so many peripheral decision cannot be made without approval from the center, which then becomes over-loaded. It is also difficult to maintain if the spider leaves the center. A successor may not have the same degree of dominance. In some instances the problem of increasing size has been dealt with by maintaining entrepreneurial structure at the core of the enterprise and giving considerable independence to satellite organizations, proving that overall performance targets are met.

The bureaucratic form

The bureaucratic form emphasizes the distribution of power and responsibility rather than its centralization. It has been the conventional means of enabling an organization to grow beyond the entrepreneurial form to establish an existent that is not dependent on a single person or group of founders. Through emphasizing role rather than flair, operational processes become more predictable and consistent, with procedure and committee replacing individual judgment.

Responsibility is developed through the structure and it is a method of organization well suited to stable situations, making possible economies of scale and the benefit of specialization.

There is seldom the flexibility to deal with a volatile environment and a tendency to be self-sufficient:

> The bureaucratic approach is intended to provide organizational control through ensuring a high degree of predictability in people's behaviour. It is also a means of trying to ensure that different clients or employees are treated fairly through the application of general rules and procedures. The problem is that rules are inflexible entrustments of administration which enshrine experience of past rather than present conditions, which cannot be readily adapted to suit individual needs, and which can become barriers behind which it is tempting for the administrator to hide.

Bureaucracy has been the standard form of structure for large organizations for thousands of years and remains the dominant form today. It has, however, come under criticism recently because of its inappropriateness in times of change and a tendency to frustrate personal initiative.

The matrix form

The matrix form emphasizes the co-ordination of expertise into project-oriented groups of people with individual responsibility. It has been developed to overcome some of the difficulties of the entrepreneurial and bureaucratic forms. It was first developed in the United States during the 1960s as a means of satisfying the government on the progress of orders placed with contractors for the supply of defence material. Much of the material had to be designed and developed before manufacture and delivery, so that offices of government agencies frequently wished to check on progress. This provide very difficult with a bureaucracy, so it was made a condition of

contractors that the contractor should appoint a project manager with responsibility for meeting the delivery commitments and keeping the project within budget. In this way the Government was able to deal with a single representative rather than with a number of people with only partial responsibility. The contractors then had to realign their organization so that the project manager could actually exercise the degree of control necessary to make the responsibility effective. This is done either by appointing a project manager with considerable status and power, or by creating product teams with specialists seconded from each functional area. The first method leaves the weight of authority with the functional hierarchy, while the product managers have a mainly coordinating, progress-chasing role specialists. The second method shifts power towards the product managers, who then own teams of experts, with the functional areas being seen as a resource rather than the center of action and decision. A third, but less common, situation is a permanent overlay of one set of hierarchical connections laid horizontally over a pre-existing conventional, vertical hierarchy. This brings the relative power distribution into approximate balance, but can also make decision-making very slow as a result of that equilibrium.

The matrix is the form that appeals to most managers as a theoretical method of organization as it is based on expertise and provides scope for people at relatively humble levels of the organization to deploy their skills and carry responsibility. It has, however, recently lost favour because it can generate expensive support systems for product managers needing additional secretaries, assistants and heavy administration.

On of the ways in which matrix might find a new lease of life is in the increasing internationalization of business, where the impracticability of bureaucracy will be most obvious:

The Independence Form

The independence form emphasizes the individual and is almost a form of non-organization. The other three are all methods of putting together the contribution achieved by the co-ordination of effort. The independence form is a method of providing a support system so that individuals can perform, with the Barristers' chambers and doctors' clinics work in this way and it is a form of organization attractive to those of independent mind who are confident of their ability to be individually successful. Some firms of consultants and craft workshops operate similarly, with a background organization to enable the specialists to operate independently. It has been regarded as unsuitable for most types of undertaking because of the lack of co-ordination and control, but it is attractive to many people and there is growing interest in it with the increasing emphasis on individual responsibility in business and a tendency to focus on professional skill rather than expertise.

This four-fold classification is a means of analysis rather than a description of four distinct types of organization with any undertaking being clearly one of the four. Bureaucracies will typically have matrix features at some points and few entrepreneurial structures are quite as 'pure' as described here. Probably any organization you could name could be classified as having one of these four features dominant and in some there is one form dominant in one section of the business and another form dominate elsewhere. Large banks, for example, are bureaucratic in their ratailing operations as consistency is of paramount importance

Form	Conditions
Entrepreneurial	Dominance of single person or group at center, due to ownership, expertise or the need of the operation for a strong controlling figure. Modest size, simple technology and single, dominant technical expertise. Uncertain or rapidly changing environment.
Bureaucratic	Complex organization with devolved power and expertise. Large size, complex technology and varied technical expertise. Stable environment.
Matrix	Complex organization with bureaucratic features and need to develop responsibility and enhance responsiveness to clients.
Independence	Simple organization form to support independent activities of specialists, with little co-ordination. Professional, rather than management, orientation among specialists.

Range of highly skilled express, which know exactly what to do, provided that a conductor provided co-ordination and brio. That superb metaphor is slightly weakness, as he concedes, by the fact that a business does not have the main co-ordination mechanism of the symphony orchestra: the score to read from.

We believe that the key to funding a new organizational form lies in reviewing the notion of hierarchy. The analyses of some economists (notably Marglin 1974; Williamson 1975) give us a different angle on working relationships within

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organizations, as they look for a rational basis. The entrepreneurial, bureaucratic and matrix forms all take hierarchy as a given, and the guiding principle is to whom are you accountable, just as the law sees employees as servants of a master-the employer- and the legal basis on which most of us work is a contract of employment. If you start without the hierarchical assumption, it is just as feasible to construed working relationships as transactions. This produces a choice, as the working relationship can either be set in a market, where one buys services from another, or it can be set in a hierarchy, where one obtains work from another. Pinchot (1985) has advocated the idea of 'intrapreneuring' as a way of making members of a hierarchy more entrepreneurial in their approach to dealing with each other and with their responsibilities.

Tentatively, we describe the new form of organization as professional. It has many features of the independence form and some of matrix. Fundamental to tits operations is the core/periphery type split, which is described in our chapter on labour markets. The core contains all those activities that will be put out to tender by contractors. The core should contain those skills that are specialized to the business, rare or secret. Logically, all the other activities are put in the periphery, but suppose there is an unexpected shortage of people to provide peripheral skills? In approaching privatization, several British water authorities reduced their employment of civil engineers, because they were expensive and the work could be done on an occasional basis by consultants. Gradually, however, there developed a shortage of civil engineers, in the consultancy firms, so these simple rules of the market place ceased to operate. The consultants were normally too small to carry trainees in the same way that the water authorities had done. Should water authorities now employ more core civil engineers?

The approach to the core employees is to give them a strong sense of identification with the business and its success, usually through developing a corporate culture. Those on the periphery have a close specification of what is required from them and their continued engagement depends on meeting the arms of the contract.

At first sight there is one way in which this form of organization is unattractive to most people, namely the lack of secure employment. Kanter (1989, p.358) believes there is no escape from this, and that security in the future will come from continued employability rather than continuity of employment. There will be no safe havens for those who can no longer keep up. This seemingly harsh message may nevertheless be the way of overcoming the greatest weaknesses of bureaucracy, as the safe havens are usually in senior posts.

The lessons of the last twenty years for the organization designer are that thining with the structure will be fruitless without thinking through the purpose of the organization, the nature of the demands being placed on it from outside, the types of operation which are to be organized, and the people available. Efficient bureaucrats may not make good entrepreneurs, independence is clearly inappropriate if the operations is one with closely interlocking tasks, and moving to a matrix may not be the best way of dealing with a dramatic change in the product market.

Weber (1947) remains the best possible reference for understanding the natue of bureaucracy, although Blau (1966) is useful to read in conjunction with Weber, Davis and Lawrence (1977) is the standard source on matrix structures. Apart from Child (1984) and Handy (1985), the best comprehensive treatment of different approaches to organization is undoubtedly

Mintberg (1979). Peters (1989) and Kanter (1989) are both stimulating in describing the forms of organization of the future.

The alternative inputs to decision –making complex which are both a product of differentiation and a means of integration. An attractive notion from management folklore is that decisions made by committees are cautious, slow and ineffective, while decisions made by individuals are imaginative, swift and creative. As organizational life becomes more complicated, we have to contrast that traditional view with the warning of Toffler:

Too many decisions, too fast, about too many strange and unfamiliar problems not some imagined 'lack of leadership'- explain the gross incompetence of political and governmental decisions today. Our institutions are reeling from a decisional implosion. (Toffler 1980, p.421).

Some decisions are best taken slowly so that they are based on a thorough analysis of all the factors, and many of the decisions are still taken by individuals, even though they may seek endorsement from their colleagues, but we have identified five types of decision best made by a decisions-making complex (DMC).

1. **Simple structuring**: This is where a relatively simple decision has to be made between alternatives, but the advantages and disadvantages have to be carefully weighted before the decision is made-probably by one person. In order that this person can weight the alternatives wisely much detailed analysis and calculation is needed. If the problem is remitted to a group like a think thank, the members can prepare the matter for decision by

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structuring the arguments for and against, leaving the decisions-maker to choose between them/

2. **Complex structuring:** This is similar, except that the decision is not simply between two alternatives. The problem is remitted to the group without the lines of action being clear, so that the DMC is finding possible answers to the question as well as preparing the arguments for and against. Now the member of the DMC have greater scope and greater power as their deliberations will determine the options between which choice is to be made rather than simply preparing the arguments where the choices have already been determined.

3. **Simple consensus:** Simple consensus is the type of decisions where the choice is clear between two alternatives, but where the outcome needs to carry the support of those concerned. The difference in practice between this mode and simple structuring is the membership of the DMC would probably be larger and representative of different interests.

4. **Complex consensus:** Again, a consensus is needed, but the alternatives are not clear before the DMC beings its deliberations.

5. **Development:** This is a quite different type of decision-making from the other four as the reason for remitting the decisions to a DMC is either to develop the skills and capacities of the group members or to develop the cohesion of the organization. The decisions itself is not as important as the process of making the decision, which will

either develop more effective members of the organization by involving in decision-making those who would otherwise lack that experience, or it will help integrate the different parts of the organization by involving representative of each in making decisions which affect them all, so keeping their activities in step.

The DMCs appropriate for these various types of decision will also vary, Simple structuring decisions will usually be undertaken by a small group of one or two aides to a person of considerable personal authority. Complex structuring is likely to be by a larger group of people to cope with the complexity as well as the political sensitivity of the task. Either type could go to a semi-permanent DMC, like a think tank, but is more ofen passed to an adhoc working party. The important feature of the DMCs for consensus decions will be their representative character and their status. Representation needed to produce consensus and status may be needed to give recommendations authority so that they are implemented rather than ignored. Sometimes there will be a working party brought into existence for this sole purpose, but we are now moving into the area of permanent committees, many of which do not simply formulate a decision but make the decisions itself. This type of DMC is the most powerful bond in organizational structure. Development decions-making, where the objective is to develop the capacity of subordinates, is usually the junior board type, but DMCs to integrate the different parts of the organization are rather more influential. We distinguish between them and complex consensus because we see the main purpose as the process of integration and not the substantive decisions, so the DMCs usually have names like coordination group, liaison committee or joint advisory panel.

Organization design and the personnel manager

Of the four fundamentals of the organizing process introduced at the opening of this chapter, we have dealt with structures and decision making complexes. Another aspect- organization development is referred to in the chapter on management development. For personnel mangers to make an effective contribution to implementing their personnel philosophy stake in preferring to concentrate on more individual and specific issues, like training or employee relations, yet the inadequacies of organization decision can make impractical many the other initiatives which personnel mangers seek to get underway and the professional expertise of personnel mangers makes them better equipped than any of their colleagues to take on this responsibility:

> If the human, social and structural characteristics of the organization are…. inextricably linked, it follows that personnel managers will not develop the full potential of their function unless they are as proficient analysis as they are as in organizational analysis as they are in diagnosing human and social needs. (Fowler 1985, p.270)

Summary propositions

5.1 Organization design is occasionally a process of creating an entire organization from scratch., but for most people it is modifying bits of an existing organization.

5.2 Personnel officers rarely play a significant role in organization design.

5.3 The four fundamentals of organization design are task identity and job definition. Structure, decision-making complexes and operating procedures.

5.4 Alternative forms of structure are entrepreneurial, bureaucratic, metrix and independence. A new form of professional organization can also be seen.

5.5 Alternative forms of decision-making are simple structuring. Complex structuring, simple consensus, complex consensus and development.

In order to get more information on the topic please read the below referred material.

Holmberg, B. (1998)	Theory and Practice of Distance Education, 2nd ed. London, Routledge, pp.133-145	5-1

5.4   Categories of Staff

As indicated in figure 5.1, the process begins with a selection by interview, followed by an orientation of the new employee. Once the employee has come on board, an assessment of his or her knowledge, skills and abilities is made in the light of job requirements. If the new employee's characteristics closely match those required by the new position, very little training will be needed. However, if they do not match up, then the deficiencies must be eliminated through proper training and development. Removal of the deficiencies becomes the goal of the training and development process covered in the next chapter.

The next step is to identify the specific actions that will be needed to accomplish the goals. There is a wide variety of action plans which could be implemented. It should be

emphasized at the outset, however, that the employees' job assignments and their work experiences on the job are almost always the most important opportunities for achieving developmental strategies are available, they are usually supplemental to the work experience itself. Supervisors, then, should be particularly careful to give work assignments that are consistent with their employees, developmental goals and help accomplish them.

In the next phase, job performance is measured. This step is critical, because it becomes the basic checkpoint for future assessment and developmental plans. The feedback loop in figure 5.1 should also be noted. This loop closes the circuit and indicates that the employment process is a continuous and ongoing one.

Figure 5.1
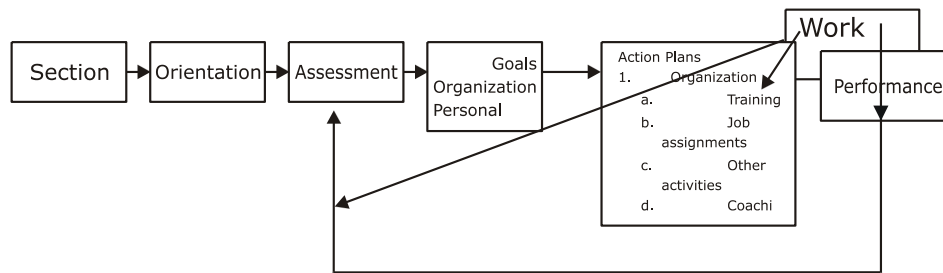
Table 5.1:
QUALIFICATIONS AND RESPONSIBILITIES – MECHANICS JOB

Responsibilities
Inspect, maintain and repair automobiles including:
- Body work and welding
- Operations and/ or use of diagnostic machinery, charts and manuals
- Overhauling engines, pumps, generators, transmissions etc.
- Maintenance activities such as repairing tires, lubrication, changing oil, and check batteries
- Planning and directing the work of part time employees
Qualifications
- Mechanical ability
- Training or experience equal to one year of vocational school in automotive care
- Ability to work with people and direct their activities
- Willingness to work ten-hour a day

The Staff Function

Staffing involves mainly selection and orientation. The supervisor's role in staffing will depend on organizational policies and practices. In many large organizations, the personnel department both interviews and provides a formal orientation programme for new employees. A supervisor may not even see new employees until they show up for the first day of work. In smaller organizations, supervisors may bear the entire responsibility for locating job applicants, making the selection decision, and orienting new employees to the organization and their specific jobs. Apart from their role at these two extremes, most supervisors will become involved in the staffing function during the selection interview and job orientation.

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The Selection Interview

The first time most supervisors become involved with the staffing process is during the selection interview. This interview is essentially a matching process, where the objective is to find the employee whose knowledge, skills, abilities and motivation most closely match the knowledge, abilities, skills, and motivation required in the job. To be effective, the selection interviewing process must go through several stages.

Establish Criteria

This first step is critical to the objective of obtaining qualified applicants and matching them to the position. The supervisor may list the major duties and responsibilities for the job and the qualifications, which successful applicants will need. Where position descriptions are available, they can serve as good guidelines for determining job responsibilities and qualifications. Examples of how the qualifications and responsibilities of a position might be stated are provided in table 5.1. Only those qualifications, which are directly related to job performance – bona fide occupational qualifications (BFOQ) should be listed and considered. Qualifications, which are not related to job performance may be judged discriminatory by the courts and can result in costly lawsuits. In large organizations, the supervisor may be required to fill out a requisition form similar to the one in figure 5.2. Supervisors who do not have a personnel department or are not required to fill out a requisition can use figure 5.2 as a guideline.

Prepare for the Interview

There are many things a supervisor must consider in preparing for an effective selection interview: scheduling; finding a quiet room where there will be no interruptions; canceling phone calls; preparing possible questions; doing

homework on starting wages, benefits, etc; reviewing the applicant's resume; reviewing job qualifications and so on.

Depending on the type of position the supervisor is filing, these considerations will vary somewhat. However, there are two overriding considerations in preparing for the interview. First, supervisors must be able to give and receive the information that will allow them and the job applicants to determine whether they have mutual interests. Second, and just as important, is the awareness that a job interview is a two-way process – that while the supervisor is assessing an applicant, the latter is also sizing up the employer's ability to match his or her own needs. Thus, supervisors should attempt to make a favorable impression on applicants. A good rule of thumb is that a job interview deserves preparation and a job applicant deserves to be received with the courtesy that one would extend to any important guest.

Begin the Interview

The first objective of the interview is to put the candidate at ease. One way to do this is to start by mentioning a topic of mutual interest such as a recent election, the score of a cricket, or even a question such as "Did you have any trouble finding our building"? After a couple of minutes, the candidate will usually be ready to begin the job interview. A warning at this point, however, is that with many candidates, this warm-up stage may be unnecessary and can lead to an aimless discussion which only heightens rather than decreases anxiety.

A good way to get into the actual interview is to offer a short description of the job, noting the major responsibilities it entails and the qualifications it calls for. Supervisors should let the interviewees know that they are interested in learning as much as possible about them and that they also want to give the applicants as much information about the job as they can so that they can make a good selection decision.

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Figure 5.2:

EMPLOYEE REQUISITION

Please be explicit. Because the quality of personnel referred to you largely depends on the information providing by this form, anticipate your needs as far as advance as possible	For employment department use requisition number

Classification/title	Department	Division

Proposed wage or salary	Date of start	Location

Position is:	( ) Addition to staff ( ) Replacement ( ) Regular (permanent) ( ) Other (part-time, summer, etc)	Why needed?

Duties and responsibilities in detail: Include any unusual features – work weeks etc.

Will employee be expected to drive a vehicle: Yes ( )   No ( )
If yes   ( ) car   ( ) light truck   ( ) heavy truck
Will employee be assigned shift work in this classification immediately? ( ) Yes   ( ) No Eventually   ( ) Yes   ( ) No

Position qualifications: For education, experience, special training, etc. use bona fide occupational requirements only.

APPROVALS	EMPLOYEE RELATIONS DIVISION
Department Manager Date	( ) Labor relations Date ( ) Compensation Date
Division Manager Date	Division Manager Employee Relations Date

Table 5.2:

GUIDELINES FOR PRE-EMPLOYMENT INQUIRIES

	Lawful	Unlawful inquiries
Name	Have you worked for this organization under a different name? Is any additional information relative to change of name, use of an assumed name, or nickname necessary to enable a check on your work on your work and educational record? If yes, explain.	Inquiries about the name which would indicate applicant's lineage, ancestry, national origin, or descent. Inquiries into previous name of applicant where it has been changed by court order, marriage, or otherwise.
Marital and family status	Whether applicant can meet specified work schedules or has activities, commitments or responsibilities that may hinder the meeting of work attendance requirements. Inquiries as to a duration of stay on the job or anticipated absence which are made to males and females alike.	Any inquiries indicating whether an applicant is married, single, divorced, engaged, etc. Number and age of children. Any questions concerning pregnancy. Any such question which directly or indirectly results in limitation of job opportunity in any way.
Age	If a minor, require proof of age in form of a work permit or a certificate of age. Require proof of age by	

	birth certificate after being hired. Inquiry as to whether or not the applicant meets the minimum age requirements as set by law and requirements that upon hire, proof of age must be submitted. If age is a legal requirement, "If hired, can you furnish proof of age"?/ or statement that hire is subject to verification of age.	
Handicaps	Whether applicant has any handicaps or health problems sensory, mental, or physical, which may affect work performance or which the employer should consider in determining job placement.	General inquiries (i.e. "Do you have any handicaps"?) which would tend to privilege handicaps or health conditions which has to relate reasonably to fitness to perform the job.

Sex	Inquiry or restriction of employment is permissible only where a bona fide occupational qualification exists (This BFOQ exception is interpreted very narrowly by the courts and EEOC). The burden or proof rests on the employer to prove that the BFOQ does exist and that all members of the affected class are incapable of performing the job.	Sex of the applicant. Any other inquiry which would indicate sex. Sex is not a BFOQ because a job involves physical labor (such as heavy lifting) beyond the capacity of some women nor can sex be used as a factor for determining whether or not an applicant will be satisfied in a particular job.
Race or color	General distinguishing physical characteristics such as scars etc.	Applicants race. Color of applicant's skin, eyes, hair, etc. or other questions directly or indirectly indicating race or color. Applicant's height or weight where it is not relevant to job.
Address or duration of residence	Applicant's address. Inquiry into place and length of current and previous addresses. How long a resident of this state or city.	Specific inquiry into foreign addresses, which would indicate national origin. Names or relationship of persons with whom applicant resides. Whether

		applicant owns or rents home
Birthplace	"Can you after employment submit a birth certificate or other proof of Pakistani citizenship?	Birthplace of applicant. Birthplace of applicant's parents, spouse, or other relatives. Requirement that applicant submit a birth certificate, naturalization or baptismal record before employment. Any other inquiry to indicate or identify denomination or customs
Military record	Type of education and experience in service as it relates to a particular job.	Type of discharge.
Photograph	May be required after hiring for identification	Request photograph before hiring. Requirement that applicant affix a photograph to his application. Request that applicant, at his option, submit photograph. Requirement of photograph after interview but before hiring.

Citizenship	Are you a citizen of the Pakistan? If you are not a Pakistan citizen, have you the legal right to remain permanently in the Pakistan? Do you intend to remain permanently in the Pakistan? Statement that if hired, applicant may be required to submit proof of citizenship. If not a citizen, are you prevented from lawfully becoming employed because of visa or immigration status?	Of what country are you a citizen? Whether applicant or his parents or spouse are naturalized or native born Pakistan citizens. Date when applicant or parents or spouse acquired Pakistan citizenship. Requirement that applicant produce his naturalization papers or first papers. Whether applicant's parents are citizens of the Pakistan.
Ancestry or National Origin	Languages applicant reads, speaks or writes fluently.	Inquiries into applicant's lineage ancestry, national origin, descent, birthplace, or mother tongue. National origin of applicant's parents or spouse.
Education	Applicant's academic, vocational, or professional education; school attended. Inquiry into language skills such	Inquiry asking specifically the nationality, racial or religious affiliation of a school, inquiry as to what is mother tongue or how foreign language ability

	as reading, speaking, and writing foreign languages.	wa acquired.
Experience	Applicant's work experience. Other countries visited.	
Conviction, Arrest and Court Record	Inquiry into actual convictions, which relate reasonably to finless to perform a particular job. (A convection is a court ruling where the party is found guilty as charged. An arrest is merely the apprehending or detaining of the person to answer the alleged crime)	Any inquiry relating to arrests. To ask or check into a person's arrest, court, or conviction record if not substantianally related to functions and responsibilities of the prospective employment.
Relatives	Names of applicant's relatives already employed by this company. Names and addresses of parents or guardian of minor applicant.	Name or address of any relative of adult applicant.
Notice in Case of Emergency	Names of persons to be notified.	Name and address of relative to be notified in case of accident or emergency.

Organization	Inquiry into the organization of which an applicant is a member providing the name or character of the organization does not reveal the race, religion, color, or ancestry of he membership. What offices are held if any.	List all organizations, clubs, societies and lodges to which you belong. The names of organizations to which the applicant belongs if such information would indicate through character or name the race, religion, color, or ancestry of the membership.
Credit Rating	None	Any questions concerning credit rating, charge accounts etc.
References	By whom were you referred for a position here? Names of persons willing to provide professional and/ or character references for applicant. Who suggested that applicant apply for a position here?	Require the submission of a religious reference. Request reference from applicant's pastor.
Miscellaneous	Notice to applicants that any misstatement or omissions of material facts in the application may be cause for dismissal.	

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Outline the Content of the Interview

A large part of the initial discussion during the interview should be oriented towards gaining information from candidates to assess their ability to match the job requirements. Thus, supervisors should have prepared a list of questions (at least mentally), which will elicit the needed information. The basis for these questions must be taken from a list of bona fide occupational qualifications, as mentioning earlier. Table 5.2 provides some specific guidelines that should help supervisors to avoid legal difficulties. Many supervisors/heads complain that the laws are unnecessarily restrictive. A common joke among them is that "the only legal piece of information that can be requested is the candidate's name, and even that may be questionable.

Actually, it is possible to get all the needed information (and then some) without asking discriminatory questions. One technique that helps do this is called nondirective interviewing. In this approach, the interviewer asks broad, open-ended questions and encourages the applicant to elaborate on areas of particular interest. Examples of open-ended questions that might be used are provided in table 5.2.

Table 5.2 Some Open-Ended Questions for Nondirective Interviewing

1.	Can you give me a brief history of yourself?
2.	What do you believe are your particular strengths with respect to this job?
3.	What are some possible weaknesses that you may have with respect to this job?
4.	What did you like about your last job?

5.	What did you dislike about your last job?
6.	Why did you leave your last job?
7.	What educational experiences do you have that are relevant to the present job?
8.	What previous experiences do you have that is relevant to the present job?
9.	Do you anticipate any difficulties in working overtime or meeting any other requirements of the job?
10.	How do you get alongwith other people?

The most common problem, most supervisors have in conducting an effective interview is that they do not exercise enough self-restraint and talk too much themselves. Supervisors who are able to regulate their own talking will usually find that even the quietest applicant will open up when given the opportunity. (To prove the point, try looking anyone in the eye for thirty seconds without talking). After the applicant does begin to open up, brief questions such as "Can you elaborate on that"? or statements such as "I do not think I quite understood what you meant" should keep the conversation going. Of course, all the questions should be aimed at gaining more information about the applicant's legitimate qualifications.

If the applicant's qualifications are a fair match with the job, the next part of the interview should be devoted to describing the major responsibilities and duties of the job. The major objective here is to prospective employees as much knowledge about the job as possible so that applicants can make a rational choice as to whether or not they desire the job. Included would be the major advantages and disadvantages of working for the organization. Although candidates may be more

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likely to accept the job if the negative aspects are not mentioned, they are also less likely to be satisfied or to remain on the job if they do not know about them beforehand. The wasted time, expense, and turnover that results from giving candidates inaccurate information makes this practice much more costly than it would be to provide an accurate picture of the job from the beginning.

Although supervisors do most of the talking in this phase of the interview, they should also listen carefully for any additional information the interviewee has to offer. Interviewees are often able to do a better job of providing useful information if they are first given a clear picture of the job requirements.

At the conclusion of the interview, the supervisor should inform the candidate of the specific date when the position will be filled. Importantly, supervisors should let candidates know where they stand and have the proper approvals made in order to make any commitments. Nothing turns potential employees off more than not knowing where they are in the employment process or finding that the terms and conditions of an offer are not as the supervisor stated them at the end of the selection interview.

Affirmative Action

The laws regarding equal opportunity in employment have a particularly important impact on the staffing function. According to the constitution, all citizens have equal right. The constitution makes it unlawful to discriminate on the basis of race, color, religion, sex, national origin, or age in any aspect of employment (hiring, firing, promotion, compensation, and other terms, privileges, and conditions of employment). Obviously, this is tremendous impact on the role of minorities, women, and older employees in staffing the organization.

Following recommendations, if taken with the spirit, will be helpful:

1. Management should publicly issue, in writing, commitment to a policy of equal opportunity employment and affirmative action.

2. A specific individual with responsibility and authority may be designated to develop and implement an affirmative action plan.

3. The organization may widely publicize and promote its affirmative action programme.

4. Specific programmes to ensure that no discrimination exists in any employment area should be developed and implemented.

5. An information system, which monitors and evaluates the nondiscrimination programme, should be established.

6. Supportive organizational and community-based programmes should be encouraged and helped.

A major goal from both pragmatic and moral standpoints is to have nondiscrimination in all aspects of staffing. Equal opportunity for all employees is an important goal for all supervisors.

To add further knowledge on the topic, please read the reference given below:

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.120-140	5-2

Staff of Distance Education Institution

The staff of distance education institution can be classified into following categories:

i)   Administration

ii)   Academic staff

iii)   Service staff

Structure of Allama Iqbal Open University Islamabad Pakistan is being presented.

ADMINISTRATION DEPARTMENTS

- Registrar's Department
- Treasurer's Department
- Audit Department
- Project Directorate
- Public Relations Office

ALLAMA IQBAL OPEN UNIVERSITY
Administrative Structure

Chancellor
(President of Pakistan)

Pro Chancellor
(Federal Minister of Edication)

Executive Council

Vice Chancellor

Vice Chancellor's Office

Selection Board

Finance Committee

Academic Councel
- Research and Educational Technology
- Board of Advance Studies and Research
- Academic Planning and Development
- Faculty Board
- Committee of Courses

Faculties
- Departments

Administration
- Registrar
- Treasurer
- Audit
- Project Directorate
- Public Relation Office

Service Departments
- Bureau of Academic Planning and Course Production
- Institute of Education Technology
- Directorate of Admission
- Directorate of Examination
- Computer Center
- Research and Evaluation center
- Central Library
- Print Production Unit
- Editing Cell

Students Support Services
- Directorate Regional Campuses Centers Coordinating Office
- Directorate of Student's Advisory and Counseling Services

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ACHIEVEMENTS OF FACULTIESI ACADEMIC DEPARTMENTS

A)   FACULY OF EDUCATION

- Department of Educational Planning and Management
- Department of Teacher Education
- Department of Distance and Non-Formal Education
- Department of Special Education
- Department of Science Education
- Department of Adult and Continuing Education

B)   FACULY OF SOCIAL SCIENCES AND HUMANITIES

- Department of Business Administration
- Department of Commerce
- Department of Economics
- Department of English Language & applied Linguistics
- Department of History
- Department of Pakistan Studies
- Department of Iqbal Studies
- Department of Urdu
- Department of Mass Communication
- Department of Library & Information Sciences
- Department of Sociology, Social Work and Population Studies
- Department of Women Studies
- Department of Pakistani Languages
- Department of Law

C) FACULY OF SCIENCES

- Department of Home and Health Sciences
- Department of Agricultural Sciences
- Department of Mathematics and Statistics
- Department of Computer Sciences
- Department of Engineering and Technology
- Department of Chemistry
- Department of Environment Sciences
- Department of Biology
- Department of Physics

D) FACULY OF ARABIC & ISLAMIC STUDIES

- Department of Arabic
- Department of Islamic Thought, History & Culture
- Department of Hadith & Seerah
- Department of Islamic Law (Fiqh)
- Department of Quran and Tafseer

ALLAMA IQBAL OPEN UNIVERSITY
Academic Structure

Executive Council

Academic Council

Vice Chancellor

Academic Planning & Development Committee

Faculty Board

Committee of Courses

Board of Advanced Studies and Research

Research and Educational Technology Committee

Institute of Mass Education
- Basic Functional Education, Community Education
- Basic Primary Education
- Middle & Secondary Education
- Short Term Educational Programs
- Research Material Dev. & Publication

Faculty of Social Sciences and Humanities
- History
- Economics
- Business Administration
- Library and Information Sciences
- Sociology, Social work & Population Studies
- Pakistan Studies
- Mass Communication
- Urdu
- Pakistani Languages
- Research Material Dev. & Publication
- Iqbal Studies
- Commerce
- Women Studies
- Law

Faculty of Science
- Agricultural Sciences
- Engineering and Technology
- Home and Health Science
- Mathematics and Statistics
- Biology
- Chemistry
- Physics
- Computer Science
- Environments Studies

Faculty of Education
- Teacher Education
- Educational Planning and Management
- Special Education
- Distance and Non-Formal Education
- Science Education
- Adult and Continuing Education

Faculty of Arabic and Islamic Studies
- Arabic
- Quran and Tafseer
- Islamic Thought, History and Culture
- Hadith & Seerah
- Islamic Law (Fiqh)

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Vice Chancellor

Director Regional Services

PUNJAB	SINDH	N.W.F.P	BALOCHISTAN	AJK/ NORTHREN AREAS	FEDERAL AREA
Regional Campus Rawalpindi	Regional Campus Karachi	Regional Campus Peshawar	Regional Campus Quetta	Regional Campus Mirpur	Regional Campus Islamabad
Regional Campus Lahore	Regional Campus Hyderabad	Regional Center Chitral	Regional Center Turbat	Regional Center Gilgit	
Regional Campus Multan	Regional Center Dadu	Regional Center Swat	Regional Center Dera Murad Jamali	Regional Center Muzaffarabad	
Regional Campus Faisalabad	Regional Center Mithi	Regional Center Abbottabad	Regional Center Kalat	Regional Center Skardu	
Regional Center Dera Ghazi Khan	Regional Center Larkana	Regional Center Dera Ismail Khan	Regional Center Zhob		
Regional Center Sahiwal	Regional Center Sukkar				
Regional Center Gujranwala	Regional Center Thatta				
Regional Center Sargodha					
Regional Center Mianwali					
Regional Center Bahawalpur					

5.5 Responsibilities and Functions of Personnel Management

After an employee has been selected in a nondiscriminatory manner, the next step in the staffing process is orientation. The goal here is to relieve immediate anxiety and apprehension, about the job and give the new employee the basic information needed to get started properly. In larger organizations, the personnel department provides a brief, formal orientation programme for new employees. Usually this programme includes things like a brief synopsis of the organization's history, an overview of the formal structure, a review of the type of product or service produced, and a summary of employee benefits such as vacations and health and life insurance. Unfortunately, very few of these standard orientation programmes provide any information about the specific jobs the employees will be filling. Thus, supervisors should never feel that their employees are completely oriented before they arrive on the job. Moreover, what little research has been conducted on standard orientation programmes indicates that they are of questionable value.

In any case, there is little question that supervisors play a major role in the orientation of their new employees. The following sections suggest some ways to make this orientation more effective. Although the orientation activities are discussed in a logical sequence, the supervisor can combine some of them or change their order to meet changing needs for an efficient orientation.

Schedule Initial Time with the New Employee

It is very frustrating for a new employee to spend the first few hours of the first day on the job sitting in the supervisor's office, waiting, while he or she completes the daily time slips, talks on the phone, assigns tasks, socializes with coworkers and

so on. If possible, supervisors should schedule their time so that they can devote the first few hours of the day to new employees. If they cannot do this, it may be wise to ask the new employee to come couple of hours late. The supervisor should then plan to spend a good part of the first day with this individual.

Relieve the New Employee's Anxiety

A major objective of the supervisor's orientation should be to relieve new employees of immediate anxieties. This can begin by spelling out in detail the first day's activities. An effective way to orient the new employee on the first day is to make a schedule similar to the one shown in figure 5.3. The initial things on the schedule familiarize the new employee with the basic essentials and are designed to reduce the anxieties of a person who is about to enter a new environment.

Make the New Employee Feel at Ease with Coworkers

A very important aspect of the orientation process is introducing new employees to coworkers and other people with whom they will have frequent contact. Before introducing the new employee to these other individuals, the supervisor might briefly describe their functions and give the new employee some idea of each person's particular abilities and characteristics. A supervisor might say, for example:

> I am going to introduce you to Atif now. He's usually considered the technical specialist here, and people go to him when they have equipment problems. At times he can be rather short and critical with people. He'll probably have a tendency to ride you a little at first because you are new. By and large, though, he's a hell of a good guy and can really help you out of some problems if you get on his good side.

It should be noted, however, that there are some obvious drawbacks to giving "off-the-cuff" opinions of people. There is a fine line between giving the employee needed information about people and plain old gossiping. In general, new employees should be given the opportunity to make their own judgments about their fellow employees, but they should not have to walk into situations of potential conflict without at least some advance warning and information that is known to everyone else.

Figure 5.3: A typical first day of orientation schedule

Time	Activity
8.30-9.30	Survival rudiments: Location of the bathroom, lunchroom, locker room, and time clock, who to call when late summary of important policies, procedures, and rules; and some informal observations about the "ins" and "outs" of the organization.
9.00-10.00	Introduction to fellow workers and other supervisors
10.00-10.15	Coffee break/ informal discussion
10.15-11.00	Basic job information
11.00-12.00	Lunch/informal discussion
1.00-3.30	Place on job with a model, experienced employee
3.30-4.00	Summary of day, Answer any important questions

Familiarize the New Employee with the Job to be Performed

In this part of the orientation, the supervisor shows the new employee where his or her job will be performed and, if possible, they observe someone else, preferably a good

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employee, a work on the job. The infant here is not to provide detailed job instruction but rather to relieve some of the new employee's initial apprehensions by giving him or her an initial feeling of familiarity with the job. A partial list of considerations that might be included in this part of the orientation is provided in figure 5.4. The supervisor should be warned against trying to create too favourable impression and excessive expectations about the job. Supervisors should be as realistic as possible in explaining major challenges or problems in performing the job effectively. For example, the supervisor of a claim department in an insurance company might say something like the following:

> The job can be very rewarding when you know you've made a reasonable adjustment on a legitimate claim and the people are truly grateful. On the other hand, it can also get pretty discouraging. You'll have some people that you just know are lying, but you have to give them the benefit of the doubt. Even these people, although they have received a more than reasonable settlement, are still not happy. So there will just be some situations where you will lose from the beginning, but it is part of the job. Fortunately, the good outweighs the bad on this job.

Make the New Employee Proud of the Organization

During the orientation there is ample opportunity to discuss with new employees the background of the organization as well as the particular jobs they will be holding. The purpose of this kind of information is to provide new employees with an appreciation and perspective of the importance of their own jobs and the organization's role in the broader scope of things. For example, a new employee in a steel mill might be told something like the following:

This is the third-largest basic steel plant in the world. It produces almost 70 percent of all unfinished steel in the country. That would easily be enough for all the automobiles produced this year, but a large proportion of it goes into other things – such as building and construction, tools and equipment, and smaller items such as appliances, desks, and cabinets. As a matter of fact, look around your own home. Of everything that is steel, we produced about 10 percent of it. That includes your lawnmower, coffeepot, posts and pans, refrigerator, stove, plumbing, and even the kitchen skink. So you can see we have a very important impact on people's lives.

Undoubtedly every supervisor's organization has unique aspects, which may make new employees proud to be part of it.

Figure-5.4

1. Who to notify in case of problems

2. Expected standard or productivity levels

3. Length of time required to become proficient

4. Specify safety hazards

5. Function of the job-who uses the product or service and its importance

6. Job interrelationships – problems created for other people by poor performance

7. If the job is uncomplicated, a quick run-through of how it is performed

8. Where to get supplies and materials

9. Required safety equipments

10. Chain of command – formal and informal

Explain Employee Benefits

In small organizations, supervisors spend a considerable amount of time explaining the details of employee benefits (e.g. life and health insurance). For many employees, especially those with prior work experience, these benefits are very important and detailed coverage is appropriate. However, for other employees, specially those in entry-level positions, the details are not as important. Again, on the new employees first day, they are much more concerned with their immediate needs with respect to the job they will hold. Thus, a good strategy is to give a brief summary outline of the benefits and then ask the new employees if they are interested in additional details. If not, set a specific later date to go over the benefits in detail.

Be Sure to Follow Up

New employees cannot possibly receive all the information they need on the first day. Supervisors should make this clear to them so that they will feel comfortable about asking questions after the first day of orientation. Depending on the nature of the job, the employee may actually assume his or her full responsibilities on the second day. However, even in the most routine jobs, it is usually beneficial if the supervisor periodically checks to see whether the employee has any questions. Gradually, this follow up process can be lengthened until the employee has become accustomed to the daily work routine. This follow-up like the other guidelines discussed above, is just a good commonsense approach to orientation. Supervisors will, of course, have to vary the orientation process depending on the nature of the job and the particular individual. For some jobs and people, it may be possible to do a fairly thorough orientation in a few hours. For others, such as positions, which are highly technical or have some supervisory duties, the orientation process may take several weeks or longer. In any case, orientation is an important function that all

supervisors must perform; it can contribute greatly to their short and long run effectiveness.

To comprehend on the topic in detail the point of view of 'Responsibilities and functions of personnel management' given in the below referred materials are very useful which may be read.

Torrington, Derek & Laura Hall (1991)	Personnel Management: A New Approach, New York, Prentice-Hall, pp.14-32	5-3
Torrington, Derek & Laura Hall (1991)	Personnel Management: A New Approach, New York, Prentice-Hall, pp.3-13	5-4

5.6   Activities

1. Visit the office of Executive District Officer (Education), seek information and draw a detailed organizational map of the office.

2. Visit your nearest AIOU Centre, interview Regional Director/Deputy Regional Director on his job description then write a report for tutorial.

3. Design the Organizational structure of Regional centre of AIOU your local and then suggest amendments in design to improve the function of AIOU.

4. When you were recruited for the job. Discuss that process with your colleagues. How it can be improved.

5.7   Self Assessment Questions

1. Distance education is inevitable part of modern society. Elaborate it.

2. Organization requires both differentiation and integration. How.

3. Discuss bureaucratic form of organization and its implications on the function of organization.

4. Compare the advantages and disadvantages of independence form with the entrepreneur   form of organization.

5. The Matrix form emphasizes on coordination of expertise. Discuss its implications for distance education institutions.

6. Some jobs have frequent redefinition of job boundaries. How this flexible networking relationship can be managed by the organization.

7. Enlist some matters of distance education which are left for collective decision and justify these.

8. How the supervisors can made new employees be proved of the organization.

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Unit 6

PLANNING AND BUDGETING OF DISTANCE EDUCATION

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6.1 Introduction

Quite often planners do not know or have little practical experience with the programmes they are going to plan.

> ….. in the preparation of development plans the main emphasis at all times is the development of people and not of things. If it is to be meaningful, it has to originate from the people themselves. People themselves must participate in decision making, in considering, planning and implementing their development plans. For it is the people who know better what their pressing needs are. [Kinunda, M. (n.d.) p.2]

All too often, well intended, ambitious development plans have not taken root at all because there was no consultation at the local level. Parents feel that they know the local situation on best and it is, after all, the people on the spot who can translate the programmes into successful situations. If local communities are to be helped through non-formal programmes, to direct progress for rural development, they should share in decision making, as it has to accord with their values and aspirations, or otherwise, they will reject the programme.

One of the worst problems of non-formal education programmes is the complexity of organization, management and staffing. Its very attributes of being flexible, adaptable and versatile, while being virtuous, can be laborious to planners and administrators. Variety of factors involved, the organizational structures, chains of command, degrees of latitude, for making decisions at different levels, geographic diversity, personnel structures, integration, both horizontal and vertical, coordination, etc. that makes organization very difficult and accounts for isolated projects and wastage of resources by duplication.

Current educational activities in rural areas bring out the illogicality of tight centralized planning programmes as are remote from the needs of rural people, the amount of education is often inadequate and quality below the national average. Increasing disnatives being sought. Cliches such as 'decisions at grass-root satisfaction with efficacy of centralized planning led to alterleavel "local assessment of learning needs" 'participatory planning', 'decentralization of planning', and 'integrated rural development planning' came into every day usage.

For rural development to be viable in the long run, greater attention to local involvement and to the development of rural institutions is necessary. Local participation may mean involvement in planning, including the assessment of local needs. Participation in planning and implementation of programmes can develop the self-reliance that is needed among rural people so as to accelerate development. In Pakistan, participation of the rural people has been very limited. Rural development programmes in Pakistan have been highly centralized. The hierarchical structure of the various ministries involved in the rural development has resulted in most decisions being made at central level and then being passed down. It is also important to remember, when planning with local participation in mind, that assessment of the quality of the labour force should be taken into account. It is all very well to talk about decision making at the grass—root level, but most of the rural people are illiterate and live in absolute poverty. They know what their needs are, but not what would profit them most.

Considerable emphasis must be placed on the training of the field and administrative staff, so as to intensify services and to extend services over-times. The strength and effectiveness of implementing decisions depends greatly on the efficiency and

capability of the field officers and those at the local level. If the local communities hold meetings with the regional officers, they can highlight their needs. Considerable rapport on the feasibility of projects can be carried out here. Suspicion of the programme, ill-feeling, and any questions or queries can be sorted out at this discussion level. If the field officer is good orator, the better for the project, for he will instil enthusiasm in the people to work more quickly and more efficiently. The field officer should have the trust in the people as well. He would have to convince the people to take an alternative development part without damaging his political relations with the centre. In short, the field officers and regional officers are the most important people in non-formal projects.

The training should be provided at three levels in order to make the local involvement and institutionalized development effective. Lele (n.d.) suggested these levels as:

1. In its broadest sense, to sensitize rural people and thus to increase the respect and ability of rural people to respond to development programmes as well as encourage local initiative;

2. For the field staff to improve technical and administrative performance;

3. For higher level administrative staff to improve the quality of policy formulation, degree of coordination and overall effectiveness of implementation.

Once realistic priorities, needs and interests have been identified and placed within its socio-political and economic context, these plans are then taken to the provincial governments. It should be the provincial government's duty to coordinate the various projects horizontally, removing duplication of materials and where possible using the same

facilities at different times for various programmes. The government would also have to see that those who need help most are brought into the activity that will be most profitable to them.

Efforts should be made for inter-departmental cooperation by the establishment of system and that is linkmen in various ministries when problems of coordination between various ministries arises, the appropriate linkmen should intervene and resolve the issue. Unfortunately, this is one of the most difficult areas in which to seek cooperation, and unless rural development efforts will not get underway, projects will remain isolated and insignificant with no multiplier effect.

Delays in preparing the information from the local level to the district level, then from the district level to the provincial level and from the provincial level to the central government and back again down the ladder to the people at the local level, delay the process of development. An efficient coordination is necessary for fruitful results of non-formal education.

Normally non-formal programmes in Pakistan aim at promoting rural development. These should be planned within a framework of well-conceived national and rural development strategies, adapted to fit each area. Very often in rural areas there are isolated independent non-formal projects with no relation to any general strategy or to teach other's designs. The result is educational chaos. In order to ensure greater integration of non-formal projects within the wider meaning of rural development, previous piecemeal approaches should be abandoned. Coombs lists four basic measures for such planning:

1. All organizations concerned (with non-formal education) should find ways to collaborate more closely, guided

by a broad view of rural development that transcends their particular specialties.

2. Each country needs to have a comprehensive strategy for rural development, and to over all anything that would go against it.

3. Within the national framework, development plans can be tailered for each rural area, adapted to its own need.

4. Those development plans require greater decentralization down to the local level. This needs a corresponding competent administrative and expertise at all levels.

The planning of non-formal education should take place within the context of overall national development. There is the need for greater integration – not the consolidation of functions in one organization, but it means linking related elements together in order to have a collective impact. Fragmentation on other hand is greatest obstacle to non-formal education and rural development. By itself education can do very little. It is only when it is combined and linked to other rural development programmes that the rate of development is quickened. Non formal programme to this effect should be linked horizontally, to complement educational and non-educational activities in a given area. Vertically, with planning organization along the line up to the inter-ministerial level… in one of the studies Coombs (1974) carried out, he observed that entrepreneurs trained in management and to skills got better results when they had access to credit supplies, and follow up advisory and assistant services like marketing, product design, raw materials procurement, plant layout and quality control. Skills that had no 'backing' of complementary services, like markets, often are a waste.

The variations among rural area, their development, potential, their present stage, their resources, their patterns of economic activities, imply that national plans can only be translated into something more realistic if they are adapted to each district concerned, to suit its needs and conditions. The Variety of non-formal education programmes can only be harmonized if there is greater decentralization. Coombs (1974) gives a more fundamental reason for greater decentralization. In his view, it is:

> "The only way to unleash the enormous latent resources, human energies and enthusiasm that are the absolute essentials for effective rural development".

Initially, rural development, brings with it high social costs. Those rural dwellers who are better off, are quick off the mark to take advantage of any new development that is of beneficial value to the area. Non-formal education can be used as a booster to supplement those who need it 'ti catch up' to keep up and to get ahead.

In this unit you are going to study all the important aspects of the planning for non-formal education.

6.2 Objectives

After reading the unit, it is hoped that you will be able to:

1. Explain the art of planning.

2. Identify criteria for the design of planning procedures.

3. Plan non-formal education at different levels national, regional and programme level.

4. Apply leading tasks in the planning of non formal education.

5. Highlight different steps in planning non-formal education.

6. Explain the principles of curriculum development for non-formal education.

6.3   The Planning Process – from mission to strategic plan

The essential nature of planning can be highlighted by four major principles: contributions to purpose and objectives, primacy of planning, pervasiveness of the planning and efficiency of plans.

Contribution to Purpose and Objectives

The purpose of every plan and all derivative plans is to facilitate the accomplishment of enterprise purpose and objectives. The principle derives from the nature of organized enterprise, which exists for the accomplishment of group purpose through deliberate cooperation.

Since managerial operations in organizing, staffing, leading, and controlling are designed to support the accomplishment of enterprise objectives, planning logically precedes the execution of all other managerial functions.

Although all the functions intermesh in practice as a system of action, planning is unique as it establishes the objectives necessary for all group effort. Besides, plans must be made to accomplish these objectives before the manager knows what kind of organization relationships and personal qualification are needed by those who fill positions, along with course subordinates are to be directed and led, and what kind of control is to be applied. And, of course, all the other managerial functions must be planned if they are to be effective.

Planning and control are especially inseparable. Unplanned action cannot be controlled, for control involves keeping activities on course by correcting deviations from plans. Any attempt to control without plans would be meaningless, since there is no way for people to tell whether they are going where they wanted to go the task of control---unless they find where they want to go---the task of planning. Plans thus furnish the standard of control.

Figure 6.1 planning precedes all other managerial functions
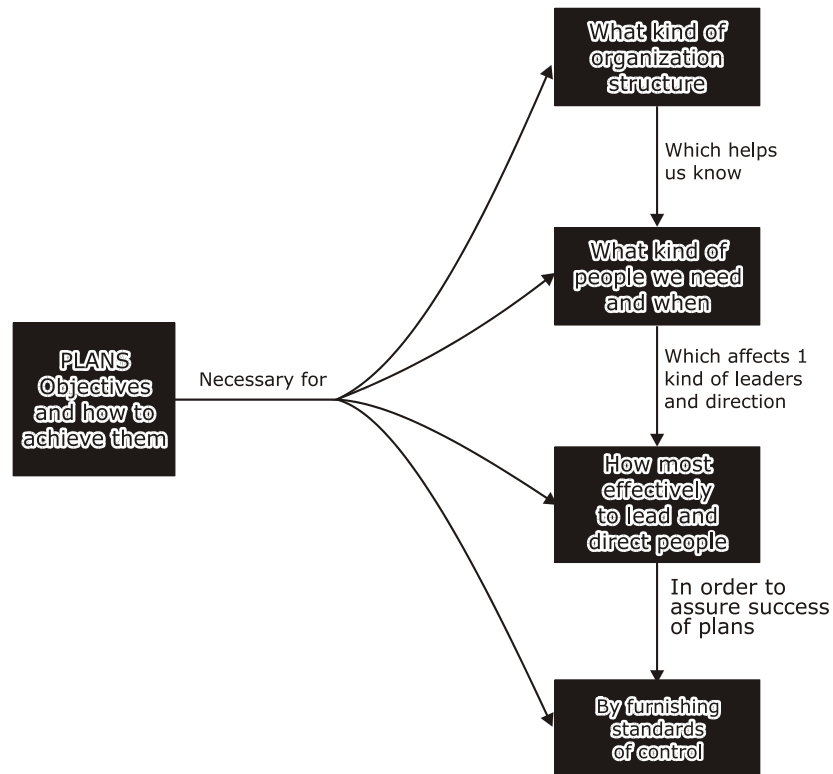
Pervasiveness Planning

Planning is a function of all managers, although the character and breadth of planning will vary with their authority and with the nature of policies and planning outlined by their

superiors. It is virtually impossible to so circumscribe their area of choice that they can exercise no discretion. Unless they have some planning responsibility, it is doubtful that they are truly managers.

Recognition of the pervasiveness of planning goes far in clarifying the attempt on the part of some students of management to distinguish between policymaking (the setting of guides for thinking in decision making) and administration or between the "manager" and the "administrator" or supervisor". One manager because of his or her authority delegated to him or position in the organization, may have more planning or more important planning than another, or the planning of one may be more basic and applicable to a larger portion of the enterprise than that of another. However, all managers---from presidents to supervisors—plan. The supervisor of a road gang or a factory crew plans in a limited area under fairly stride guidelines and procedures. Interestingly, in studies of work satisfaction, a principal factor fund to account for the success of supervisors at the lowest organization level has been their ability to plan.

Efficiency of Plans

The efficiency of a plan is measured by the amount it contributes to purpose and objectives as offset by the costs and other unsought consequence required formulate and operate it. A plan can contribute to the attainment of objectives, but at too high or unnecessarily high costs. This concept of efficiency implies the normal ratio of input to output, but goes beyond the usual understanding of inputs and outputs in terms of dollars, labor-hours, or units of production to include values as individual and group satisfactions.

Many managers have followed plans, such as in the acquisition of certain aircraft by airlines, where costs were

greater than the revenues obtainable. Their have actually been some aircraft with which an airline found it could not make money. Companies have inefficiently attempted to attain objectives in the face of the unsought consequence of market unacceptability, as happened when a motor car manufacturer tried to capture a market by emphasizing engineering without competitive advances in style. Plans may also become inefficient in the attainment of objectives by jeopardizing group satisfactions. The new president of a company that was losing money attempted quickly to reorganize and cut expenses by wholesale and unplanned layoffs of key personnel. The result in fear, resentment and loss of morale led to so much lower productivity as to defeat his laudable objective of eliminating losses and making profits. And some attempts to install management appraisal and development programs have failed because of group resentment of the methods used, regardless of the basic soundness of the programs.

Types of Plans

The failure of some managers to recognize the variety of plans has often caused difficulty in making planning effective. It is easy to see that a major program, such as to build and equip a new factory, is a plan. But what is sometimes overlooked is that a number of other courses of future action are also plans. Keeping in mind that a plan encompasses any course of future action, we can see that plan are varied. They are classified here as purposes or missions, objectives, strategies, policies, procedures, rules, programs, and budgets.

Purposes or Missions

If it is to be meaningful, every kind of organized group operation has, or at least should have a purpose or mission. In every social system, enterprises have a basic function or task which is assigned to them by society. The purpose of businesses

generally is the production and distribution of economic goods and services. The purpose of a state highway department is the design, building and operation of a system of state highways. The purpose of the courts is the interpretation of laws and their application. The purpose of a university is teaching and research.

Sometimes distinctions are drawn between purposes and missions. While a business, for example, may have a social purpose of producing and distributing economic goods and services, it may accomplish this by fulfilling a mission of producing certain lines of products. The mission of an oil company like Exxon is to search for oil and to produce, refine and market petroleum and a wide variety of petroleum products, from diesel fuel to chemicals.

It is true that in some businesses and other enterprises the specific purpose Industries, a product line mission often becomes fuzzy. In some of the larger conglomerates, such as Litton Industries, a product line mission does not appear to exist. However, many conglomerates have regarded their mission as "synergy" which is accomplished through the combination of a variety of strengths and weaknesses. Some business never make clear to themselves or their organizations what their purpose or mission is, and many it is business enterprises have likewise not always made this clear, for example, difficult to get a very clear notion of the mission of Department of Interior. Even some nonprofit foundations seem to have an obscure mission. One cannot help but wonder, for example what the mission of the very large Ford Foundation is.

It can hardly be doubted that a clear definition of purpose or mission –necessary in order to formulate meaningful objectives. While every business should know answer to the

question. What is our business and what should it be? Many business executives have difficulty in finding the answer

The correct approach requires, first, that a business defines who are its customers and what their attitudes and expectations are. This is a simple approach, but often poses difficulties, as the railroads apparently found when they realized that they had too long looked upon themselves as being in the railroad business rather than the transportation business. However, every kind of enterprise in a society should know who its customers are and what they expect.

It is sometimes though that the mission of a business, as well as its objective is to make a profit. It is true that every kind of educational enterprise must have goal or objective" if it is to survive and do the task, society has entrusted to it. This basic objective is accomplished by undertaking activities.

Objectives

Objectives, or goals, are the ends toward which activity is aimed. This represent not only the end point of planning, but the end toward which organizing, staffing, leading and controlling are aimed. While enterprise objectives constitute the basic plan of the firm, a department may also have objectives. Its goals should naturally contribute to the attainment of enterprise objectives, but the two sets of goals may be entirely different. For example, the objective of a business might be to make certain profit by producing a given line a home entertainment equipment, while the goal of the printing department might be to produce the required number of books of a given code and quality at a given cost. These objectives are consistent, but they differ because the printing department alone cannot ensure accomplishing the University's objectives.

It is enough to emphasize here that objectives, or goals are plans and that they involve the same planning process as any other type of planning, even though they are also end points of planning. A sales goals, for example, cannot be guessed at or wished for; it must be determined in the light of purpose and circumstances. Likewise, a plan to accomplish a certain sales goals will have within it, or derivatives of it, project or departmental goals.

Strategies

For years the military used "strategies," or "Grand plans" to mean plans made in the light of what it believed an adversary might or might not do. While the term "strategies" still usually has a competitive implication, it has been increasingly used to reflect broad overall concepts of an enterprise operation strategies, therefore, most often denote a general program of action and an implied deployment of emphasis and resources to attain comprehensive objectives. It is resulting from "the process of deciding on objectives of the organization, on changes in these objectives, on the resources used to attain these objectives, and on the policies that are to govern the acquisition, use and disposition of these resources. And a strategy as can be defined the determination of the basic long term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary to carry out these goals."

Thus, a company may have an objective of profitable growth at a certain percentage per year. Supportive of this might be a determinations that the company will be of a certain kind, such as a transportation company rather than a railroad company or a container company rather than a paper box manufacturer. A strategy might include such a major policies as to market directly to customers rather than through distributors,

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or to concentrate on proprietary products, or to have a full line, such as General Motors decided to have years ago for its automobile business.

The purpose of strategies, then, is to determine and communicate, through a system of major objectives and policies, a picture of what kind of enterprise is envisioned. Strategies show a unified direction and imply a deployment of emphasis and resources. They do not attempt to outline exactly how the enterprise is to accomplish its objectives, since this is the task of countless major and minor supporting programme. But they are a useful framework for guiding planning do, however, justify their separations as a type of plan for purposes of analysis.

As a matter of fact, most strategies, particularly in business., do fit the traditional military concept by including competitive considerations. In the 1950s and later, the German Volkswagen Company, for example, selected the strategy of offering on the highly competitive American market a low-priced small car getting high mileage per gallon of fuel, easy to drive in congested areas, and easy to park, in order to meet a demand by consumers who were not being served in these respects by native manufacturers. In this strategy were all the elements of the traditional military concept; (1) Competitors, (2) a market not large enough to satisfy all competitive manufacturers, and (3) a gap that offered an adversary an opportunity. But even this kind of strategy is not entirely an independent type of plan because it is actually a combinations of objectives (to secure a given market share), a major policy (produce and market a small, low-price cars) and various programs (for example, exporting and marketing)

Policies

Policies**,** are also plans because they are general statements or understanding which guide or channelise thinking and action in decision making. One can hardly refer to a policies as "statements, " since they are often merely implied from the actions of managers. The president of a company for example, may strictly follow-perhaps for convenience rather than as policy-the practice of promoting from within, the practice may then be interpreted as policy and rigorously followed by subordinates. In fact, one of the problems of all managers is to make sure that subordinates do not interpret. As policy minor decisions which they make without intending the decisions to serve as precedents.

Policies limit an areas within which a decision is to be made and assure that the decision will be consistent with and contributive to objectives. Policies tend to predecide issues, avoid repeated analysis, and give a unified structure to other types of plans, thus permitting managers to delegate authority while maintaining control.

Policies ordinarily exist on all levels of the organizations and range from major company policies through major departmental policies to minor or derivative policies applicable to the smallest segment of the organizations. They may also be related to functions-such as sales and finance-or merely to a project-such as that of designing a new product with materials to meet a specified competition.

The varieties of policies are many. Example are department policies to hire only university-trained engineers or to encourage employee suggestions for improved cooperation, and company policies to promote from within, to conform strictly to a high standard of business ethics, to compete on a price basis, to insist on fixed rather than cost-plus pricing.

Being guides to thinking in decision making, it follows that policies must allow for some discretions. Otherwise, they would be rules. Too often policies are established as kind of Ten Commandments which leave no room for discretion. Although the discretion area, in some instances, is quite broad, it can be exceedingly narrow. For example, a policy to buy from the lowest of three qualified bidders leaves for discretion only the question for which bidders are qualified; a requirement to buy for a certain company, regardless of price or service, is a rule.

Because policies are so often misunderstood, the authors have selected examples from a company's policy manual, it will be noted in each case that there is an area for a person in a decision-making capacity to use discretion. The following are interesting examples:

1. **Gifts from Supplies.** Except for token gifts of purely nominal or advertising value, no employee shall accept any gift or gratuity from any supplier at any time. (What is "token" or "nominal"?)

2. **Entertainment.** No officer or employee shall accept favors or entertainment from an outside organization or agency which are substantial enough to cause undue influence in his or her selection of goods or service for the company, (What is "substantial" or " undue"?)

3. **Outside Employment.** It is improper for any employee to work for any company customers, or for any competitors, or for any vendors or suppliers of goods or services to the company; outside employment is further prohibited if it; (a) results in a division of loyalty to the company or a conflict of interests, or (b) interferes with or adversely affects the employee's work or opportunity for

advancement in the company (what is meant by a "division of loyalty," "conflict of interest," or 'adversely"?)

4.   **Pricing**   Territorial division managers may establish such prices for the products under their control as they deem in a division 's interest so long as (a) these prices result in gross profit margins for any line of products which are consistent with an approved profit plan, (b) price reductions will not result in detrimental effects on prices of similar products of another company division in another state or country, and (c) prices meet the legal requirements of the state or country in which the prices are effective. (What are "consistent," "detrimental," or "legal requirements"?)

The area of discretion in most of these policies is fairly general. However, in the pricing policy shown, the discretion area is fairly specifically defined. Likewise, in the outside employment policy, that portion dealing with any vendors or suppliers leaves no discretion and is, consequently, a rule.

Policy should be regarded as a means of encouraging discretion and initiative, buy within limits. As shown in figure 6.2, the amount of freedom possible will naturally depend upon the policy, which in turn reflects positions and authority in the organization. The president of a company with a policy of aggressive price competition has a broad area of discretion and initiative in which to interpret and apply this policy. The district sales manager abides by the same basic policy, but the interpretations made by the president, the vice president for sales, and the regional sales manager become derivative policies which narrow the district sale manager's scope to the

point where, for example, he or she may be permitted only to approve a special sale price to meet competition and not exceeding a 10 percent reduction.

Making policies consistent and integrated enough to facilitate the realization of enterprise objectives is difficult for many reasons. First, policies are too seldom written and their exact interpretations too little known. Second, the very delegation of authority that policies are intended to implement leads, through its decentralizing influence, to widespread participation in policymaking and interpretation, with almost certain variations among individuals. Third, it is not always easy to control policy because actual policy may be difficult ascertain and intended policy may not always be clear.
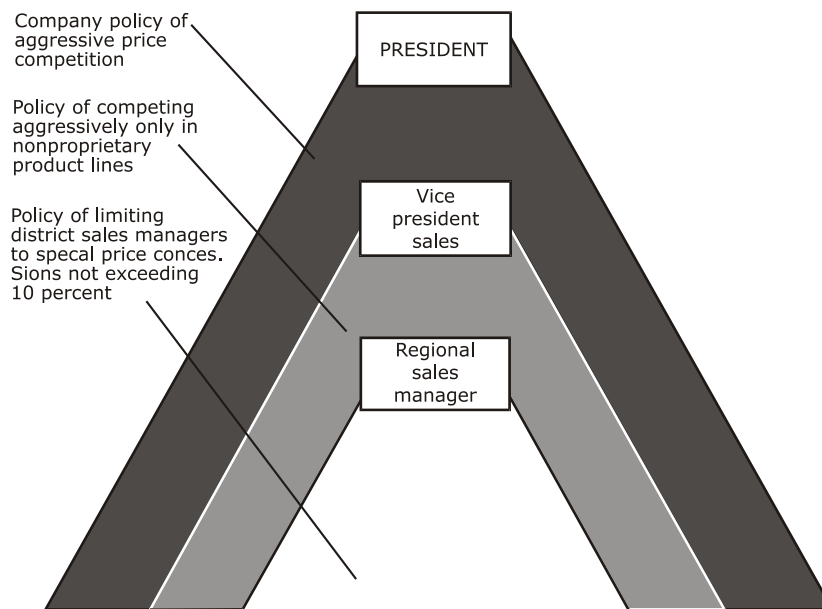
Figure 6.2 How policies may be successively limiting.

Procedures   Procedures are plans because they establish a customary method of handling future activities. They are truly guides to action, rather than to thinking, and they detail the

exact manner in which a certain activity must be accomplished. Their essence is chronological sequence of required actions.

The board of directors follows many procedures quite different from those of supervisors; the expense account of the vice president may go through quite different approval procedures from that of the salesperson; the procedures for carrying out vacation and sick leave provisions may vary considerably at various levels of organizations but the important fact is that procedures exist throughout an organization, even though, as one might expect, they become more exacting and numerous in the lower leaves, largely because of the necessity for more careful control, the economic advantages through specialization of spelling out actions in detail, the reduced need for discretion, and the fact that routine jobs led themselves to obtaining greater efficiency through prescription of what is thought to be the one best way.

As in other types of plans, procedures have a hierarchy of importance. Thus in a typical corporation, one may find a manual of "Corporation Standard Practice" outlining procedures for the corporation as a whole, a manual of "Division a Standard Practice" and special sets of procedures for a department, a branch, a section, or a unit.

Procedures often cut across department lines. For example, in a manufacturing company, the procedure for handling orders will almost certainly encompass the sales department (for the original order), The finance department (for acknowledgement of receipt of funds and for customer credit determinations), the accounting department (for recording the transaction,) the production department (for order to produce or authority to release from stock), and the traffic department (for determination of the shipping means and rout).

The relationship between procedures and policies may best be indicated by a few examples. Company policy may grant employees vacation, procedures established to implement this policy will schedule vacation to avoid disruption of work, set methods and rates of vacation pay, maintain records to assure each employee a vacation, and provide means of applying for the vacation. A company may have a policy of shipping orders quickly; particularly in a large company, careful procedures will be necessary to ensure that orders are handled in a specific way. Company policy may require clearance by the public relation department of public utterances of its employee; to implement this policy, procedures may be established to obtain clearance with a minimum of inconvenience and delay.

Rules are plans as they require actions which, like other plans, are chosen from among alternatives. They are usually the simplest type of plan.

Rules are frequently confused with policies or procedures. A rule requires that a specific and definite action be taken or not taken with respect to a situation. It is thus related to a procedure which guides action but specifies no time sequence. As a matter or fact, a procedure could be looked upon as a sequence of rules. A rule, however, may or may not be part of a procedure. For example, "no smoking" is a rule quite unrelated to any procedure; but a procedure governing the handling of orders may incorporate the rule that all orders must be confirmed the day they are received. This rule allows no deviations from a stated course of action and in no way interferes with the procedure for handling orders. It is comparable to a rule that all fractions over half an ounce are to be counted a full ounce or that inspectors in the receiving department must count or weigh all materials and compare these against he purchase order. The essence of a rule is that it

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reflects a managerial decision that certain action should be taken or not.

Rules should be carefully distinguished from policies. The purpose of policies is to guide thinking in decision making by marking off areas of discretion. Although rules also serve as guides, they allow no discretion in their application. Many companies and other organization think, they have policies when they really spell out rules. The result is confusion as to when a person may use his or her judgment, if at all. This can be dangerous. Rules, and procedures, by their very nature, are designed to restrict thinking and should of course be used only when we do not want people in an organization to use their discretion.

Programmes are a complex of goals, policies, procedures, rules, task assignments, steps to be taken, resources to be employed, and other elements necessary to carry out a given course of action; they are ordinarily supported by necessary capital and operating budgets. Programs may be as major as that of the Du Pont Company to acquire Conoc, an $8 billion oil and coal company, or the 5-year program embarked upon by the Ford Motor Company several years a go to improve the status and quality of its thousands of supervisors. Or they may be as minor as a program formulated by a single supervisor in a parts manufacturing department of a farm machinery company to improve the moral of workers.

A primary programme may call for many derivative programmes. For example, an airline programme to invest in new jets, costing hundreds of millions of dollars for the aircraft and the necessary spare parts, requires many derivative programmes if the investment is to be properly used. A programme for providing the maintenance and operating bases

with spare components and parts must be developed in detail. Special maintenance facilities must be prepared, and maintenance personnel trained. Pilots and flight engineers must also be trained, and if the new jets means a net addition to flying hours, flight personnel recruited. Flight schedules must be revised, and ground station personnel trained to handle the new airplanes and their schedules, as service is expanded to new cities in the airline's system, Advertising programmes must give adequate publicity to the new service. Plans to finance the aircraft and provide for insurance coverage must be developed.

These and other programmes must be devised and effective before any new aircraft are received and placed in service. Furthermore, all these programmes necessitate coordination and timing, since the failure of any part of this network of derivative plans means delay for the major programme with consequent unnecessary costs and loss of revenues. Some of the programmes, particularly those involving hiring and training of personnel, can be accomplished too soon as well as too late, since needless expense results from employees being available and trained before their services are required.

Thus one seldom finds that a programme of any importance in enterprise planning stands by itself. It is usually a part of a complex system of programmes, depending upon some and affecting others. This interdependence of plans makes planning very difficult. The results of poor or inadequate planning are seldom isolated, for planning is only as strong as its weakest link. Even a seemingly unimportant procedure or rule, if badly conceived, may wreck an important programme. Coordinated planning requires extraordinarily exacting managerial skill. It truly requires the most rigorous application of systems thinking and action.

Budgets: A budget as a plan is a statement of expected results expressed in numerical terms. It may be referred to as a "numbered" programme. As a matter of fact, the financial operating budget is often called a "profit plan". It may be express either in financial terms or in terms of labor-hours, units of products, machine-hours, or any other numerically measurable term. It may deal with operations, as the expense budget does; it may reflect capital outlays, as the capital expenditures budget does or it may show flow of cash, as the cash budget does.

Since budgets are also control devices, the principal discussion of them is reserved for the chapters on control. However, making a budget is clearly planning. It is the fundamental planning instrument in many companies. A budget forces a company to make in advance-whether for a week or 5 years-a numerical compilation of expected cash flow, expenses and revenues, capital outlays, or labour or machine-hour utilization. The budget is necessary for control, but it cannot serve as a sensible standard of control unless it reflects plans.

Budgetary planning does vary considerably in its accuracy, extent of detail, and ways of developing budget. Some budget are made to vary with possible levels of output of an enterprise, these are called "variable" or "flexible" budgets. Another approach that has been widely (but not always successfully) used by government agencies has been referred to as "programme budgets." The idea behind this type of budgeting is the each agency and department of it will identify programme goals sought, then develop detailed planning programmes needed to meet these goals, and finally "numberize" or "dollarize" the needed programmes. It is easy to see that this kind of budget, where it is done well, goes far inforcing a fairly detailed and complete degree of planning. Still another type of

budgeting, which really combines variable and programme budgeting, has been given the attractive name "zero-base budgeting". In this approach, the objectives sought and the work found necessary for their accomplishment are put up in " work packages" as though the budget planner were starting from the beginning, or "base zero." The impetus to make planning more complete may be readily seen from this approach.

As a matter of fact, the principal advantage of budgeting is that it makes people plan; and because it is usually in the form of numbers, it forces a degree of definiteness in planning.

To comprehend the topic in detail the point of view of 'The Planning Process' given in the below referred material is very useful which may be read.

Thomas W. Smith, (1998)	In Michael Graham Moore (1998) Distance Education, Vol.12, No.2, USA, pp.63-72	6-1

6.4 Operational Plans and Budgets

One of the most important tools of control is budget. A budget reduces an organization's goals to fixed points in the future and states them in dollars and rupees. The remainder of this unit discusses the function of budgets and how they are prepared and used. Armed with a budget as well as such nonbudgetary means as ratio analysis and statistical tools, the manager can exert a strong control influence on the organization.

Purpose of the Budget

The budget is both a planning and a control tool. Budgets are essential to the planning process since they indicate which resources are to be committed for some future period. Once the

budget has been adopted, its function changes to that of control. The adopted budget now becomes binding upon management, and the organization must operate within these established constraints.

One of the most important aspects of the budget is in providing bench marks for comparisons. A budget indicates the allocation of resources for the coming period (plan). Performance can then be tracked against expectations. If manager sees that current performance is out of line with expectations, efforts can be redirected to bring about the desired performance.

Budgets are generally constructed in monetary terms, stating how many dollars and rupees will be allocated for a given period. However, a budget may also be prepared in non-monetary terms. This form of budget shows the number of people units produced, and shipping or raw materials ordered for a future period.

Staffing the Budgetary Effort

A budget may often require subjective judgments and the assignment of priorities. This is particularly important where there are limited available resources. The effective use of budgets depends upon the proper assignment of personnel to this effort. It is important that skilled managers be assigned to budget control and that the goals of the budget be communicated effectively to all participants. The three most common approaches to staffing are line management, budget director, and budget committee.

Line management

An important group involved in the implementation of a budget is line management. These are the individuals who are closest to the marketing department or production line and in

touch with the immediate needs of the organization. Periodically, marketing managers are asked to prepare a sales forecast for a coming period of operation. This is given to the production department, and the managers prepare a one year personnel, equipment, and financial budget. Information is collected from all managers and used as the basis for developing the complete budget for the next year.

Budget director

One person is sometimes assigned the task of putting the budget together and presenting it to the board of directors or other appropriate authority. It is usually the budget director who gathers information from various managers. The budget director is incharge of seeing that necessary data is collected and reported in a consistent form. He/she then prepares a draft of the budget and submits it for review to the managers before submitting it to the board. He/she is incharge of the final draft, including its dissemination and implementation.

The budget director works closely with the accounting and data processing departments. It is her task to see that all relevant data is gathered, assembled, and submitted for approval.

Budget committee

A committee is sometimes used in budget preparation. This committee is composed of individuals from various departments or levels of the organization. It makes decisions and establishes priorities with the needs of the total organization in mind.

Once the budget has been prepared, it is given to the board of directors or other appropriate authority for approval. The board of directors holds the ultimate decision-making power

and is responsible to the shareholders for the success of the organization.

The board of directors reviews major items in the budget and, after discussion and revision, approves the final document. This approved version becomes the controlling document which is binding on all managers of the coming budget period.

The actual administration of the budget is in the hands of the budget director, who sees that all departments and managers adhere to the budget. The budgetary process is usually on-going. Once the current year's budget has been approved work begins on next year budget. The current year often serves as a model upon which the following year's figures are developed. Thus, the budget director is closely involved in the planning efforts of the organization.

Types of Budgets

Several common variations of the budget are found in management. A budget may be basically fixed or variable. That is, the budget may be unchanged for the coming period, regardless of the performance of the organization, or it may be adjusted depending upon operating conditions.

A budget may be developed from a previous year's experience. In this case, it may simply be an extension of a previous budget with only minor changes or deviations. Conversely, a new budget may be prepared each year, with little resemblance to the previous year's figures. Let us consider these possible budget variations.

Fixed budget

A fixed budget is based upon certain assumptions for a future period. Thus all revenue and expense items are fixed.

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This budget includes labor costs, supplies, and overhead, all based on a certain level of output.

As long as the operations remain as expected, the fixed budget provides a useful control. However, the budget director must consider changes which might occur if demand increases. This could result in an increased level of operations and present a totally different cost picture for the period. The fixed budget is appropriate where the volume of output or distribution of services is known with some certainly. For example, a school with a maximum enrollment limit could use a fixed budget. Where this is not true, the variable budget may be more appropriate.

Variable budget

A variable, or flexible budget allocates resources for a future period in differing amounts. Variable budgets are flexible and changing, depending upon the actual conditions which may be experienced in the coming period. This could also be applied to number of students enrolled, hospital beds occupied, or airline seats sold.

To better understand the need for variable budgets, let us look more closely at the impact of changing output volume on the costs of goods manufactured. As was stated earlier, the total costs of producing goods include both fixed and variable costs. Variable costs are dependent upon volume of output. Thus, if output of the plant increases, often the variable costs per unit will drop. If output decreases, the variable costs per unit often increase. This is because an organization can take advantage of economies of scale and volume purchasing.

The volume increases, the unit cost to produce the goods drops. Fixed costs remain relatively constant regardless of the

amount of goods produced. The variable budget is designed to take this important fact into consideration. It allocates costs for a future period on different assumptions of output. If output increases or decreases, the amount allocated changes. This is in line with the actual conditions which may be expected.

Zero-base budgeting

A relatively new concept in budgets is the zero-base budget. To appreciate the application of this concept, we must consider the traditional means of establishing budgets. Generally, budgets are prepared on an annual basis, using information and figures influenced by the previous year. Allocations based on last year's figures are often used as the beginning point, or basic assumption for the coming year's performance.

This traditional approach of beginning with last year's figures has several major limitations. First, it builds in an assumption that the coming period will behave the same as the previous year. Second, it does not stress a justification for all items in the budget, only that theft were present in last year's budget.

In the zero-base budget, first uses by Texas instruments, no built-in assumptions are made. Funds are not allocated for the future period merely because they were included in the previous year's budget.

This forces managers to justify every item in the budget each year. It makes no assumptions, and it requires that items be included on a priority basis. The process generally begins with the development of packages. Packages are subunits of the larger organizational goals and activities. After the packages have been isolated, each package is placed in ranking order of priority. That is, each item is listed in order of its greatest need. The most important may be approved promptly, while those down on the list may require more extensive justification.

In order to get more information on the topic, please read the below referred material.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.141-155	6-2

6.5   Budgeting for Distance Education

The budget allocation of an institute tells us about its priorities with regard to CO policies and philosophies. By closely examining the budget allocations of an institute, we can clarify its existing and future directions. It is argued that the budget of Korea Air and Correspondence University (KACU) comes from two sources — the Government and KACU revenues — according to its future development plans as an open and lifelong educational system. As we will soon enter the twenty-first century, it is imperative that we carefully analyze the trends of budget allocations in the past-, identify problems that have arisen, and future directions for better use of resources.

This paper sets out to analyze budget allocations of KACU for the past ten years, identity major investment areas, clarify the economics of KACU's budget allocations as a distance education system, and suggest fundamental principles for future budget allocations to enable KACU to become a leading open distance teaching university. Firstly, a framework for analyzing the budget allocations of a distance education system is developed. Then, trends that show how the budget has been allocated over the past 10 years are identified explained according to the framework. Finally, suggestions are made on how to improve the economics of budget allocation to foster an open learning institute which provides quality higher education.

Framework for Analysis

It has been recognized that various differences exist between distance teaching universities and conventional universities. The differences appear to be found not in the kinds of work, the two are performing but in the degree of emphasis they place on certain kinds. For example, even though distance teaching universities and conventional universities both utilize the media for instructional purposes, the former make greater efforts to utilize the media more effectively and efficiently in their teaching-learning process. More diverse student support services are needed for the students in distance teaching institutions than for those in conventional universities since most of their students study independently without direct help from teachers and, thus, they need other kinds of individual support.

For the purposes of this paper, the kinds of work that are important in educational settings are categorized into the following three areas; educational activities; administrative system and infrastructure; and student support system.

Educational activities are those which are essential in maintaining and managing the teaching-learning processes of an educational system. The budget which covers educational activities includes funds for courses or development of course materials and delivery (radio and TV programmes, face-to-face instruction, laboratory work, supplementary handouts, etc.); research and training for academic staff; evaluation of student performance; and textbook purchases. Distance teaching universities put more emphasis on course material development, mass delivery systems und research related to the educational use of media.

In a distance reaching university, an effective, efficient administration and infrastructure are more important than they are in a conventional university because of the number of students it -serves and the various teaching methods it adopts. The budget for administration and infrastructure covers personnel, facilities, and computer systems, including the

networking structure among university-related places. Computer systems are given more attention by distance education universities than by ordinary universities.

The student support system is important in any university. In distance teaching universities, the management of study centres and counseling and tutoring services are more important than any other student support services.

These three categories are applied in identifying trends of KACU's budget allocations over the past 10 years. There are major limitations in this work. Firstly, categorization of items used in this study may not be identical with those used in official university budget allocation documents- Some items found in the university documents are not included in this study because of their irrelevance to the study purposes and others have been combined for the analysis. Secondly, the budget for printed text development cannot be included in this analysis because printed texts are developed by an independent printing company under a separate budget. Thirdly, even though the university newspaper plays an important role in educational activities at KACU, its budget is excluded from the analysis since — it also comes under a separate budget.

Analysis of Budget Allocation (1984-1993): Categorization

Under the three categories, several items are included. The following list shows the categorization for the analysis of budget allocations at KACU.

- Educational activities: research, textbook, purchases, training, course material development and delivery (TV, radio, supplementary materials, new media, schooling, laboratory work), evaluation.

- Administration and infrastructure: personnel, facilities, computer systems.

- Student support: study centres, counseling, scholarships.

Overview of trends in budget allocations

The KACU budget comes from two sources — the Government and student fees. Table 10.1 shows the expenditures by source of revenue from 1984 to 1993 and Figure 10.1 indicates the 10-year trends in university income by sources.

Table 10.1: Expenditures by source of revenue

Year	Government Subsidy	Student fees
1984	$6,705,349 (40.8%)	$9,748,275
1985	$8,131,802 (40.2%)	(59.2%)
1986	$8,060,065 (40.6%)	$12,079,468
1987	$8,792,573 (41.7%)	(59.8%)
1988	$10,001,514 (43.3%)	$11,673,387
1989	$12,062,216 (51.6%)	(59.4%)
1990	$13,681,835 (50-3%)	$12,282,337
1991	$12,445,008 (44.9%)	(58.3%)
1992	$13,789,000 (40.8%)	$13,101,178
1993	$15,455,202 (37.9%)	(56.7%)
		$11,298,837
		(48.4%)
		$13,516,231
		(49.7%)
		$15,282,191
		(55.1%)
		$19,983,000
		(59.2%)
		$25,348,150
		(62.1%)

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Figure 10.1: Trends in income by sources. 651
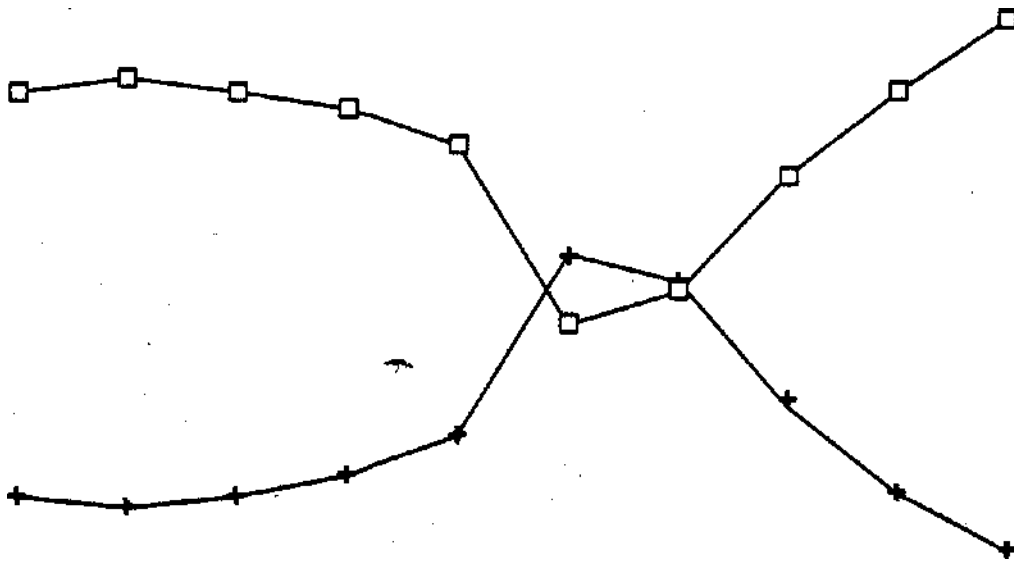
Note char the proportion of student fees has increased to over 62% in 1993, which indicates chat a more flexible budget allocation can be achieved at the university level.

The 10-year trends in budget allocations on educational activities are shown in Figure 10.2.

Figure 10.2:   Trends in the budget allocation for educational activities (% of total budget)
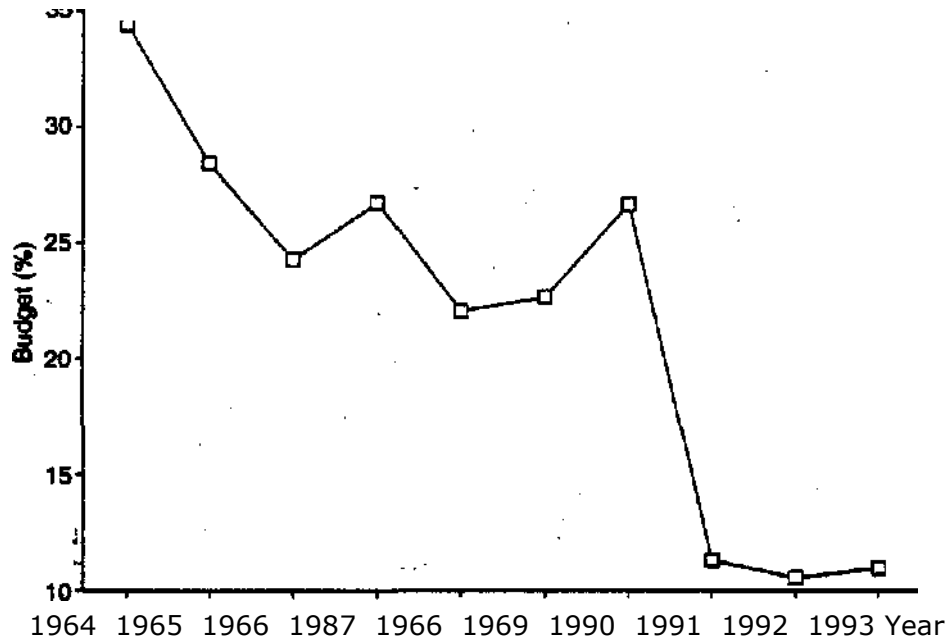
From Figure 10.2, we can see that from 1990, the budget allocation for educational activities has been drastically decreased (30.4% in 1984, 16.2% in 1990, and 15.4% in 1993). From 1990, no funds for TV and radio programme productions were needed from KACU because KACU*s production function was assigned to the Educational Broadcasting System (EBS) and, thus, EBS has been responsible for procuring the necessary funds for KACU programme productions.

Figure 10.3 shows the trends in the budget allocation for KACU's infrastructure over the past 10 years. In 1993,-about 65% of KACU's total budget was allocated for this category. From 1991, a greater number of academic staff members have been recruited than before. And especially in 1993, a large amount of funds was saved to purchase broadcasting and computer facilities. Even though EBS took over the responsibility or

producing TV and radio programmes for KACU from 1990, KACU had to provide production facilities for EBS.

Figure 10.3: Trends in the budget allocations for KACU's infrastructure.
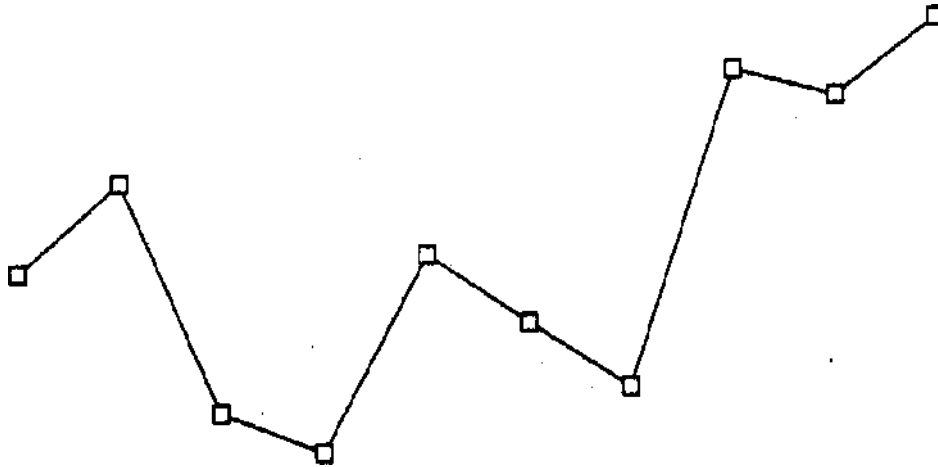
Figure 10.4 indicates the 10-year trends in budget allocation for the student support system. Compared to the funds for maintaining the infrastructure of the university, the funds allocated for the student support system were moderately small. Except for 1992, less than 10% of the total budget was allocated for student support each year. In 1992, the funds for managing study centres were almost doubled compared to the other years (3.8% in 1991, 6.9% in 1992) because or the expansion of their functions. KACU has twelve regional study centres and 27 local study centres. The centres provide tutoring services, audiovisual materials, computer facilities, and other administrative support to the students in their region.

Figure 10.4: Trends in the budget allocations for the student support system.
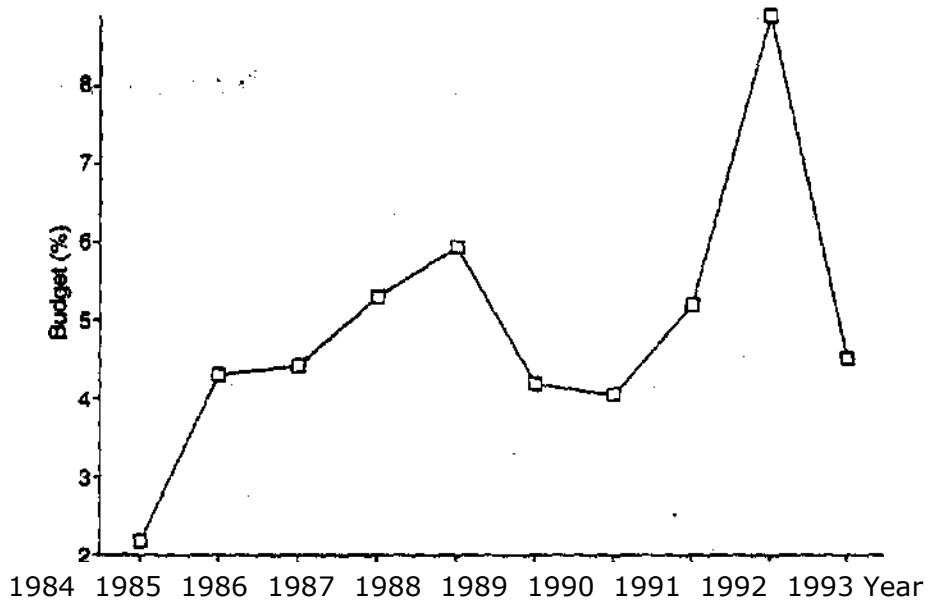
Major Investment areas

Under the category of educational activities, there has been a tendency for more money to be spent on research, textbook purchase, student evaluation and supplementary text materials since 1990 (Figures 10.5 and 10.6). In 1993, a significant amount of funds was allocated for the research and development of new media systems such as computer-mediated communication and a multimedia production system. These figures show that KACU has begun to pay more attention to media-related research and experimental development. From Figure 10.6, it is worth noting that since 1990, less funds were allocated to broadcasting and new media systems. As indicated previously, from 1990, the TV and radio production function was assigned to EBS and, thus, less money has been spent on broadcasting and using new media for production since 1990,

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Figure 10.5: Budget allocations for educational activities
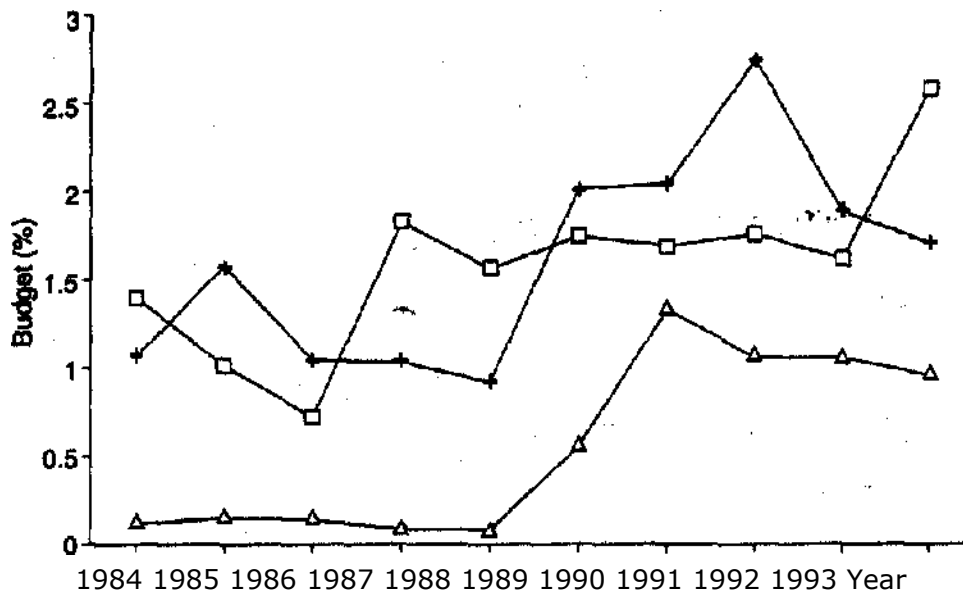
Figure 10.6: Budget allocations for educational activities II.
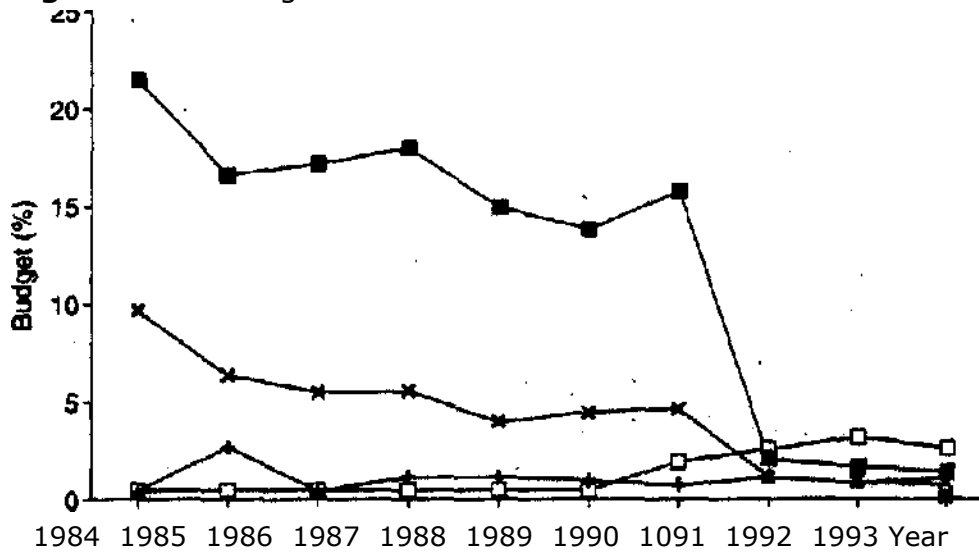
The budget for maintaining the infrastructure of a social system is comprised mostly or fixed costs. In a distance teaching university, fixed coats are usually higher than variable costs. Of

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the total budget, 45-65% was allocated for maintaining the infrastructure of KACU for the past 10 years (see Figure 10.3). As was pointed out before, since 1991, a larger budget has been allocated to support the personnel of KACU because new academic staff members and technical professionals with more experience have been recruited. Except for the increase in budget for personnel and facility purchases in 1993, no significant economies in the infrastructure of the university were found (Figure 10.7).

Figure 10.7: Budget allocations for the infrastructure.
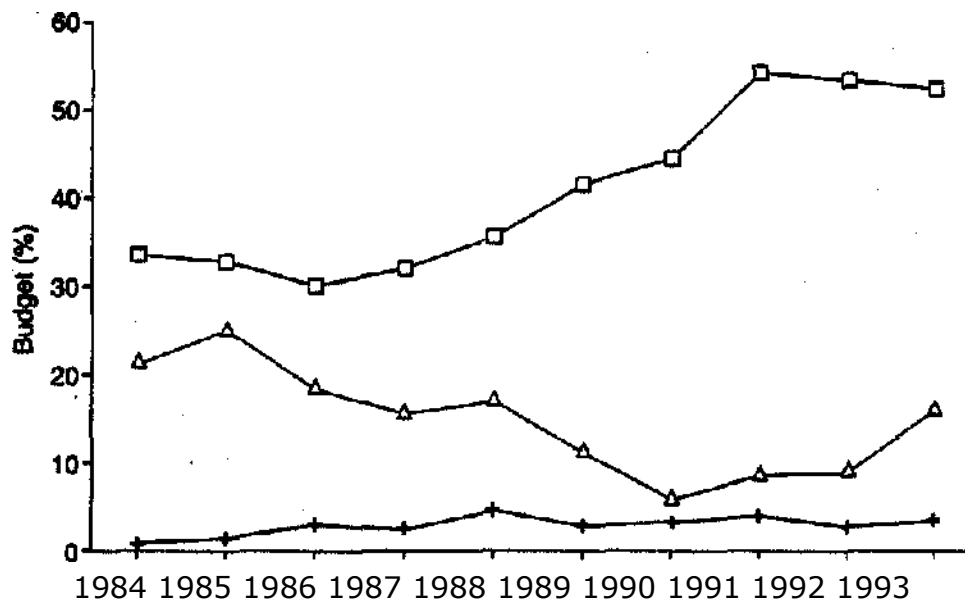
The student support system is the key element in distance education and it is the interface between the university and its students. Since distance education is based on a self-learning system, it is important for a distance education institution to provide learning support services for its students. Not many funds have been provided to support the twelve regional study centres and 27 local study centres which are

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responsible for direct teaching-learning services to KACU students (Figure 10.8). However, it is anticipated that more funds will be allocated to support those study centres since the university has implemented decentralized management policies since 1993.

Figure 10.8: Budget allocations for the student support system.
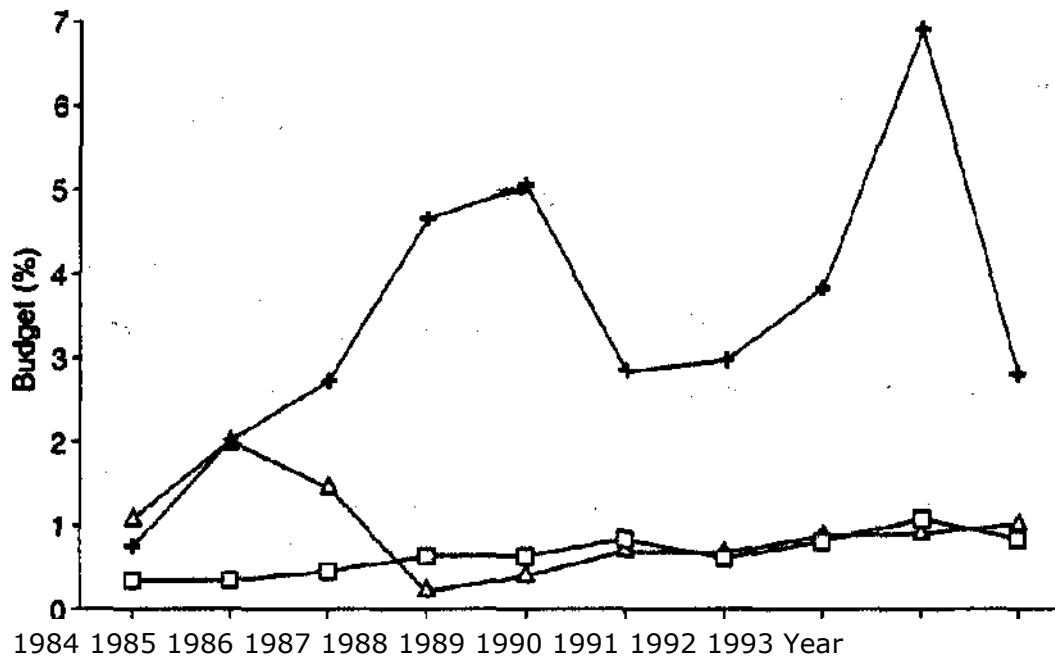
Conclusions

KACU has aimed at establishing a flexible open higher learning institute through distance teaching methods. Reddy (1992) argues that "open learning systems aim to redress social or educational inequality and to offer opportunities not provided by conventional colleges or universities. In this system, restrictions on learning are fewer than those in formal educational institutions." Major characteristics of an open distance teaching university include separation of the teacher

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and learner, development of student support services the use of a variety of media, the provision of interaction between teacher and learner, and the emphasis on individualized autonomous learning. Because of these characteristics, the cost structures of conventional and distance teaching universities are quite different from each other. In distance teaching institutes, costs such as salaries of course developers, managers, and counselors; computing costs; production equipment costs; and maintenance costs are higher than those for conventional universities because labour-centered direct face-to-face learning is replaced by capital-centered distance learning.

When examining the budget allocations for the educational activities, the infrastructure, and the student support services of KACU, no clear evidence is found to support the idea that more funds have been spent in establishing strong media structure to support distance teaching. Rather, costs for personnel have been increased. This indicates increase in the labour-centered activities of the university.

A decrease in schooling sessions has led to a decrease in budget allocations for schooling activities. But no indications of any major fund increase in supporting interactions between teacher and learner or in strengthening media system of the university to compensate schooling functions are noticed.

As a system is decentralized, more support has to go into its subsystems. KACU has tried to establish a decentralized system in implementing teaching learning activities, managing administrative functions, and evaluating student performance. However, more investment is necessary to link networks between headquarters and study centres via computers. In addition, more funds are required for student support services in regional and local study centres.

Several suggestions to improve the economics of budget allocations for an open distance teaching university can be made. Firstly, investments in advanced technology-based facilities such as a computer network system are needed to cope with the huge number of students more effectively and efficiently. In addition, facilities for materials development and delivery need to be well-maintained and updated each year since most teaching and learning takes place through these materials.

Secondly, more funds have to be allocated to supporting student self-learning activities rather than providing direct teaching services. Counseling and tutoring systems which can provide quality services to many students in study centres at a low cost would be an important area of investment.

Thirdly, investments for the introduction of an interactive media system would improve the economics of budget allocation in distance education. New media systems such as computer-mediated communication or DBS has proven to be cost effective if a large number of users are involved. It is also argued that new media can provide students with learning opportunities similar to face-to-face interaction.

Finally, in addition to the investments for teaching and learning activities, investments for research and development — especially in the fields of media use, self-learning mechanisms, and performance evaluation — are required.

For further details, please the below referred materials.

Keith Harry, ed. (1999)	Higher Education through Open and Distance Learning, London, The Commonwealth of Learning, pp.72-84	6-3
Greville Rumble (1981)	'Economics and Cost Structures' In. Anthony Kaye & Greville Rumble, eds. (1981) Distance Teaching for Higher and Adult Education, London, Croom Helm, pp.220-234	6-4

6.6 Activities

For more understanding carry out these activities.

1. discuss with your colleagues, the implications of complexity of organization, management and staffing of Non-Formal Education on planning process and write a report.

2. Arrange a meeting of your peer students, evolve some ways to have inter-departmental co-ordination by a Non-Formal establishment.

3. Think and list below some budgetary control practices.

6.7 Self Assessment Questions

1. Discuss the general purpose of every plan
2. Elaborate different types of plans
3. Develop relationship between objectives and planning
4. "Planning and Control are especially inseparable". Elaborate this.
5. "The budget is both a planning and control tool". Discuss.

6. Discuss types of budget with examples.

7. Enlist and discuss the levels of training so that local involvement may be made sure.

8. Distinguish between major departmental policies and derivative policies. Clarify your answer with examples.

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MANAGEMENT OF DISTANCE EDUCATION

Written by:
Dr. Muhammad Rashid

7.1   Introduction

Management is performed by all managers and at all levels in the organization. A manager may seek advice and help from personnel manager who is an expert in personnel problems in managing people (staffing function). The Board of director undertake staffing function by selecting, developing and appraising the executive. The chief executive performs staffing function in relation to departmental heads or middle management. The departmental heads, in turn, select and develop lower level managers and so on. Thus, personnel management is an all-pervasive function of management.

Management of human resource is a delicate task, which requires sustained or regular efforts. Only then we can get best possible results by managing this source of power in an effective manner. Hence personnel management is a dynamic and continuous process.

Besides the general principle of management, there are definite principles and policies of personnel management, which help overall development of human resource.

Management defines the relationship between (a) employer and employee, and (b) employee and employer. The word employee includes the workers at the lowest level and also the employees at all levels and types of foremen, operators, middle level departmental managers and top level general managers or chief executives.

Management considers the development of individuals at work, as an individual and as a member of the group. While formulating personnel policies, and solving the human problems of an organization the individual character and the entity as a member of the group should be considered so that the intrinsic

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abilities of the workers may be developed to the best use of the organization and the goal of the organization is attained to the maximum possible extent.

The whole management philosophy is based on the assumption that the labourer is a human being. He should be given humanly treatment so that he may recognize his intrinsic abilities, and such abilities may be developed and motivated towards the best interest of the organization.

The term "management" has many connotations, implications, and aspects. The scope of management is so wide and diverse that it is difficult to coin any single definition that can fully convey its importance to man and society. We shall therefore examine management from several points of view.

Management involves the sum total of all activities undertaken to achieve the goals and objectives of an individual or an organization. It is simultaneously the integration of effort. The design of organizational structure, the acquisition and judicious use of resources, motivating people, providing leadership, planning strategies, controlling innovating and otherwise creating an environment in which individual and group goals can be achieved.

Management is not a static concept. It is rather a dynamic, complex and social phenomenon. It is dynamic because it is not independent of time change or value systems. It is complex and social because it involves people: the totality of their interpersonal relationships: aspects of leadership, motivation, productivity, and morale: and at innumerable combination of technical, economic, political, psychological and social factors. Management is not single dimensional: it is a multidimensional phenomenon because managers make decisions in an environment that has economic, physical, social, psychological, political and technical

components. Managers must deal with man–machine systems of various complexities. They must understand and attempt to influence, human behaviour in an organizational setting.

Management is universal in the sense that all organizations, regardless of their specific objectives, type of work, geographical or cultural environment must be managed. Indeed management is the central activity needed for human progress and survival. In the interdependent world of our times, organizations, particularly large and complex organizations, provide the framework for productive effort: and these organizations must be managed. The effective management of organizations is therefore one of the most important and central tasks of the society. Without proper management our social structure cannot sustain the stresses and strains created by rapid social and technological changes.

Management transcends the traditional boundaries of narrowly defined disciplines and by its very nature is an interdisciplinary field. Neither the students nor the study of management can be confined to the narrow walls of a single discipline. Substantial contributions to the field of management have been made from such diverse fields as philosophy, political science, economics, engineering, mathematics, statistics, sociology, psychology, anthropology and social psychology.

In view of its extremely broad scope and complex nature, we can coin several useful definitions of the term "management." Each will have a special significance as it relates to a particular management situation or to a specific approach to solving management problems. For example, management has been viewed as a function, a process, profession and as an elite or a class of people. Management has also been described as an art and as a science. And, along with material, capital and labor, management is considered a resource. It is perhaps the most

valuable resource because it provides the primary force for converting other resources into product and services.

As a function, management refers to the kinds of tasks and activities that are performed by managers. The specific nature of the activities are determined by such managerial functions as planning, organizing, directing, leadership, and control. The functional view of management implies that managers of organizations, public or private, producing goods or services, must essentially perform the same basic tasks and functions. They must establish organizational goals and objectives: secure sufficient financial and human resources: assemble materials, tools and machinery: organize capabilities in terms of authority, responsibility and accountability relationship: provide direction and leadership: institute control mechanisms: and in general create and maintain a motivating and rewarding environment. It is clear from this partial list that managerial tasks are extremely varied and complex. The efficient and effective performance of these tasks and functions is the responsibility of the managers.

As a process, management refers to the series of systematic, sequential or overlapping and interdependent steps by which goals and objectives are achieved. The process of management is the vehicle through which managerial functions are performed. The skills involved in the designing instituting and controlling of this process are teachable, learnable and transferable–hence the evolution of the discipline of management. The process concept of management is useful for two reasons. First, it has a time orientation and so reflects the dynamic nature of management. Second, within the process framework, it is possible to concentrate on decision making (how choices are made among alternatives), which is the essence of management.

Management, like law and medicine, is a recognized profession. All major colleges and universities offer professional degrees in management. Several professional societies, such as The Academy of Management, AIDS (American Institute of Decision Sciences). TIMS (The Institute of Management Sciences), and ORSA (Operations Research Society of America), have been formed for the purpose of interchanging information and encouraging professional development in different branches of management. Several professional journals are being published in which persons from educational, business, health and governmental organizations publish articles relating to the practice, applications and theory of management. Professional societies have also been organized and management journals are being published in Europe, Asia, Africa, South America and other parts of the globe. Private business firms and management consulting firms frequently offer training seminars in such specialized areas as management science, sensitivity training and transactional analysis. Recruiting firms that cater only to persons with specialized backgrounds (management science, industrial relations, behavioural science, etc.) have been organized in the United States and abroad. Thus, not only does management meet all the tests of being a profession, it is already entering an advanced stage of specialization of its various components. This overspecialization has created the need for and increased the value of concepts or techniques that can serve as integrative devices.

Management also refers to an elite or class of people. In this sense, management is the group of people directing the affairs of a business firm, or any organization. Management is that group in an organization which has the legal authority to direct and control the organization. We refer sometimes to the dichotomy of "labor" and "management": but as most of us know , such a dichotomy does not have any general validity,

except perhaps during those times when labor unions are engaged in contract negotiations.

A very general definition of management views it as an art of getting things done with and through people. It is an art because individual variations in approaching, and successfully solving, the same type of managerial problems can be observed in actual business practice. It is an art because management problems are often amenable to individuals styles that are based on creativity, judgment, intuition and experience rather than on the systematic methods of science. As an art, the ingredients of management are intuition rather than logic, guesses rather than measurement, and group discussion that leads to consensus rather than experimental verification that is precise and admits no deviation.

Management as a science adopts the view that a substantial portion of management consists of "phenomena that can be measured, relationships that can be represented quantitatively, causal chains whose internal consistency can be logically verified, and conclusions which can be tested experimentally". In this manner, knowledge and experience can be accumulated systematically, and the tested procedures can be utilized without the level of risk faced by the original researchers. The objective of this approach is to bring as many management phenomena as is realistically possible under the domain of programmed decision making. The higher the percentage of decisions that can be handled with the tools, techniques, and methods of management science, the greater is the freedom of the manager to devote his time to creative – as apposed to routine – activities. The phenomenal progress in the field of management in terms of more powerful tools and techniques of analysis and better methodology for solving complex problems, has been made possible only because the art

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of management has increasingly been supplemented by the science of management. However, there are some inherent limitations in viewing management as a science because the preconditions of a truly scientific analysis are rather severe. A pragmatic synthesis of art and science appears to be the prescription for modern management.

The above discussion of the various aspects of management has been presented to emphasize management's importance to society as well as its inherent complexity. We now provide a definition of management which is both descriptive and useful.

Management is the process of integrating the efforts of a purposeful group, or organization whose members have at least one common goal.

Our definition of management implies at least three things. First, management involves goal oriented persons whose efforts must be integrated in the context of a group or an organization. These persons have biases, norms, cultural identifications, attitudes, individual aspirations, group goals and organizational loyalties. What motivates people of diverse backgrounds in an organizational setting? How can we bring organizational members to their highest level of development, satisfaction and fulfillment? What can we do to generate a constructive, purposeful environment that is conducive to productivity as well as quality of life? Answers to such questions are being provided by behavioural scientists who have produced research, generalizations, and theories relating to human behaviour in organizations. The focus of the behavioural science approach to the study of management is on individual, group, and organization behaviour. Behavioural scientists attempt to understand those factors or variables (and their interrelationships)

that can give us an insight into such phenomena as leadership, motivation, communication, and organizational performance. The academic disciplines useful in conducting this type of inquiry are psychology, sociology and anthropology. The area of behavioural sciences is an important area of research and study, but we shall not delve into it in this text. However, our definition implies the significance of understanding human behaviour in organizations. It can be stated in this context that one of the prime responsibilities of management is to bring out what is best in people.

The second implication of our definition of management is that the problem of defining goals and objectives is of the utmost importance. It is obvious that there is at least one common goal, which is the very foundation of the concept of management. This emphasizes the role of management as the catalyst for evolving a set of common goals. This is not an easy task. Human nature is such that there is an inherent conflict among various goals and objectives that an individual wishes to achieve at different points of time. This conflict occurs in a number of ways: (1) conflict between an individual's own objectives (e.g. more money or more leisure time): (2) conflict between role defined goals e.g., more time at work or with family): (3) conflict between individual and group goals (e.g., an individual's personal attitude toward war as opposed to the stand of the political party to which he belongs); (4) conflict between goals of different groups to which an individual belongs at the same time (e.g., a union member serving on a contracat negotiating team while holding a large amount of company stock); and (5) conflict between individual and organizational goals (e.g.; employee's desire for identification with producing the whole product versus the company's need for improving productivity through the device of mass producing the parts and then assembling the product). Such example of conflict among

goals and objectives can be seen by all of us in everyday life. The responsibility of management in this context is to understand the nature of conflict and arrive at a set of viable and achievable goals and objectives for the organization (e.g., sales volume, return on investment, share of the market, customer service, diversification, and social responsibility).

Managers must also choose the means for plans to achieve these goals and objectives. In practice, managerial plans are based upon, and derived from, organizational objectives and managers employ a set of tools, techniques, or other facilitative mechanisms to implement these plans. It should be stated here that in this text we do not address ourselves to the important question of how individual, group and organizational goals are formulated. Instead, we narrow our inquiry to those problems where the main goal can be stated in quantitative terms, and the problem can be solved by quantitative methods. Although the quantitative methods are of assistance in the rational choice of both goals and means, they are more relevant and practical in the selection and implementation of the means. Yet, we must not discount the "spirit" of the quantitative approach (i.e., conscious and systematic analysis), which is at the heart of resolving policy issues and forming organizational goals.

The third implication of our definition resides in two words: "process" and "integration." As stated earlier, the process framework emphasizes the time orientation, the dynamic nature, and the decision-making aspects of management. And, if we admit the existence of conflicting goals and objectives in organizations, then the integration of efforts of organizational members becomes the basic ingredient of management. The integration of effort takes place at several levels and in different forms. Starting from the top level,

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strategic, and policy-type questions (e.g., which markets to enter, which products to produce) to the very basic operational questions (e.g., determination of product mix level of inventories), the responsibility of management is to make resource-allocation decisions. Each decision, regardless of the level or part of the organization where it is made, must be integrated into a purposeful "whole." We emphasize this point here because we shall not have the opportunity to repeat this important assertion in individual chapters.

Actually, in most cases in this text we shall formulate and solve problems with the implicit assumption that these problems exist by themselves: that they are separate from other problems of the organization: and that they have no effect on other problems or parts of the organization. This is a severe assumption all it flies in the face of interdependence, which is the predominant reality of modern life. That's why do we make such an assumption? The answer lies in the nature of management practice and the purpose of this book. In real life, managers break problems, specially complex problems, into simple components and solve the component problems one by one, as if each component existed by itself. The solutions to individual components are then integrated to yield a solution to the original problem.

The purpose of this book is to illustrate the quantitative approach to management. Although it is possible to apply the quantitative approach to simple as well as complex problems, we plan to restrict our scope to a set of very basic problems. The problems to which we address ourselves have two attributes. First, there are prototypes of problems that managers face with increasing frequency in real life. Second, there are the type of problems that are ideally suited for the

learning of how the quantitative approach to management works.

The Importance of Management

Management has become the most important resource because modern societies are characterized by certain unique phenomena. Perhaps the most significant of these phenomena that call for integration of effort and place a heavy premium on management are: (1) the emergence and importance of organizations. Particularly large organizations: (2) the fact of interdependence among various sectors of the economy: and (3) an increasing rate of change not only in terms of new technology, inventions, and innovations, but also in value systems that ultimately affect every phase of our lives. We briefly discuss each of these three points.

An organization can be viewed as a system of cooperative effort, designed to achieve a set of goals that are, in several respects, common to organizational members. Organizations have emerged and survived because they provide the only efficient means through which basic resources are converted into products and services needed for human survival. Organizations are important because we spend a vast proportion of our lives as participants, clients, or customers of formal or informal organizations. They provide a setting in which individual attempts to satisfy their needs to exercise authority, gain social status and prestige, determine the direction of future events, and have the power base from which to influence the behaviour of other persons and organizations. Given the prevalence and importance of organizations, it is easy to appreciate why managers and students of management must gain an understanding of the environment, nature, structure, processes, and behaviour of organizations. Each and every one

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of these aspects of organizations constitutes a major field of management study.

In modern societies these large and complex organizations must operate under the most uncertain and dynamic environment. They must be managed and managed effectively – for the welfare of man and society. We see therefore that the emergence of organizations, particularly the large and complex organizations, has contributed significantly to the importance of management.

The fact of interdependence among various sectors of our economy, and even among various nations of the world, can perhaps best, be illustrated by the economic consequences that followed the 1973 Arab oil embargo. In a chain reaction, prices of raw materials, food products, and services increased at a very fast pace. The rates of inflation in most countries climbed to a two digit level and the stability of the world monetary system was shaken. A similar type of interdependence, though of a less dramatic nature, exists among government, business, industry, and the individual. To understand the complexities of these relationships, to plan for contingencies, and to be able to survive, is the job of management. This requirement, too, attests to the importance of management.

Management is also very important in our society because of the rapid change, not only in terms of new technology, inventions, and innovations, but also in value systems that ultimately affect every phase of our lives. The pace of new technological inventions: managerial innovations: and changing economic, political and social patterns is such that obsolescence, technical as well as professional, is an ever-present threat. For example, it took only seven years before IBM's System 360 was superseded by the introduction of a vastly improved System 370

series. This had a profound effect on the entire computer industry. RCA was virtually forced to abandon the computer field and in 1972 the company had to absorb a loss of some $220 million for making the original decision to enter the computer field. The computer leasing industry suffered a severe financial blow within the short span of only three or four years. Computer leasing companies (Rockwood Computer, Granite Management, DPF, to name only a few) that had become the favorites of Wall Street during the middle sixties, were pushed almost to the brink of financial collapse. But this is one example of the consequences of change that are inherent in developing and managers of modern organizations.

Apart from technological changes, the managers of modern organizations must face the information explosion, ambiguity, uncertainty, and most importantly, the realities of rapidly changing value systems. Our attitudes towards such psycho-socio-economic factors as population growth, family, sex, size of cars, and pollution, are changing very rapidly. Management is important because managers must cope with the rapid change and its consequences of rapid change. They must anticipate change, predict its impact and plan its direction.

The central problem for the manager is not only to manage the change, but to create change so that organizations can effectively serve society. A careful balance must be found between change and stability. The key to such a balance, and hence to order and survival, is effective management.

We end this section by asking this question: How do we judge the quality of management? A general answer is to say that the quality of management is related directly to the degree of success with which the managerial decisions have produced results in terms of stated goals and objectives. And, it is to

assist the manager in his process of making decisions that the quantitative approach has established its importance. The main purpose of the quantitative approach, then, is to improve, perhaps optimize, the decisions that managers make in the process of management.

7.2 Objectives

After the study of this unit you will be able to:

1. Discuss the concept of management.

2. Highlight the importance of management.

3. Elaborate distance education with reference to management.

4. Explain out the process of production and development of course material.

7.3 Management and Leadership in Distance Education

It was desirable at this stage to have a look at the Pakistani industrial scenario. The industry in our country has undergone a sea change since independence. Earlier most of the managers in Pakistan firms had not obtained any formal training in management. They learnt the most of management through hit and trial methods. With growing pace of industrialization and changing nature of industry, a need was felt for the professionally qualified people to make various positions.

With the growing competition and increasing size of organizations, the tasks of management became more and more complex. Horizontal and vertical development of industrial units with decentralized characters gave rise to problems of assessment of situation, problems of operational command, problems of limitation of leadership and various other problems of organizational nature. The complexities of the newly

established units of varying sizes operating in hitherto untried areas were both technical and organizational in character. There were problems of morale and incentives, of sales and profit, of needs of rationalization and replacement of obsolete machinery. For the first time, the Indian management found that conventional patterns of leadership and control do not work with the same effectiveness as before. They realized the impact of complexities of business operations on organizational and human behaviour. The management was also facing problems about personnel, finance, Government regulations, industrial relations and many others. Appropriate actions required skills of financial, operating and staff areas, knowledge of human motivation and human relations, and understanding of the economic and social forces that affect the environment in which the organizations in continuing with the centralized control. To avoid crisis and as a measure of bringing stability, organizations started delegating increasing responsibilities with corresponding authority to managers in vital areas.

It was at this juncture, that a high need of professionalisation was felt in Pakistan industry. Selected few did go to United States of America, United Kingdom, Canada, etc. for advanced training in management. Their return signaled the start of a new era. The era of professional manager was ushered in Pakistan industry. But it was not possible to impart the formal education in management to those who were already employed in various concerns in our country. Although they had a strong desire in their minds to acquire the knowledge of different methods and techniques of management, yet it was not feasible for a large number of people to go in for full time classes in management institutes. Obviously what we Pakistani needed was to impart management education in such a way that it would not affect their working routine in their respective concerns. It was the distance education system which could provide the answer and

was capable of assimilating all such desirable features. The reason being that the distance education system, unlike the formal conventional system, was able to take the education in management to the doorsteps of those who were in need of it. The aspirants, here, were not required to disturb their working schedules.

In this way, originally the system of distance education in management was introduced to cater to the needs of in-service persons of Pakistan industry and enlarge job prospects of such trainees. Later on, the scope of distance education system was enlarged so as to spread its aims in other spheres of life, also. This enlargement of scope was done keeping in view the changing needs and pattern of industry as well as society in general. Now with the passage of two decades of experimentation and innovation, the distance education in management in Pakistan has come of age. This system has considerably adapted itself to the changing needs of society so as to promote the compatibility of its services with the new needs of the industry. At present, beside catering to the needs of in-service persons, the objectives of distance education system include fulfilling desires of those persons who want to be self-employed, fresh students who found themselves unable to get admission in the formal educational institutes due to high competition for a limited number of seats

The system of distance education in management has acquired firm roots in our country and this has happened just within a span of three decades. Nobody can disagree with the fact that this method of providing management education is gaining a high popularity in our country. The institutes which have been already providing distance education in management, are on the lines of expanding their services in this field, keeping in view the changing needs of the society. Such institutions

have increased the scope of their services either by offering more combinations of the course material or by opening their doors to a new type of clientele. This trend of proliferation of management education through the medium of distance education, is expected to continue even at a greater pace in the present liberalized economy. As the Pakistani Government has been taking more and more steps towards the globalization of Pakistani economy, the demand for the professional managers is bound to rise in our country. This trend will certainly make the positive impact over the state of distance education in management in India.

In order to comprehend further the concept of distance education, please read the below referred material.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.163-175	7-1

7.4   Management of Materials Development

A national level UGC sponsored study conducted by Mouley (1986) revealed that many distance education institutes in India attempted to introduce innovative courses which failed to make a headway because the controlling bodies of parent universities usually looked upon these proposals with suspicion. This finding has been corporated by the study conducted by Anald (1979). According to him the parent bodies of distance education cells had discouraged experimentation in the field of course development. Similar findings have been reported by Sahoo (1985) who states the non-innovativeness of the course material supplied by distance education institutes has many a times acted as a cause of drop-out of candidates.

The study conducted by Balasubramanium (1986) revealed that the distance education courses in India are similar to regular courses, rather diluted versions of regular courses, and stereotyped with no innovations. As the Boards of Study have more members from formal education, innovative proposals are looked upon with suspicion and experimentation is discouraged in most instances. Mouley, et al . 1985). But this does not mean that experimentation has not been attempted in Indian system of distance education. Mouley et al (1985) have reported that out of 23institutes investigated by them, 12 organizations have tried innovative practices in the process of course material development. Such institutes made use of composite writing of lessons through special teams, introduction of semi-programmed instructional materials and reviewing and updating lessons every year.

In India, many researches have been conducted with regard to the quality and suitability of the course materials for self-learning. Significant work, in this respect, has been done by Gupta (1976), Biswal (1979), Dutt (1986), Saraswati (1985) and Mouley (1986). The findings of these studies reflect that the instructional material supplied to the students is usually designed in an unscientific manner. The commonly used format is essay type which, in many cases, was found lacking the pedagogy of self-learning. It was found that the majority of the students at the University level (8) to 85 per cent) depend solely on lessons supplied through print medium. These findings have been supported by the studies of Anald 91979), Singh (1980), khan (1982) and Sahoo 91985). In all these studies, the students reported the usefulness of lesson scripts in one or the other respect though the format of lesson scripts, analyzed by various researchers, varied in many cases. Most of the students expressed moderate view about the presentation of course material, the clarity of their contents, suggested

references, etc. Sahoo, 1985 and Mouley, 1986). However, a great majority of the students felt that the course materials were many times hard to comprehend. Many of them expressed difficulties in understanding the language of course material, as per the findings of Singh (1980), Koul (1982), Khan (1982), Sahoo (1985) and Mouley (1986). A study conducted by Cross (1976) reported that most of the respondents favoured the system of modularized instruction.

The practice of course-development varies among the institutions providing education through the medium of distance education. These variations occur due to different patterns of staffing and different policies regarding the production of course materials. In some of the organizations, the courses are prepared by the faculty exclusively engaged in imparting instructions through the medium of distance education. But in most of the other cases, the lessons are prepared either by the contracted staff or by the teachers of universities and colleges whose primary function is to deliver lectures to the regular students (Mouley, 1986). Usually the staff members of distance education institutes are not trained in designing the course material for self-learning. They may be subject experts but they lack the proper perception of the needs and motivation of the learners (Gupta, 1982).

A researcher dimension of the development of course material is the provision pertaining to the regular updating of the course lessons by the distance education institute. But in our country, very few distance education organizations have a policy of regular revision and evaluation of study material so as to modify it as per the changing needs of the students and other society variables. Most of the institutes undertake this exercise of revising and updating the course-contents only when it becomes highly necessary (Dutt, 1985 and Mouley, 1986).

Also, there is no adequate decision making power for reconstructing the courses or for experimenting innovations (Biswal, 1979 and mouley, 1986).

The effectiveness of course material provided by the distance education institutes have been studied by comparing it with traditional methods in terms of achievement of students. The programmed material was found superior to the traditional methods in the studies conducted by Hughes and McNamar (1961) Goldback et al. (1962), Kaulkarni (1974), Nallaiah and Adinarayana (1977), Mohanty (1979), Shitole (1979), Dean (1980), Emery (1981), Gupta (1983), Kumar 91983) and Budhasagar (1986). On the other hand, Feldhusen (1962), Birt (1962), Hatch and Flint (1962), Spangoli (1965), Patel 91970), Cockwood (1980), Beauchamp (1980),Decarbo (1981) and Fairbrother (1981) reported that programmed learning as well as conventional learning were equally effective.

Distribution of Course Material

No detailed study has been carried out to analyze the distribution services provided by the distance education institutes in India. However, the effectiveness of these services have been reflected in many research findings. Most of these studies have thrown light on two very important aspects. I.e. scheduling and frequency of distribution services provided by the distance education organisations. A large number of the students felt that the supply schedules so study materials were crowded which posed difficulties for them in reading all the lessons kahn1982: koul, 1982:Sahoo. 1985 and Mouley, 1986). Another difficulty was related to the irregular dispatch of course material which created many problems for the students. (Singh. 15 1980; Nagaraju. 1982: koul, 1982. Sahoo, 1985 and Mouley. 1986), the studies conducted by Koul in 1982 and Sahoo in 1985 brought another difficulty in light, which occurred due to

untimely supply of the reference material. They stressed upon the need of establishing proper co-ordination between the supply of course material and reference material to those course contents.

Face-to-Face Contact Programmes

In India, there has been a significant variation among the distance education institutes in organization of the Personal Contact Programmes (PCP). This was revealed by the study carried out by Mouley in 1986. The Personal Contact Programmes of different institutes differ significantly in respect of their duration, participation of staff and students and mode of conduct of these programmes. The researches carried out by Anand (1979) and Balasubramanium 91986) deal with the attendance in PCPs and the organisation of these programmes. Balasubramanium (1986) state, "there is no provision for different types of activities during contact. Programmes except listening to lectures. But still the students seem to enjoy the course." There are contradictory findings regarding the students' preference for compulsory or voluntary provisions of attendance in PCPs. While the compulsory attendance was liked by the respondents in case of the studies conducted by Bhushan Singh Sharma in 1976 and Sahoo in 1985, the students expressed negative opinion regarding compulsory attendance in the studies conducted by Anand in 1979 and Mathur in 1980. The research findings of the study carried out by Sahoo (1985) revealed that the students demanded the increase inn frequency of PCP sessions. In case of the research conducted by Bhushan and Sharma in 1976, the respondents expressed desire for increase in the duration of each session of personal Contact programme.

Another very important aspect of Personal contact Programmes studied through these research works pertained to the usefulness of these programmes. The research findings of

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Balasubramanium (1986) indicated that the topics of lesson scripts were repeated during PCP sessions. Sahoo reported in 1985 that no uniform policy was maintained in directing teachers for selection of topics for teaching during PCPs. He also stated that the usual methods for teaching in these contact programmes were lecture and question-answer method. In 1982, Nagaraju found the planning and organisation of PCPs as inadequate. Inspite of all these difficulties most of the student expressed some positive opinion regarding the usefulness of Personal contact Programmes. This Fact came into light through the studies conducted by many researchers including Anand (1979), Mathur (1979), Biswal (1979) Khan (1982), Pillai and Mohan (1983), Sahoo (1985), Kumar (1986) and Balasubramanium (1986). These studies show the students found the personal contact Programmes useful for them in many respects. PCP session provided them opportunity to clarify their various doubts and academic problems, which in turn resulted in their better preparation for examinations.

To have further knowledge on the topic, please read the reference given below:

Richard Freeman (1997)	Managing Open Systems, London, Stirling (USA), pp.28-34	7-2

7.5 Coordination between Academic and Operational Areas

The success of the distance education institution basically depends upon professionals of academic and operational areas. Again the coordination between operational and academic areas depends upon the appropriate way of operational leadership which has not only to move from vision to reality but also to ensure political backing. In coordination, there may be issue of contradiction between innovation and institutionalization but

leadership must be institutionalized alongwith the innovation, if it is to survive. It is only the coordination of staff of different departments which led the organization increase in size horizontally and vertically at the same time in the quality of the programmes and shadow procedures.

Scholars Rumble, G. has given good idea to the topic in the below referred material which may please be read.

| Greville Rumble, (1986) | The Planning and Management of Distance Education, London, Groom Helm, pp.175-181 | 7-3 |

7.6 Activities

1. Visit the office of EDO (Education) and discuss management aspect of concerned district.

2. Visit Director Regional Services office of AIOU to discuss the functions of AIOU.

3. Visit Regional Office of AIOU nearer to your residence to conduct interview with its head regarding problems of employees as well as students.

7.7 Self Assessment Questions

1. How would you define the term management. Discuss the conceptual framework of management?

2. Highlight the importance of management.

3. Distance Education has contributed much to management in Pakistan. Discuss

4. "The practice of course development varies among the institutions providing education through the medium of distance education". Elaborate.

5. Discuss management of material development.

6. The success of distance education institution depends upon coordination between academic and operational areas.

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PRODUCTION AND OPERATIONAL MANAGEMENT OF DISTANCE EDUCATION

Written by:
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8.1 Introduction

a. <u>Planning</u>

Planning is preparation for action. It leads to a pre-determined strategy, detailed scheme or programme of action meant to accomplish an objective or several objectives simultaneously. A plan focuses on the what, why and how of achieving overall goals. Planning involves selection among alternatives. An essential feature of the planning process is that it identifies possible or probable outcomes of actions within a specific period before the project manager makes a commitment. In recent years, the importance of planning processes is stressed for educational institutions also. Planning is essential to bring about the desired changes in educational institutions, to promote culture of education and to improve their effectiveness and functional efficiency.

Distance education is a complex system and involves elaborate planning. There are three continuous stages, i.e. planning during conceptual stage, planning during evolutionary and growth stages and planning during maturity. After an institution is established, detailed planning regarding the objective, strategies and operational plans, implementation of plans, policies and procedures for control and evaluation need to be spelled out. In a well-established institution, it is necessary to review the performance so as to respond to the changing societal needs. Apart from sustaining the educational effectiveness and organizational efficiency, planning as a generic process will provide a continuous direction to the distance education institution. Finally, the purpose of all planning activity at institutional level is to ensure cost-effectiveness at the time of actual operations.

b.   Management

It is the function of management to translate plans into realities. This paper uses the term 'management' to covey such activities as processes of planning, decision-making, leadership, implementation and evaluation. The management of distance education is different from the management of conventional universities. As Keegan puts it, "In traditional education, a teacher teaches; in distance education, an institution teaches. This is the radical difference". Educational material has to be produced on a large scale and distributed to thousands of students scattered in different parts of the country. Also the technological aspect of distance education is very sophisticated. All these make distance education institutions more complex than the industrial processes involving technology at production and distribution stages and incorporating features of constant monitoring and upgrading. Viewed as a system, as Kaye and Rumble think, the distance education institutions can be analyzed in terms of an integrated system of operating, logistic and regulatory subsystems. Operating subsystem converts system inputs into outputs. The main outputs of a distance learning system are courses and educated pupils. The functions of the logistic subsystem is to procure and replenish inputs through activities such as purchase and maintenance of equipment. The regulatory subsystem is at the core of the system and facilitates coordination of various activities of the institution and relates organization to its environment. Kaye and Rumble say that planning; control and evaluation are the underlying processes in these subsystems. In each of these subsystems, managerial tasks would centre around three processes.

    i.   Determination and divisionalization of the activities;

    ii.   Allocation of the divisionalized activities as someone's assigned responsibility; and

iii. Delegation of authority commensurate with responsibility.

Unless these processes take place, it will be difficult to install viable management structures, organization designs, monitoring, evaluation systems etc. Keegan writes, "The administration of distance systems comes closer to general administrative theory than the administration of conventional education system". It represents an industrialization process of educational administration and requires administrative skills that are akin to those of an industrial enterprise. As Keegan further observes, the distance system has daily preoccupations, such as lead times, deadlines, print runs, job schedules, typefaces, delivery and dispatch. Administrative efficiency is essential for the successful functioning of a distance education system is highly centralized and any disharmony in coordination will bring the system to a grinding halt. Efficiency and coordination are the significant factors in this system.

The research findings on organizational designs point towards a continuous process of evolution of the structure as the scope of activities of the institution expands in terms of its concept as well as geographical coverage. From an informal one it transits to a formal one. Therefore, there is no one optimal structure design, which would always serve a strategy with maximum efficiency and effectiveness. However, it would be advisable for an institutional planner to keep the following factors in mind while deciding about the institutional structure.

i. It must encourage innovation on the part of academics, staff, students and all the other associates;

ii. It must service the institutional objectives both in the short and long run;

iii.   It must facilitate the institutional communication process both within and outside with various interest groups;

iv.   It must contribute towards organizational climate by encouraging participation, rather than isolation, between the various officials and academics, and between the institution and the outside world;

v.   It should facilitate decision-making and various implementation processes;

vi.   It must fulfill the aspirations for professional growth of officials and academics; and

vii.   It must provide for task and role clarify for various agencies and top officials involved in the implementation. The stability of top-level leadership is also an essential requirement of the structuring process.

c.   Monitoring and Evaluation

Monitoring is an essential dimension of both the planning and management processes. Monitoring involves accurate, relevant and timely information and data reaching the appropriate persons followed by a desirable corrective action. To plan the monitoring system, the project mangers should address the following questions:

i.   What is it being planned?

ii.   What aspects of the programme environment system will be covered?

iii.   Who/ which agencies will be responsible for generating analyzing feedback information?

iv.   How will the feedback information be obtained?

v.   When and how frequently will the information be obtained?

vi.   Who will establish the accuracy of information? How will it be established?

vii.   Who will use the information and initiate the corrective action?

viii.   How much information is needed? How fast is it needed and what cost will be incurred?

There will be alternative choices for each of the questions raised above in planning a monitoring system. Monitoring also includes a review of the corrective action taken in response to feedback. Monitoring is distinguished from evaluation where judgments are making about quality and effectiveness of project performance. To conclude, monitoring is considered as a link between planning and control.

8.2   Objectives

After study of this unit, you will be able to:

1.   Discuss management.

2.   Administer learning process.

3.   Analyze the concept of community.

4.   Elaborate specific activities of administrative process.

5.   Describe the impact of new technology on the production and management of distance education.

8.3 Production Management

Production management is concerned with the system employed in the creation of goods and services. Adam Smith made the first recorded contribution to this field when he identified, three main economic advantages of division of labour i.e. (a) development of skill or dexterity when a job is done repetitively, (b) avoidance of loss of time caused by job change over, and (c) invention of new methods, tools, machines etc. as the result of the same people doing a job repetitively. After Adam Smith came Charles Bahhage who developed an economic method for the manufacture of pins through an analysis and measurement of process work involved in the manufacturing of standard pins.

The most significant contribution to management and more particularly to production management came from Frederic W. Taylor and Frank B. Glibreth. While Taylor, the father of scientific management, made contribution in different fields like work measurement, metal cutting and machining, wage incentives, and factory organization. Gilbreth tried to put measurement of work and human effectiveness in the proper perspective. He stressed, for example, the relevance of methods and human notion, both in increasing output and in reducing worker fatigue. Taylor's approach was more production oriented than worker oriented. Gilbreth, on the other hand, recognized important aspects like creating congenial work conditions, facilities and environment for ensuring higher productivity from workers. The work of these two persons was complementary and was of great help in giving birth to the time and motion study which later cam to be known as industrial engineering a forerunner to scientific management.

The important pre-World War-II contributions, which need special mention are the development and introduction of

statistical quality control by Walter Shewart in 1931 and the development of work sampling by LHC Tipett in 1934. The significant contributions in the field of production and operations management have been the development of tools like high speed computers, numerical control machines and automated production lines, modern mathematical techniques like inventory models of equipment replacement.

Apart from these tools and techniques some of the other important concepts of costs for decisions, optimally concepts and new concepts of organization for manufacturing have become a vital part of day to day management in many companies in the USA and West Germany. Some large organizations in India are also using many of these tools, techniques and concepts.

In order to comprehend further the concept of distance education, please read the below referred material.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.182-188	8-1

8.4   Operational Management

Operations management, or the management of operations, pulls together all the activity and knowledge areas. It also draws on such functional areas (at least in business organizations) as finance, marketing, purchasing, engineering, and accounting, which require extensive specialized study. Operations management plans, controls, organizes, and directs the principal line function of any organization; that is, the conversion of organizational inputs to outputs. Furthermore, operations management must accept the principal responsibility for the continued survival of an organization and, in certain

instance, for organizational growth. Quite obviously, operations management cannot do this alone. It requires inputs and cooperation from all other functional areas. If even one area (engineering, for example) remains ineffective for a long enough period of time, the organization will be seriously hurt or even fail.

Examples of Operations Management

Perhaps some examples of operations management within varying contexts will help to clarify its nature. Suppose you inherited a defunct gold mine but wanted to put it into operation. Your immediate goal would be the output of gold in salable form-perhaps in gold bars. To accomplish this, you would need a number of inputs. One of the inputs would be the mine itself, supplying the gold ore as raw material. Other inputs would include your labor and the labor of others, as well as whatever equipment would be needed to carry on mining operations.

You would have to hire people, purchase equipment, and find the money to do all of this. It is obvious that you will require expertise from three specialized areas-personnel management, purchasing, and finance. You could use consultants, hire specialists, or develop your own expertise as you go along. The important point is that operations management quickly identifies the major area of activity and suggests where and when the organization needs specialized help.

Consider a manufacturing firm, one making radios, as an illustration. The outputs are radios in the appropriate quantities and styles to meet market demand. The marketing department plays an important role here, for it must determine the nature of the market and provide forecasts to the organization. With such market information, the management can marshal inputs

in the proper quantities to convert them to the desired output. Inputs will be raw materials, purchased parts from other manufacturers, labor, money, and physical facilities. The nature of the inputs and the required marketing information again suggest the types of specialized knowledge and skill needed by the organization. How about a bank, or a corner grocery store, or a governmental agency?

All of them provide inputs which are converted in out puts by the organization. A bank has the usual inputs of labor and physical facilities, but its main input is money that people deposit in the bank for savings. These savings are then converted into number of outputs: personal loans, business loans, mortgages.

Convenient service to the consumer is the principal output of a corner grocery store. Primary inputs are wholesale quantities of meats, vegetables, canned goods, and other items. The grocer converts these inputs as well as his labor and physical facilities into convenient service by stocking small quantities of each item on his shelves; by offering his personal assistance to the customer; and by arranging the physical facilities in a manner that is convenient to the consumer.

Ordinarily, the principal output of a governmental agency is service to the citizen, although the output hierarchy may vary considerably. The Federal Aviation Administration, for example, seeks to assure safe flying, regulates rates of commercial airlines, assigns routes, and generally oversees airport operations. All of this output provides service to the citizen. Inputs to the FAA include persons skilled in aviation operations, physical facilities, and money appropriated by Congress to pay employs and purchase facilities and equipment.

These Examples should help illustrate that all organizations confront the challenge of converting their inputs to valuable outputs and, further, that all organizations must manage these operations as their principal line activity. Hence, operation management consumes a major portion of the time and effort of managers throughout an organization and requires the types of activities and knowledge that we have discussed so far in the book. Now it is time to get into some of the specific problems involved in operations management. We will consider these problems under two broad managerial functions-planning and controlling.

Planning for Operations Management

One of the first items confronting an organization as it plans how to best fulfill its mission is that of location. Where should an organization locate to best acquire and use inputs? Where should it locate to assure maximum use of its output? You may have noticed advertisements in national magazines extolling the advantages of certain states in order to entice industries to locate there. But the location can be narrowed down far more than to areas enclosed by state boundaries. The question may be whether to locate in or out of a city, or in what part of a city, or in what shopping center, or even in what specific location in a shopping center or on a city block.

Factors to consider location analysis include taxes, labor supply, initial land and facilities cost, power sources, and ecological impact. With respect to an organization's employs, the availability of mosques, schools, hospitals, stores, housing is always important. In particular situations, other factors such as parking may be critical. Location analysis is a complex problem to which certain quantitative techniques offer help.

One quantitative method simply weights the various factors by location. Suppose we were considering three possible

locations for our organization: A, B, and C. We could use a scale from one to five and assign a weight to each location for each factor. If a rating of ''five'' indicated the most favorable rating while ''one'' was the lowest, all we would have to do is total our traits to obtain the best location (table 14-1).

In other situations, a special application of linear programming provides the best solution (see chapter 4 for an explanation of linear programming). If we were trying to locate a new warehouse to faction as a distribution center and to receive factory shipments, the transportation costs from various factories to the possible warehouse locations would be an important factor. The particular linear programming approach for determining the low-cost system of shipping routes from factories to warehouse is called the transportation model. It is a deterministic model and leads to the best possible solution for minimizing transportation costs. For example, we have factories in Los Angeles, Chicago, and New York and warehouses in Atlanta, St. Louis, phoenix, and Seattle. We want to add another warehouse but are not certain whether it should be located in Minneapolis or Detroit. Assuming we know all the transportation costs from factory to warehouse, we can set this up as a transportation model and quickly solve it.

Table 14-1 Location analysis

Factors*	A	B	C
Taxes	4	1	5
Labor supply	5	2	3
Land cost	1	3	2
Power	4	1	3
Ecological impact	4	3	1
	18	10	14

|
Best location
 * Assume that all factors listed are of equal importance.

Table 14-2 shows the initial set-up which will eventually lead to solution. Note that unit transportation costs are in the cells which connect horizontally by rows with the factories and vertically by columns with the warehouses. For example, it costs $12 to ship one unit of product from Los Angeles to Atlanta. Note also that supply and demand figures are shown alone the right and lower margins of the matrix. For example. Los Angeles has a capacity to supply 6,000 units per year while the Atlanta warehouse has a demand for 4,800 units per year.

Table 14.2:   Initial set-up for transportation model

	Existing warehouse				Proposed warehouse		
Factories	Atlanta	St. Louis	Phoenix	Seattle	Minneapolis	Detroit	Supply
Los Angeles	12	8	5	6	7	9	6,000
Chicago	5	2	7	10	2	2	18,000
New York	6	8	11	14	9	6	10,000
Demand	4,800	10.000	5,200	8,000	6,000	6,000	34,000

The transportation model will not only show us the best place to locate a new warehouse, Minneapolis or Detroit, but will show us the best overall system of shipping. That is, we will know how much to ship from Los Angeles to each warehouse, from Chicago to each warehouse, and so on. The answer will be the absolute lowest-cost system of shipping, given the route costs, supply capacities, and demands. The problem can be worked by hand through a rather slow repetitive method, but linear programming problems such as this are quite adaptable to computer solution.

For further details, please read the below referred material;

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.188-190	8-2

8.5   Administration of Learning Process

If administration is to facilitate teaching and learning, it becomes necessary to examine the major task necessary for the achievement of such purpose. In this unit we shall discuss the nature and scope of these task. We shall show something of the interrelationships among these tasks, though we cannot treat the detailed techniques to be employed in the achievement of them. Such a treatment requires books not a single chapter.

The task approach to administration is not characterized by any highly developed theory. At best, the organization of the tasks into operational areas is taxonomy. This classification, however, brings a certain order to the field which will prove useful to both student and practitioner of administrations.

The administrative tasks or operational areas of administration may be grouped into categories. "We think the six categories shown below represent a convenient grouping:

1. School-community relationships.
2. Curriculum and instruction.
3. Pupil personnel.
4. Staff personnel.
5. Physical facilities.
6. Finance and business management.

The principal of a school and the superintendent of a school system ordinarily have many tasks to perform in each of these operational areas. In large schools or school systems, assistants to principals and superintendents may be given limited responsibilities in one or two of the operational areas, for example, a high school principal may have a vice-principal in charge of pupil activities, discipline, and attendance, to assist

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him. Or a superintendent of schools may have a director of curriculum and a business manager to assist him. In these cases a team of administrators has been formed to work at the administrative tasks.

The organization and treatment of administrative tasks in this unit should in no sense imply that one administrator or even a team of administrators can or should do these things alone, other people are nearly always involved. These people may be citizens, schools board members, or members of the teaching or non-teaching staffs of the school. In some cases the tasks are achieved with the assistance of these people, in other cases entirely by them, and in still other cases these people advise the administrator regarding the tasks. It should be clear, however, that the responsibility for seeing that these jobs are done rests with the administrator. The nature of each of the major operational areas will now be suggested.

School-Community Relationships

Because education in our country is largely a public venture, and because in the final analysis it can be no better than the citizens of community will have it, school-community relationships represent both a point of beginning and a continuing concern for any school administrator.

Character of the Community

School communities may be characterized as urban or rural, as farm or non-farm, as industrial or residential, as middle-class or lower-class, such common designations may provide the school administrator with some clues as to how he is to work with his community. In actual practice, however, school communities may not lend themselves to such easy categorizing.

Bullock was concerned with the community characteristics that the school administrator needed to understand. After preliminary testing he determined that the following questions were important:

1. What is the general community level of approval or disapproval of the school program?

2. What kind of educational philosophy does the community hold?

3. What degree of prestige do teachers as occupational class hold in the community?

4. What kind of community is this with regard to such characteristics as cohesiveness and unity of action?

5. How does this community define the role of he school administrator?

6. How receptive is this community to change and innovation?

Bullock then proceeded to develop some scales which an administrator might use in a school community in an attempt to answer the questions enumerated above. In one city school district, for example, the found that the level of school approval varied significantly in terms of the geographical location, occupational category, organizational membership of residents, and the amount of formal education completed by residents.

The pertinence of school-community relationships to the other tasks of administration may be seen in the further examination of some of Bullock's questions. According to him, the level of community approval is related to the level of the program for which a community would be willing to spend money. The educational philosophy of a community has a

bearing upon the curriculum of the school. The willingness of a community to accept the leadership of teachers in instructional matters is, in part, a function of the prestige in which teachers are held. Community cohesiveness is pertinent to community decisions regarding school building expansion, as it is to other community decisions. Perhaps enough has been said to illustrate how necessary it is that a school administrator understand the composition and character of his school community.

Desires and Aspirations of Citizens

Some of what was said above has implications for the assessment of the desires and aspirations that citizens have for their schools. We need to note specifically, however, that this is another important aspect of school community relationships. There are many ways by which assessment might be made, such as through informal conversations with citizens and through the use of rating scales like those develop by Bullock and referred to above.

A number of studies done at the University of Chicago have dealt with the task of the public school as perceived by various sub-publics, occupation and amount of schooling were found to be the best predictors of educational belief. Fair predictors were also geographic region in which one lives, age, race, and religion. Interestingly enough, the type of community in which a person lives, income, sex, and participation in school programs did not prove to be closely associated with educational view-point. Some useful instruments for the assessment of public perceptions were also develop part of these studies.

The building of a realistic expectation of what the public schools can and should do in community represents one of the major tasks of any school administrator. Only with such

understanding can school procedures make sense to citizens and lead to significant advance in school programs

Curriculum and Instruction

A second and in a sense a basic, operating area for the school administrator is that of curriculum and instruction. By curriculum and instruction we mean those activities in which school workers, sometimes assisted by lay citizens, engage to plan, implement, and evaluate an instructional program.

We recognize, too, that in the final analysis change in instructional content or method does not come through mere talking about it. Actually, changes occur when the understanding and skills of teachers and other workers change. To be effective, therefore, curriculum development activities should provide ways by which school workers may acquire new insights or develop new skills. Such insights and skills are related to the following. Curriculum categories: determination of objectives, the development of a program of instruction, the use of instructional procedures, and the appraising of instruction. Each of these will be treated briefly here.

Determining Objectives

Each school staff needs to develop, in the light of all the evidence available, a concept of the specific objectives of the school or school system in a particular community. Setting the conditions so that procedure can be carried out effectively is another important administrative task.

General statements of policy, like those found in Goals are provocative. Gardner suggested, it will be recalled, that "our schools must prepare all young people, whatever their talents, for he serious business of being free men and women,." These broad objectives seem acceptable enough until one tries to spell

them out in more specific terms. For instance, in the interest of intellectual development, are youngsters going to be free to examine controversial issues such as the economics of communism? In the moral realm, to what extent can and should representatives of religious denominations be used in the school program? The administrator must be concerned with these and similar questions as he tries to develop a plan whereby the professional staff can get at the objectives of the school.

What are some of the elements of such plan? Basically, two things are necessary: to provide opportunity to learn more about the culture and its demands upon the school and to provide opportunity to learn more about the growth and development of children and youth. These are the foundations of any kind of curriculum study.

Teachers and other school workers, to be sure, already know a great deal about the culture which determines, in part, what the school ought to be about. In a society as complex and pluralistic as ours, however, such knowledge may be fragmentary, incomplete, and even in error. A comprehension of the way federal expenditures for foreign aid may be related to our own economic well- being may illustrate the world-wide nature and complexity of our society.

A plan for helping professional workers to make a continuous assessment of the social scene requires that they have an opportunity to examine the culture both first hand and vicariously. To examine first hand, people must have an opportunity to travel in their own locality, in the nation, and the world at large. Such travel can, of course, be supplemented by reading or by hearing the reports of other observers, provided such observers have the ability to see and to report.

Opportunity for extending the knowledge of teachers about human growth and learning is readily at hand. Pupils can be seen not only as people to be taught but as subjects to be studied. Actually, the challenge of teaching is probably not fully appreciated until both approaches are used. To study children and youth, however, certain conditions seem necessary. Teachers need a little time, for reflection. They may also need the help of a person who is more capable in study and research approaches if their own studies are to be well conceived and executed. The administrator should try to provide these conditions.

Program of Instruction

After the objectives of an instructional program are formulated, the job of actually determining a program to achieve these objectives still remains. Facilitating the development of such a program is also the task of the administrator. To The extent that programs are district-wide in character, the superintendent and his staff should take major responsibility to facilitate the process. To the extent that each building has autonomy in developing its own program, the building principal and his staff should take major responsibility to facilitate the process.

Many of the conditions suggested above for administrators to promote in the determination of objectives pertain also to the development of instructional programs. It seems desirable, however, to look more specifically at the behavior of administrators, particularly as such behavior may affect the work of teachers and other professional personnel as they engage in program development.

Jenkins and Blackman studied the relationship between the behavior of elementary school principals and the curriculum

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development activities of their staff members in a large city school district." While many of the findings were suggestive only, the data do indicate rather clearly that there was no significant relationship between the verbalization of democratic attitudes by administrators and the effectiveness of those administrators in putting democracy into action, or to put it another way, administrators may say they involve teachers in curriculum planning- they may even think that they do involve them-and at the same time this condition may not exits.

In the same study it was also found that the most effective administrators used approaches that were neither strongly "staff-centered" nor strongly 'task-centered." Rather, principals who had some facility to help teachers define jobs and who at the same time were able to exhibit warmth toward teachers were the ones who, in general, had the most effective staffs in terms of developing curriculum programs.

While organizational arrangements for curriculum study were not a significant variable in the Jenkins-Blackman study, a school administrator does have certain organizational responsibilities if he is to foster program-building among his staff members. At the district level, for instance it would seem appropriate that some kind of district-wide curriculum council be formed. This council should have representative teachers, principals, and staff members from the central office, so that instructional plans for the entire system might be appropriately reviewed. Existence of such a council guarantee nothing. The council must come to represent a genuine forum where ideas, not status positions, are important.

Organization of programs where instruction is scrutinized is also important at the building level. In the Denver study, for instance, a team of leaders- the principal and a curriculum co-

ordinator for each of the secondary school was established, and their leadership activities pertaining to instructional improvement over a period of three years were examined.10 Such a team arrangement seemed to provide a way by which the principal's office could really do something by say of working with teachers on instructional problems.

National Curriculum Programs

But development and implementation of the program of instruction is no longer and activity carried on chiefly by a school district or a single school. Under the auspices of the national Science Foundations and other groups, national curriculum programs have been developed, and they have had decided impact upon the instructional practices of many schools.11 Beginning in 1956 with the Physical Science Study Committee, with head quarters at the Massachusetts Institute of Technology, extensive programs have also been developed in mathematics, Biology, and Chemistry..12 More recently, the National Education Association has carried on an extensive project on instruction. 13 The United States office of Education has also supported projects in English and social studies whose results may have national impact.

These national programs raise several important issues. Control of education in this country has, in the past, been assumed to be a state and local matter. Legally, this is still the case for the most part, but actually the influence of the national programs in widespread and pervasive. At one time, extensive teacher participation was considered essential to the development of curriculum programs. But today relatively few teachers take part in the development of most national programs; in fact, they find that they are, rather, the consumers of these programs. Although very limited resources were once available for curriculum development, the national programs

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have had at their disposal millions of dollars for holding conferences, developing instructional materials, hiring consultants, and organizing institutes wherein teachers might become acquainted with the programs.

In addition, these programs create new responsibilities for the administrator, who must acquire some knowledge of them in order to discuss them with his staff. He also will probably wish to encourage his teachers to attend institutes where the new programs are being presented. In any case, those involved in curriculum development at the local level can no longer ignore the ideas growing out of the national programs, nor can they ignore the instructional materials these programs make available.

Instructional Materials

Another closely related task for which the administrator takes responsibility is the selection and procurement of instructional materials. The teacher, to be sure, is central to adequate instruction., but even good teachers can do better when they are provided with appropriate tools.

The first task in the area is that of budget provision. Budget-building assumes that program development, discussed briefly above, has gone forward, and that the materials needed to implement such as program will now become the basis for the budget request. Fro instance, if it has been decided that every biology student should have actual experience using laboratory equipment and supplies, the budget request will be quite different from one based upon a course that is to be taught with the textbook-demonstration-lecture approach.

Even assuming this kind of budget approach, however, it will usually be the administrator who must convince the

superintendent; staff, the board of education, and finally the community that expenditure for in situational materials are indispensable to an adequate program of instructional. Sometimes elaborate plant and grounds- the outside façade of the school-wine out over books, maps, and other instructional aids when budget become tight. Without deprecating adequate programs of plant operation and maintenance, administrators need to be able to hold the line for budget items intimately related to the instructional program.

In the actual selection of instructional materials, teachers should play a large part. It has been found that teachers feel strongly the need to assume responsibility for those activities which have to do with instruction. It behooves administrators, therefore, to devise way by which teacher participation in instructional matters, including the selection of instructional materials can be encouraged. It should be recognized, however, that since such participation does take time, it must be regarded as a part of the total load of the teacher.

When budget provision for instructional materials has been made and when teachers have assisted in the actual selection of materials, there still remain the problems of procurement and delivery. These are tasks which the administration of a school district should perform with the greatest possible dispatch. Nothing is as exasperating to a teacher as to participate in a budget-building or a materials-selection program and then have purchase or delivery of materials delayed indefinitely by administrative red tape. The principal and the superintendent must cut through any such maze or avoid creating it.

In order to get more information on the topic, please read the below referred material.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.190-192	8-3

8.6   Student Administration

To this point we have examined administration from the standpoint of its development and meaning, and in terms of the major tasks confronting a school organization makes and implements decisions. Some writers call this approach the decision-making process, but we shall call it simply the administrative process. While this view of administration has been prominent in business and public administration, it has been relatively neglected in educational administration.

The General Concept

It now seems appropriate that we examine the meaning of the term "administrative process". We shall build this definition in a historical manner by examining some of the earlier statements on the administrative process, and in a comparative way by noting discussions in educational writing and elsewhere.

Early Statements

Fayol, as early as 1916 in his Administration industrielle et Generale, dealt with what he called the "elements of management." He described them as planning, organizing, commanding, coordinating and controlling. These components of what we would call the administrative process resulted from thoughtful observation on the part of Fayol,, an engineer who

had turned administrator, Urwick,a student of public administration, has this to say of Fayol:

Thus his life embraced four careers rather than one, and in each of them he was pre-eminent. As a technical man he achieved national distinction for work in mining engineering. As a geologist he propounded a completely new theory of the formation of coal-bearing state and supported it with a detailed study of the Commentry district, almost unique as a piece of geological research. As a scientist turned industrial leader his success in both fields was phenomenal. The days of his own detailed research were over, but he applied the scientific approach to problems in every direction and encouraged those associated with him to do likewise… But he always declared certain simple principles. Finally, as a philosopher of administration and as a statesman he left a mark on the thinking of his own and of many other European countries.

While the meaning of planning, organizing, and coordinating may seem clear, two of the words Fayol used above may need explanation. The word "commanding" will be better understood if one remembers that the time was 1961. Under this term, Fayol, suggested that the manager should perform such activities as these; acquiring a thorough knowledge of his personnel eliminating the incompetent, setting a good example, conducting periodic audits of the organization, bringing together his chief assistants for conference, and avoiding preoccupation with detail. Perhaps today we would use the term "directing" to include much of what Fayol meant by command.

The word "controlling" may also give some trouble. A part of Fayol's own explanation of the world follows:

In an undertaking, control consists in verifying whether everything occurs in conformity with the plan adopted, the instructions issued and principles established. It has for object to point out weaknesses and errors in order to rectify them and prevent recurrence. It operates on everything, thins, people, actions. From the management standpoint it must be ensured that a plan does exist. That it is put into operation and kept up-to-date, that the human organization is complete, the summarized personnel charts in use, and that command is exercised in line with principles, that co-ordinating conferences are held. etc

Some of our present-day writers use the term "evaluating' in much the same way that Fayol used "controlling."

Even this brief discussion may suggest that Fayol had given expression for a process that seemed to have appliction to the problems confronting

Fayol's "elements" or processes of administration were derived chiefly from experience with industrial enterprises, Soon, however, students apply these principles to the public realm. Planning, that is working out in broad outline the things that need to be done and the methods for doing them to accomplish the purpose set for the enterprise.

Organizing, that is the establishment of the formal structure of authority through which work subdivisions are arranged, defined and co-ordinated for the defined objective; Staffing, that is the whole personnel function of brining and training the staff and maintaining favorable conditions of work;

Dawting, that is the whole personnel function of bringing and training the staff and maintaining favorable conditions of work; Co-ordinating, that is the all-important duty of interrelating the various parts of the work; Reporting, that is keeping those to whom the chief executive is responsible as to what is going on. Which thus includes keeping himself and his informed through records, research and inspection: With all that goes with budgeting in the form of fiscal planning and control.

Check acknowledged that the above formulation was an adaptation of the national analysis previously elaborated by Fayol. Although Gulick on speaking specifically of the office of the President of the United States, he extended that this analysis would be a helpful pattern into which to please the major activates of any chief executive.

We have in the above statements the conclusion reached by two scholars, one with a background in industrial management and the other with public administration as his orientation, who tried to fathom and explain the process by which the work of administrator, particularly a chief administrator, gets done. Soon these and other promising efforts were to be adapted to educational administration.

Application to Educational Administration

Seara appears to have been the first writer in education to apply the administrative process to educational administration in comprehensive fashion," in his book, he acknowledges indebtedness to other students of administration, including Fayol and Gulick, for their work in the field. According to him, the process includes the following activates: planning, organization, direction, co-ordination, and control. With two minor changes, Fayol's five elements emerge in Sears' formulation. The staffing and reporting functions, as presented by Gulick,

are apparently subsumed in the other activities enumerated. Moreover., Sears does onto follow Gulick in including budgeting as one aspect of the administrative process., it will be noted, however, that much of what Gulick places under budgeting has to do with control, a term Sears retain as one of his major headings,. Sears treats each of the five elements of the process at some length.

A yearbook of the American Association of School Administrators took cognizance of the administrative process. After noting that administration is essentially a way of working with people to accomplish the purpose of an enterprise, it enumerates some crucial activities in this relationship. An excerpt from the section in which five crucial activates are described follows:

1. Planning or the attempt to control the future in the direction of the desired goals through decision made on the basis of careful estimates of the probable consequences of possible courses of action.

2. Allocation or the procurement and allotment of human and material resources in accordance with the operating plan.

3. Stimulation or motivation of behavior in terms of the desired outcomes.

4. Co-ordination or the process of fitting together the various groups and operation into an integrated pattern of purpose-achieving work.

5. Evaluation or the continuous examination of the effect produced by the ways in which the other functions listed here are performed.

The above formulation of the administrative process seems to contain one new point of emphasis. For "commanding"

(Fayol's term) or "directing" (the term used by Gulick and Sears), the word "stimulation" has been suggested. In view of what is known about motivating group action toward a common enterprise, this may be a significant addition.

A careful examination of the administrative process as it applies in education has been made by Gregg. To him the process has seven components as follows" decision-making, planning, organizing, communicating. Influencing, co-ordinating, and evaluating.

While Gregg uses many of the components with which we are now familiar, he employs certain new emphases. Both communicating and influencing stress the necessity for mobilizing all members of the work group if the organization is to achieve its purpose. In fact, Gregg's treatment stresses time and again the necessity for involvement of staff if the administrative process is to be effective.

One of the few empirical tests of the administrative or decision-making process is found in the work of Griffiths and Hemphill.11. In a comprehensive and careful study of the performance of 232 elementary school principals, tested in a week-long simulated situation, considerable evidence was gathered to support a formulation of the process as follows:

1. Recognizing a problem and the need to prepare to make a decision.

2. Preparing for clarification of the problem.

3. Initiating work in preparation.

4. Organizing and judging facts, opinions, and situations.

5. Selecting alternatives.

6. Deciding and acting.

A Definition

Reference to additional analyses of the administrative or decision-making-process seems desirable before a definition is attempted. Simon has amplified the idea as follows:

It should be noted that the administrative processes are decisional processes: they consist in segregating certain elements in the decisions of members of the organization., and establishing regular organizational procedures to select and determine these elements and to communicate them to the members concerned. If the tasks of the group is to build a ship, a design for the ship is drawn and adopted by the organization., and this design limits and guides the activities of persons who actually construct the ship.

The organization, then, takes from the individual some of his decisional autonomy, and substitutes for it and organization decision-making process. The decisions which the organization makes for the individual ordinarily (1) specify his function,, that is, the general scope and nature of his duties; (2) allocate authority , that is, determine who is the organization is to have power to make further decision for the individual; and (3) set such other limits to his choice as are needed to co-ordinate the activates of several individuals in the organization.

In the above, Simon helps us see that the decision-making with which we are concerned is not individual but rather organizational decisions-making. The administrator occupies a key spot in the process, but even so he is not permitted to make arbitrary decisions or give arbitrary directions.

In a statement on administrative theory, Litachfield sets forth major and minor propositions having to do with the administrative process. Excerpts from his statement follow:

First major propositions: The administrative process is a cycle of action which includes the following specific activities

A. Decision making
B. Programming
C. Communicating
D. Controlling
E. Reappraising

Minor proposition: Decision making may be rational, deliberative, discretionary, Purposive, or it may be irrational, habitual, obligatory, random, or any combination thereof. In its rational, deliberative, discretionary, and purposive form, it is performed by means of the following sub activities:

A. Definition of the issue
B. Analysis of the existing situation
C. Calculation and delineation of alternatives.
D. Deliberation
E. Choice

Minor propositions: Decisions become guides to action after they have been interpreted in the form of specific programs.

Minor proposition: The effectiveness of a programmed decision will vary with the extent to which it is communicated to those of whom action is required.

Minor propositions: Action required by a programmed and communicated decision is more nearly assured if standards of performance are established and enforced.

Minor propositions: Decisions are based on facts, assumptions, and values which are subject to change. To retain their validity, decision must therefore be reviewed and revised as rapidly as change occurs.

While Litchfield's propositions are submitted as hypotheses to be tested, they appear to us, even in their present form, to represent a most understandable description of what is involved in the administrative process. There is clearly a flow from decision-making, to program formulation, to communication and motivation about program, to checking and controlling standards of performance, and to continual reappraisal.

Dill prefers to characterize the entire process as decision-making. He suggests that the process includes an agenda-building phase or intellectual activity; a commitment phase or "choice" activity; an implementation phase; and an evaluation phase. Dill also points out that to understand how decisions are actually made, we need to know about the environments in which decision-makers work and bout the complexities of interpersonal and inter group relations in decision-making. We are also indebted to Dill for noting ways by which decision-making has been improved. These improvement include rapid advances in the capacity to define and collect data, and progress in the development of models that assist in predicting the consequences of decisions.

Clearly, the decision-making or administrative process, while variously defined and still subject to further refinement, represents a useful concept. For our purpose here, we shall define the administrative process as the way by which an organization makes decision and takes action to achieve its goals.

Steps in three Process

For our purpose, we propose that the process is cyclical and contains the following components:

1. Decision-making
2. Programming
3. Stimulating
4. Co-ordinating
5. Appraising

It is obvious that our selection of terms is eclectic. For this we make no apology. Much as we tended to agree with the Litchfield formulations, we have made certain modification which we think describe somewhat more accurately what goes on in educational administration.

Here we refer to a warning given by Halpin:

Unless one is extremely careful he can easily be tempted about "process" as if it were a free-floating affair, detached from the behavior of individuals… An outside observer can never observe "process" qua: "process" he can observe only a sequence of behavior or behavior-products from which he may infer 'process15.

These words bring us to emphasize the point that the administrative process is a conceptualization –not an observed phenomenon. It appears, however, that such a conceptualization can be a useful guide to the practicing administrator, and that it can suggest way by which researchers may submit the idea to further testing. Each of the five components of the administrative process suggested above will now be discussed.

Decision-Making

Decision –making, can be rational or irrational. Obviously, we are concerned with decision-making as a rational matter. Whatever the decision is, the issues and problems involved must first be clarified. In other words, the problem must be defined. Secondly, the existing situation must be analyzed, often requiring the gathering and interpretation of data. At this point, consideration must be given to the possible alternatives, and the consequences of each alternative course of action weighed. Finally, a choice must be made; a course of action must be determined.

Let us illustrate this step in the administrative process. Suppose there is public demand to teach reading more effectively. The school as an organization needs to ask such questions, as, who is making the demand? What are they seeking? What seems to be the motivation behind the demand? These questions will help in getting at the issues and defining the problem. The next step is that of determining the existing situation. What is the character of the pupil population to whom reading instruction is given? How do these pupils perfarm on various kinds of reading tests? From data gathered to answer these two questions, the school may be in a position to determine to what extent and in what ways the demand for more effective reading instruction is justified.

Suppose the reading tests reveal that the youngsters are not quite up to national norms, particularly for above-average pupils, as we shall say the youngsters in our example are. Suppose further that the achievement of pupils in some buildings does seem to meet expectations, while achievement in other buildings falls below expectations, with such information collected and interpreted, what are the alternative courses of action? What at the consequences of each possible action? For

instance, the school can do nothing, or it can pursue any one of several courses of action. The test results could be circulates to each of the principals, or to the teachers. An in-service program on reading instruction for all teachers in the system might be organized, or such a program might be organized in just certain buildings or for certain teachers. Additional materials for reading instruction might be purchased. From among these and other alternatives, one or more choices must be made. Even the choice to do nothing is a choice.

This choice may finally be made by the superintendent of schools, but note what has prefaced such a choice. In all probability, other administrative staff members, and possibly teachers and citizens, were involved in answering the questions concerning the sources of the demand for improved reading instruction, and the motivations behind such demands. A whole research department may have been involved in determining what the youngsters are like and how they read. An assessment of teachers opinion concerning many aspects of the problem may have been taken. A review of the alternative courses of action may have been deliberated at length in a meeting of the school principals and the central office staff. Only after analyzing all of the cues supplied by the involvement of these various people in the organization does the superintendent make the decision. In a real sense, the decision is an organization decision.

Programming

Once a major decision is made, there are a number of implementing decisions to be made. This aspect of the administrative process is often called organizing, but the word "programming" seems to describe it some-what more accurately. In programming, arrangements for the selection and

organization of staff for housing, equipment, and budget must be made.

Let us refer once again to our example of unsatisfactory reading achievement. Suppose one decision made in that situation included establishing an in-service education program for teachers on reading instruction. Such a decision requires considerable programming. For instance, which teachers are to be involved? Who will actually organize and conduct the program of the school district? What kinds of meetings will be arranged and what kinds of meeting facilities are needed? What will be program cost and how is it to be budgeted? Finally, how is this new expectation of teachers related to their other work responsibilities? Only after such question as the above are considered, answered, and acted upon can the decision to offer an in service program to teachers be said to be programmed.

Again, this tends to be organization action. Teachers and principals may help the superintendent decide which teachers are to be included. A planning committee composed of teachers, principals, and supervisors may be organized to help in picking the reading consultants and in making other plans. A particular supervisor may be asked to take over the detailed organization and direction of the program. Meetings may be scheduled in buildings that are central to the group participating and room arrangements made with the principals of those buildings. The supervisor in charge and the consultants engaged for the program would probably determine equipment and materials needed. For all of these activities, the superintendent would need to allocate money from the school budget. If the current budget did not permit such allocation, the program might have to be delayed until budget provision could be made. Such provision might require action by the board of education in

adopting the budget. In all of these activities, an organization has programmed its decision.

Stimulating

The third step in the administrative process, it will be recalled, has at times been called command, and at other times, direction. While any administrator may on occasion need to command and on other occasions to direct, we feel the better term for what is involved here is "stimulating".

To be sure there are several kinds of stimulation. At one level, the organization or the administrator acting for the organization can exercise considerable pressure upon an individual in that organization. Seldom, if even can a status leader in an organization free himself completely from exercising some such influence. At another level, however, stimulation can be much more rational. In other words, members of the organization also examine the evidence and come to recognize that certain courses of action are desirable, it is our belief that effective administrators act nearer to the rational level of stimulation than to the pressure level.

We do not wish to oversimplify this problem. Simulating members of an organization to action is as complex as human personality itself. What seems to be effective in an administrator's relationship with one person may not be effective with a second. There is no cook-book procedure or "never-fail recipe" for stimulation, although certain kinds of activities seem useful in many situations. One of these is involvements. Teachers wish to have a part in deciding school policies, particularly those having a direct relationship to the instructional program. Such involvement gives many teachers a sense of identification with the organization and greater

readiness to do what is needed to help the organization achieve its goals.

Communication has also been found to be of great importance to the stimulation of organization members. Communication needs to be of three kinds: down, up. and across. The Hawthorne studies 16 and other research have demonstrated that when members of an organization are "in on the know," when they understand clearly what is being attempted by the organization, they tend to be more productive, Face-to-face communication appears to be very important if organization members are to be motivated to do their best.

Let us use our reading example above to illustrate stimulating as a part of the administrative process. Even after the decision to provide an in service education program for teachers on reading instruction has been programmed, there is still the question of stimulating the teachers who need help to become interested in getting it. Of course, they might be required to take the program; but if so, the question remains as to how they can be stimulated to do something about improving their teaching techniques.

However, if teachers have been involved in the decision to initiate the program, and if some of their own wishes to time and place of meetings have been taken into considerations, their attitudes toward the program are probably different from what they might have been if the decision had been merely thrust upon them. Moreover; if test results on the reading program and interpretations of those results have been shared with the teachers, the need for improved reading instruction will probably be as apparent to teachers as to administrators. In the case of a teacher who particularly needed to get into the program, the principal might find no substitute for a frank face-

to-face conference in which, among other things, as review of the test results of the pupils of that teacher would be made.

As with the other aspects of the administrative process, stimulating is not merely personal behavior on the part of the administrator. Ideally, stimulation should be directed toward the achievement of the purposes of the organization, not merely toward the personal satisfaction of a status leader. Moreover, the work group itself may often provide or contribute to the stimulation needed to get individual members of an organization to increase their contributions to the organization.

Co-ordinating

A further aspect of the administrative process is that of co-ordinating. This activity involves brining into appropriate relationship the people and things necessary for the organization to achieve its purposes. Often, in co-ordinating, the goals of the organization must be reviewed and made explicit. At times, standards of performance necessary to the achievement of such goals need to be noted. Members of the organization may need to be held to meeting such standards.

The place of co-ordination may also be illustrated in our reading example. The in-service program was set for a particular time. Equipment and materials had to be made available at that time, not at some other time. Perhaps an important purpose of he school, the teaching of literacy, had to be reiterated and re-emphasized. The organization had to become involved in the business of setting standards for the in-service program to be made available to teachers. Not just any resource people would do. Consultants who could serve at a suitable level or standard were sought. Presumably, those teachers who took the in-service program were not permitted

merely to "site in." work expectations were established, and all participants required to meet them.

Some of this may make it appear that the administrator manipulates the members of the organization in a sense this may be true; however, the control implied is for the purpose of organization achievement, not individual aggrandizement. Ordinarily, no member of an organization has the vantage point occupied by the administrator of that organization. Hence no one, as a rule, can see as clearly as he the relationships among people, the allocation of tasks, and the division of labor necessary to organizational achievement. Two extensions of this argument seem to be necessary. In the first place, in order for the administrator to see the relationships of people and things necessary for the achievement of the organization's purposes, one assumes administrative competence. Moreover, co-ordination will not proceed at a high level unless the members of an organization recognize both the administrator's role and their own roles in co-ordinating activities.

The administrator is the key person in helping all members of an organization understand the need for co-ordination and the role each person is to play, When he becomes lax in his co-ordinating role, confusion, in-effectiveness, and job dissatisfaction nearly always follow.

Appraising

The last step in the administrative process, as we see it, is that of appraising. Some writers in the field use the term evaluation; and, to be sure, the two terms have many of the same connotation. Because we have used evaluation in a somewhat broader sense in Chapter4, we have chosen the word "appraising" as more suitable to describe one aspect of the administrative process.

It seems clear that administrative decisions and subsequent action if they are rational, are based upon certain facts, values, and assumptions. In time, any or all of thee bases may change, and such change may make both the decision and the implementing action obsolete. The need for continuous appraisal, or reappraisal as Litchfield calls it,17 is apparent.

There would appear to be two purposes or concerns in appraisal. They might be stated as follows (1) To what extent and how well have the organizational objectives been met? (2) To what extent and how well has the organization been maintained? A variation of the latter question might be: to what extent and how well have the members of the organization grown in competence? These points emphasize the fact that organizations do not exit just for fun but rather to achieve some specific purpose. In the case of the public school, the purpose includes the teaching and learning of literacy and critical thinking. In appraisal, then, key questions would have to do with how well literacy and critical thinking are being taught and being learned.

But an organization must also take the long view. In addition to looking at the degree to which its objectives are being met at the moment, it must also be aware of how well the organization is being maintained so that it may continue to achieve its ends. Excessive teacher turnover, for instance, implies that the organization is not being maintained. Moreover, unless the members or an organization continue to grow in competence, the organization cannot be well maintained.

Let us see if appraising can also be applied to our reading example. The in-service program or reading instruction for teachers has gone forward. The results of such a program now need to be assessed. Such question as the following should be

asked: Did the people who need help in the teaching of reading enroll in the program? Was the program of such a nature that actual assistance was given? In what ways have the practices of teachers change as a result of the program.? Have these changes in practices produced more effective reading on the part of pupils?

The last two questions are key ones. If teaching practices have been shifted toward established criteria of good teaching, one kind of evidence concerning the effectiveness of the in-service program has been obtained. At best, however, this is a kind of intermediate or inferred evidence. The real test comes in determining whether or not the youngsters, on the basis of the established criteria, are actually reading more effectively. This last tends to be a kind of ultimate evidence as opposed to intermediate evidence. We suspect that many workers in education have been too willing to settle for intermediate in place of ultimate evidence.

Perhaps we need to say a word about criteria. The establishment of criteria, the bases used in so much appraising, particularly in education, is a value process. In other words, what we consider to be effective reading is a result of the values that professionally sophisticated or informed people hold for effective reading. Comprehension as opposed to mere word-calling is an example. In appraising, then the organization applies values as well as facts to determine how well it is doing.

An appraisal of the reading ability of youngsters before and after the in-service program may suggest what extent the organization is achieving its purpose so far as reading instruction is concerned. But what about the maintenance of the organization? Now another set of questions, such as the following, must be asked: Have the teachers who participated in

the in service program identified more fully with the organization? In case the school needs to tackle another problem, are they disposed to help with it? Did the in-service experience result in increased professional competence and a feeling of increased professional status? If these questions can be answered in the affirmative, there has been organizational maintenance as well as organizational achievement.

To comprehend the topic in detail the point of view of 'Student Administration' given in the below referred material is very useful which may be read.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.192-193	8-4

8.7   Impact of New Technology

In recent years, thanks to technology, we have easy access to higher education, specially by means of distance education. It is not necessary here to introduce each individual educational technology. Computer-based instruction, Compact Disk Interactive (CDI), teleconferencing utilizing satellite or ISDN, and many others are being practiced by many institutions and individuals engaged in distance higher education. At NIME in Japan, for example, we had experimental ISDN teleconferencing with European colleagues who are working on their DELTA project in the EC must recently. We are also conducting regular weekly multilateral teleconferencing with scholars in Thailand, Indonesia, Papua New Guinea, Fiji, and Hawaii to exchange information. Every year, we conduct on-the-job training programmes. Although some technologies are still in their experimental stage, we are assured that promised information technologies will materialize in another decade in most countries, and we are looking forward to seeing the days

when everybody, either as a formally registered student or an ordinary citizen, can have easy and inexpensive access to higher education through telecommunications.

Furthermore, 'distance' can be expanded across national boundaries in the years to come. In Europe, AEDTU (Association of European Distance Teaching Universities) is trying to make arrangements in such a way that students of different countries can have credit transfer and international collaboration. In Asia, too, international cooperation among distance teaching universities is increasing with the exchange of teaching materials, collaborative research, and joint seminars, and that is the basic reason why AAOU was established. With technological advancement, it is expected that international cooperation and collaboration in Asia and the Pacific region will be more active and substantive in the twenty-first century.

However, we should keep in mind that the key to the success of distance education is 'social technology' which enables open universities to be more promising and rewarding institutions. Technologies in terms of electronics and communication devices are simply a means to achieve the goal of open universities. And it is human wisdom which makes full utilization of technology. Indeed, modern distance higher education is still a new baby in the history of human intellectual history, and we must admit many shortcomings and difficulties. But we are happy to have these problems, as they are our next challenge, and our efforts can solve the problems eventually. And in this context, if institutions in Asia and the Pacific can have better and deeper cohabitation, economy of education will demonstrate an increased performance, although still it may not satisfy traditional economic theory.

From a public administrator's point of view, these technologies are not cheap, because the cost for the satellite, antennas, and other equipment require huge amounts of initial capital investment. Communication infrastructure, which supports these new ventures, is a big national project. But from the user's point of view, a computer terminal is not expensive and a telephone bill is easy to cover. Even the price tag of CD-ROM as a new media is affordable. And again, let us ask the same question again: ''Does Education pay''.

My own personal answer is ''yes'', although others may disagree. From a pure economist's point of view, spending several millions of dollars for 'effect unassertive business' is nonsense. But from the users' or consumers' view-points, education, in any form, is desirable and valuable, and the values thus acquired are not measured in monetary terms. The more convenient, the more effective, the better for those who are willing to learn regardless of age, sex, and ethnicity. For instance, working with a computer terminal for information retrieval in your room will save time, money, and energy in comparison with library work. Taking university lectures through radio and television is, depending on circumstances, more convenient than attending calass room. Listening or watching taped instructional materials provide you with advantageous opportunities for studying important subjects repeatedly. CDI is a wonderful device for self-study. We are living in such a great technological environment for learning.

And at this point, it may be necessary to emphasize that the education in future should be 'learner oriented' rather than 'teacher oriented'. As far as Japan is concerned, the Ministry of Education, which used to use the term 'life long education', replaced the term with 'life long learning', and the implication is very profound. Many people today still think that 'education'

and 'learning' are synonymous. But that is not true. In my personal opinion everybody; has intellectual curiosity, or the will to learn. Of course, the subjects of these spontaneous learning motivations are amazingly diverse. Some may be interested in learning botany, while others are eager to learn philosophy. And, in this context, the mission of education must be to prepare varieties of subjects for study and to assist these learners.

Education should be a big intellectual entrprise where learners, or customers, are free to pick up anything, anytime they want to have, Traditional higher education, in contrast, has been a small restaurant where only a few old fashioned cuisines were served on the menu, often as a 'set menu', to the customers regardless of their tastes and choices. In other words, 'education' must be defined as a supporting mechanism for learners, not as one-sided knowledge-giving institution. if this redefinition of education is correct, then technological innovation in education is more than remarkable. Indeed, what is happening around us today is technological revolution rather than innovation. And the revolution is most significant in the field of education, especially in distance education.

In fact, it would not be an exaggeration to say that current distance education is a product of the technological revolution. Above all, those who are engaged in distance education are benefiting in terms of interactive devices. Traditionally minded people often show their skepticism about distance education, saying that teaching by distance does not provide opportunities of face-to-face interaction both for instructors and learners. But as we know, such criticism has no basis today. As a matter of fact, current distance higher education can provide much better and more sophisticated two-way communication not only between instructors and learners,

but also among learners themselves. Such arrangements are often more efficient and user-friendly than conventional university classrooms.

Distance learners can communicate with each other through computer networks, audiovisual devices, and tele-learning, and these means of communication are, often, more flexible than classroom instruction. For example, a question from a learner sent by Internet, can be responded to by the instructor in charge, and this exchange of information is time and space free. It is no wonder that our colleagues in Europe recently began to use the new terminology of 'Flexible and Distance Learning' or FDL. ISDN can bring a compressed picture of an instructor with a clear digital voice to most of the terminals, and the responding voice can reach the ears of the instructor. Fax transmission is very easy and inexpensive. Indeed, when a system is well designed, Individual teaching is possible through these electronic means of communication, and often this individualized instruction cannot be expected in the traditional classroom.

To have further knowledge on the topic, please read the reference given below:

| Sarah Guri-Rosenblit, (1999) | Distance and Campus Universities: Tensions and Interactions, A Comparative Study of Five Countries, Unesco, Pergamon, pp.139-169 | 8-5 |

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8.8 Production and Distribution of Course Material in Distance Education

The success of distance education institution depends on the reliable sources of the delivery of instructional material to their clientele. According to Holmberg, B.(1990, p.130) course units and other learning material for distribution to students are handled in practice in following three basically different ways.

a- A few distance teaching organizations send packages containing complete courses at the beginning of the study. This is usually felt to be a question-able procedure, as many students are likely to be intimidated by the large quantity of learning material to be worked through. It is also bad economy, as even modest drop-out rates lead to smaller editions of later units being required if course materials are distributed in batches along with student's progress.

b- A much more common practice is to send study material on predetermined dates. However, sending course units without paying attention to individual students, seems to be counter-productive, in case of slow working student he may be frustrated and discouraged.

c- The third way is to adapt the distribution of course materials to what is desirable from the point of view of motivation supported and the non-contiguous way of communication. Proper adaptation to the conditions of distance students make it desirable that course unit should be distributed in relation to the individual study pace of each student.

The Director will need to study local conditions to decide upon the most suitable method of distribution of the written instruction to students. This decision must be made early as it will affect the format of the courses since it will be necessary to send students units of work large enough to ensure that they can continuer to make progress while awaiting return of earlier units sent for correction.

World Perspective

Different distance education institutions in the world use different modes of delivery of instructional material to their clientele. According to Asian Development Bank (1986, p.34) the Sukhothai Thammatirat Open University of Thailand use the postal services for the delivery of instructional material to their students. While in Indonesia materials were sent to the cities through a courier service up to a provincial or district capital town depending on the case of farther delivery to the local cities. From there on school supervisors carried the material to local school for delivery. The post office was not used for delivering the instructional materials.

According to Marshall, P. (1992, p.18) in New Zealand open polytechnic, the distribution of material to student is done by mail through the distribution center. Usually distribution of instructional material in the distance education system of India is made by postal service. According to Kaye, Anthony and Rumble, G. (1981, p.299) the Athabasca University/Canada uses the mail services to deliver the instructional material to students at their homes. Everyman's University of Israel, Fernuniversitat of Federal Republic of Germany also use the post service for the delivery of materials to students but free University of Iran (FUI) distributes the course materials to regional and local centers for collection by students during

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registration. Open University United Kingdom uses postal services to deliver printed materials direct to students.

Similarly the Universidad Nacional Abierta (UNA) of Venezuela delivers the packed printed material by road to local centers for collection by students. The Universidad National Education a Distance Institution of Spain delivered material to Associate Centers or selected bookshops throughout the Spain and students purchased material from them.

The AIOU being a distance institution also distribute printed or non-broadcast material to student by postal services. The details of the delivery system of AIOU are as under.

Admission and Mailing System at AIOU

The Allama Iqbal Open University divides the academic year into two semesters. Each semester normally lasts for (5) months, from April to August and October to February. All the admissions are notified well in advance through advertisement in the national press. There is always a deadline set for admission in each semester i.e. 1st February to 5th March (Spring Semester) and 1st August to 5th September (Autumn Semester).

The department consists on the following sections.

A) Admission Section

B) Mailing Section

Thousands number of applications are received in every semester. E.g the department processed Admissions approximately of 1,25,000 students (339364 course enrolment) during spring 1998 semester. (A brief on performance and achievement of AIOU 1998, p.88).

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Following are the major Activities:

1) Computerised lists of students admitted are provided to all regional officers to strengthen the student's support system.

2) About five hundred queries of students are replied through letters and telephone calls every month.

3) Mailing section dispatches over two thousand packets daily to students at the start of semester.

All this process takes about three months from the receipt of applications to finalize the admissions. After checking the eligibility the forms are coded by the admission section, Which sends them to the computer center for the preparation of enrolment list and mailing labels. After admission, instructional materials are sent to the students at their addresses by the mailing section. The final computer lists of admissions for various programmes of each semester are passed on to the regional offices located in all provinces.

Five-year report (1974,1979, p.82) describes the AIOU process as:

Mailing lists are prepared on a course basis and sets of envelopes are prepared based on lists. Mailing starts three or four weeks before a semester or course starting date, depending upon number of students, and the correspondence service section swings into full action. Course by course, books, supplementary material, assignments, study guides and broadcast schedules are put into envelopes, tied and registered and bagged ready for the post office to collect. The section dispatches packets to the students. There is a permanent post office in the section.

Scholars Kaye, A. & Rumble, G. have given good idea to the topic in the below referred material which may please be read.

Anthony Kaye, & Greville Rumble etc. (1981)	Distance Teaching for Higher and Adult Education, London, Croom Helm, pp.89-99	8-6

8.9   Activities

1. Visit the office of your concerned Regional Office of AIOU, have a meeting with Regional Director seek information how monitoring and evaluation is carried out and develop a report

2. Discuss six operational areas given in this unit with your group and see how these are interconnected.

3. Explore the characteristics of your local community by frequent visits of community.

8.10 Self Assessment Questions

1. Explain the planning process

2. Differentiate between planning and management with examples

3. Enlist and discuss the questions which might be addressed by Evaluators during evaluation process.

4. Discuss aspirations of citizens have implications for planning and management of distance institutions, with examples.

5. An Administrator may be responsible for selection and procurement of instructional material, suggest some measures so that administrator may carry out his responsibilities effectively.

6. Administrative process may be seen as coordinating also. Justify this statement with examples.

7. The success of distance education institution largely depends upon reliability of delivery system how.

8. Draw a sketch of admission and mailing system of AIOU. Suggest some workable measures to improve the system.

8.11 Bibliography

Greville Rumble, (1986) <u>The Planning and Management of Distance Education</u>. London, Groom Helm.

Sarah Guri-Rosenblit, (1999) <u>Distance and Campus Universities: Tensions and Interactions: A Comparative Study of Five Countries.</u> Unesco, Pergamon

Kaye, A. & Rumble G. (1981) <u>Distance Teaching for Higher and Adult Education</u>. London, Croom Helm.

Unit 9

EVALUATION

Written by:
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9.1   Introduction

Think about the last time that you considered the need to make some sort of change. Before choosing a particular course of action, you would have reviewed the available options, or at least the options that you knew about. You would have assessed how well each option might meet your needs, and at what cost. You would then have weighed the advantages and disadvantages associated with each of the options before making your decision.

The change you selected might have been about some personal matter such as your family finances, or something to do with your children's future. Or it may just as easily have been related to your professional life. You may have been thinking about introducing a new course, or modifying the student registration system, or increasing student retentions. Whatever your area of concern, in order to carry out any change, you will have had to work through the process which we call evaluation.

The process of evaluation which we employ to reach at decision as to the way forward is the same regardless of the area of concern or its source or even of its importance. The care we take, the methods we use and the amount of attention we give to the process in those different situations is another matter. In this chapter we will be looking at formal evaluation, considering the purpose of formal evaluation activities in open and distance teaching organizations and examining the different types of approaches to evaluation, which are available to us.

Evaluation

Evaluation then is an activity with which everyone is familiar. The question is, how you can best use evaluation with open and distance learning provision. At the informal level,

individual members of any institution will be actively engaged in making their own personal evaluations of activities, which come, within their own areas of responsibility. The problem will be that, as with all other spheres of life, individuals ' perceptions will be coloured and distorted by the particular lenses through which they see the world. We can only make an evaluation on the basis of the information to which we have access. The conclusions that we reach will be limited by the quality of the information -its comprehensiveness, relevance, up-to-dateness, accuracy.

Structured Approach

One way of looking at the process of evaluation is to view it as a series of different stages. The stages, which comprise this cycle, are shown in Figure 9.1. It should be emphasized that reality is usually much more untidy and idiosyncratic. Some stages may be omitted, and the sequencing may not always operate as shown. The old joke about deciding what the conclusions will be before carrying out the evaluations, as is often the case, carry a grain of truth.

Evaluation stages.
1. Identify an area of concern
2. Decide whether to proceed
3. Investigate identified issues
4. Analyse findings
5. Interpret findings
6. Disseminate findings and recommendations
7. Review the response to the findings and recommendations and agree on any corrective actions.
8. Implement agreed actions.

Figure 9.1 The basic stages of evaluation

Identify an area of concern

This stage can be triggered in a number of different ways. Formal monitoring procedures such as reviews of pass rates, or course registration figures often identify situations which should be giving cause for concern. Informal means such as letters of complaint, or anxieties expressed by staff can bed to the recognition of the existence of possible problem areas. Cost concerns may result in pressure within the organization for the evaluation of a specific project or innovation, such as the use of interactive video for example. Or again there may be an institutional commitment to provide certain data or certain types of evaluation for external auditing review or grant awarding purposes. If you think of your own institution, you can probably think just as many if not more instances where the evaluation process has been triggered by external requests for data or because of political pressure than through the process of objective review the trigger for the evaluation cycle may therefore operate in a variety of ways.

Decide whether to proceed

Not all problems or potential problems, which are identified, will be seen as having a sufficiently high priority to warrant further investigations. A decision will therefore need to be taken about whether or not to investigate further, or whether to commit resources for a though evaluation.

Investigate identified issues.

The ways in which issues are investigated should, wherever possible, be determined by the requirements of the problems. For example, the evaluation of an issue such as the quality of guidance to tutors may be usefully approached using a mixture of in-depth discussion to establish the criteria used by

the tutors themselves, plus some quantitative feedback to establish the scale of any particular problem areas.

Analyse findings.

Whatever the type of study devised and carried out for the evaluation, the data collected need to go through some form of analysis stage, the extent and depth of the analysis will depend in part on the technical competence and in part on the specific interests and institutional requirements of those carrying it out. I have known examples where the analysis of course feedback data was limited simply to a one-page summary of students' written comments presented as a report from the teaching team to 'higher authorities'. I have also seen examples where weeks of sophisticated computer analysis were carried out on complex quantitative data in order to help the course team pinpoint the precise sources of students' problems with a course.

Interpret findings

The more sophisticated and complex study, the more important is the interpretation phase. The same set of analyses may well be interpreted in very different ways depending on the particular perspective of the interpreter. A high difficulty rating for a course module may be interpreted as evidence that the teaching approach needs further investigations and possibly some revision, or it may be taken as evidence that the students are insufficiently prepared for the course.

Disseminate findings and recommendations

The dissemination phase can be key in determining whether or not the evaluation findings re used, the timing of the dissemination, the target group for the findings, and the perceived relevance of the findings to people's concerns will all

need to be taken into account. For example, the importance of variations in student retention rates may be different for those responsible for ensuring the viability of future courses than for administrators responsible for ensuring adequate provision of exam rooms. The same set of information can carry very different messages to different groups. Increased student retention rates may be good news to some staff in an organization, and a mixed blessing to others.

Review findings, agree and implement corrective actions.

These final two stages do need to be seen as part of the evaluation process. Evaluation is not an abstract research exercise but an essential tool of good management. In general the methodologies for the design and implementation of evaluation studies are well developed, but the methodologies for enhancing the likelihood of organizational use of evaluation findings is still developing. Hence the importance of recognizing that these two stages must be included in the cycle.

The purpose of evaluation

The aim of evaluation in the case of any organization must be to support that organization in achieving its goals. In other words, to enable it to become a more effective organization within whatever constraints it has to operate. In educational organizations, the need for formal evaluation activities is usually clearly recognized. In their 1977 review of major evaluation studies, Guttentage and Saar drew attention to the fact that 'education is one of the most highly researched evaluation fields'.

The learning organization

Evaluation is used, or should be used, to enable institutions to operate as learning organizations. The importance

of the role of the detection and correction of error is the basis for the ideas on organizational learning. An important feature of their argument is the view of the organization as a unit or a whole in respect of the reviews of performance and the implementation of subsequent modifications.

For example, individuals or small groups such as course teams may have learnt that the submission rates on assignments for a particular course drop sharply at a certain point. There are a number of possible explanations for this phenomenon which would have to be investigated. It may be to do with the difficulty of the assignment for the course workload at the point. If that the case, then the person responsible for the course will probably attempt to deal with the problem by changing the assignment or by cutting out some of the student study tasks. However, there may be institutional level implications for this state of affairs. For example, the number of assignments which students are expected to complete, the monitoring of standards, the course approval strategy and the course testing strategies are all aspects where the institutional procedures may have to be modified if the problem is found to be sufficiently widespread or severe.

Programme evaluation

Programme evaluation in the field of open and distance teaching is relatively underdeveloped, by programme evaluation I mean evaluation which focuses on programmes of study. It is at this level that the pedagogic, management and often the financial responsibilities lie in education and training. It is usually here that responsibility for the detailed issues of quality and accountability have to exercise.

I have chosen the term 'programme of study' to describe sets or groupings of courses. Usually, these would be sets of

courses which share some sort of common aim. That aim may be the award of a qualification for students who successfully complete a requisite number or series of courses in an area o expertise,; or it may be that a particular audience is targeted, or a particular teaching medium is used.

Within any institution it would be a simple if onerous task to list large numbers of possible issues to which evaluation could make some contribution. However 'busyness' is no substitute for purposeful intervention at key points. The question then is how to determine what the key points are –how are we to identify the purposes of evaluation in such a way as to achieve the best match with the goals of the institution?

Diverse institutional goals

The overarching aims of a provider of education will be related to the provision of learning opportunities and to such associated activities as the accreditation of learning. But such global aims can also contain a diverse range of subsidiary goals. In an earlier work I discussed the different types of goals that learning providers can hold. Four distinct grouping can be identified.

- Society /economy centred
- Institution centred
- Subject centred
- Learner centred

The society/ economy centred goals refers to the skill centred education and training which both public and commercial providers are increasingly encouraged to offer. Institutional goals can include institutional survival' high status among clients, other providers or funders; or public recognition.

Providers may also hold 'subject centred' goals, by which I mean claims to scholarship and the desire to provide courses of a high academic quality. The leaner centred goals emphasize the personal development aspect of learning and the need for learners to achieve not only subject knowledge and skills but also more sophisticated learning strategies and such intangible outcomes as self confidence, recognition of self worth, and a commitment to the community.

You may have noted the absence of student performance from the list. In the UK, the assessment of student performance is referred to by the term 'assessment'. The term 'evaluation' refers primarily to the evaluation of the teaching and organization activities which support student learning and includes the assessment of student performance as just one aspect or function. However in his book on the assessment of students, Rowntree highlights the fact that assessment and evaluation are often treated as 'virtual synonyms'. As he points out, there are many countries, including USA, where the term 'evaluation' is used to describe both the assessment of individual student performance in terms of what they have learnt or accomplished and the evaluation of the teaching and other organizational activities which support student learning. In fact some institutions use the term 'evaluation ' solely to describe the assessment of student performance.

Needless to say, such differences in the way the term is used can on occasion lead to considerable confusion. Discussions about 'evaluation' between professionals from countries separated by different traditions of usage of the same term can be enlivened by the misunderstandings caused by failure to check on the definitions of apparently common terminology. In this unit, I will stay with the UK meaning of evaluation.

Diverse interest groups

The particular interest group which sponsors the evaluation is of particular importance in determining the purpose of any particular evaluation activity. Kegan (1989) described well the complexity of the way in which the nature of the evaluation is determined when he commented that.

> The nature of the evaluation will vary according to whether an intervention is primarily directed to, for example, in improvements in quality, reduction in cost, equalisation of access, or improvements in working conditions; and it will also vary according to its sponsors whether they be managers, political leaders, client groups, or the workers who are subject to the evaluation.

What Kegan was drawing attention to was that evaluation is not a clear-cut straightforward activity, Rather the primary purpose of the evaluation and the particular interests of the sponsoring group initiating or sanctioning the evaluation will combine to define what kind of approach, what kind of focus the evaluation will have.

Even where the evaluation is commissioned internally and carried out internally, there may still be great differences in its nature. Consider for example a situation where the quality of the teaching received by students is being evaluated. If the aim of the evaluation is to assist with staff development, then its nature will be rather different than if its aim was to collect data to use for staff appraisals. This particular example is an important one because many staff have relatively little experience with open and distance teaching, and are unaware of the different needs of home-based or distance student.

9.2 Objectives

After reading this unit, you are expected to:

1. define evaluation
2. discuss approaches to evaluation
3. structure follow up evaluation program
4. evaluate open learning program
5. compare advantages and limitations of term evaluation

9.3 Approaches to Evaluation

Evaluation is a process which can be utilized across the whole range of activities in an educational institution. One way of looking at these different approaches is to consider the fundamental purpose of the evaluation. Summative and Formative Evaluation.

Summative Evaluation

Where the intention is to form a judgment or conclusion about either the absolute or the relative merits of whatever is the focus of the evaluation, this would be seen as summative evaluation. Striven, who first advanced the distinction between formative and summative evaluation related it to the effectiveness of the instruction or teaching. It could equally well be used in relation to judging whether a teaching component or some aspect of the student support system has worked as intended. A public examination is another example of a summative evaluation of the candidate's knowledge. Summative evaluations are generally used in order to compare the success of different approaches in achieving a particular goal, or meeting a particular need. Consider the following; comment by Nigel Paine (1990) who reviewed the final report of the Open Tech Programme development review.

I wanted to know the answers to some very basic questions:

- How much did it cost?
- What did it achieve?
- What lessons were learnt for the future?
- Is this kind of development programme a model for us?

The approach being taken here was very much a summative one. In fact, as pointed out, the development review had been carried out with a distinctly formative focus. This meant that although much of the information needed for a summative evaluation was available, it was used, interpreted and presented with a development focus.

Formative evaluation

Evaluation is formative when it is used with the intention of developing or improving the functioning of an activity or the effectiveness of a component. Testing of instructional material during their development in order to identify areas where improvements might be made; trails of systems in order to iron out the wrinkles before adopting them fully; reviews of monitoring data carried out in order to identify areas, weakness and establish priorities for improvement would all be classified as formative evaluation.

Evaluation purpose	Materials Development phase	Material presentation phase
Formative	Developmental testing	Rolling remake
Summative	Market testing	Validation review

Figure 9.2 Examples of activities with different evaluation Purpose at different materials production phases

It would be a mistake, however, to think of the distinction between the two forms of evaluation as formative if carried out during the development phase and summative if carried out during the presentation phase. Figure 9.2 shows examples of both formative and summative approaches being used during materials development and materials presentation stages.

In a similar way, material, which is gathered for formative purposes, may be used for summative decisions, just as data, which is gathered for summative purposes, can be and often is used in formative ways. Tester, in his book on formative evaluation, points out how as long as the purpose of the evaluation is to "revise" the instruction by reorganizing or supplanting it, the evaluation can be a type of formative evaluation" (1993). He gives the example of instructors who may wish to evaluate a "bought in" course. If they intend to modify or supplement those parts, which they consider inadequate for their learners, then they would be carrying out a formative evaluation. There is also the point, however, that if it fell below the expected standard, whether technically or academically, then it might be expected that the instructor would decide not to use it at all. In other words, the evaluation would be transformed into a summative evaluation.

Context, input, process and product

Pretest – post-test approach

The next step to consider is what methods of enquiry you can actually use in carrying out evaluation. There is a long tradition of trying to set up experimental designs, or the nearest thing to them that was actually feasible in education and media research Programme Evaluation and quality in education; and media research. However this approach does have limitations because of the problems of trying to control all the variables

except for the experimental one. It is also open to criticism about the appropriateness of the "lab-based" approach for investigating the effectiveness of instructional materials used; by different kinds of people in different ways and in different settings. However, variations of it are still used for the formative development of instructional materials.

An example of the one-group pretest-posttest design is the formative evaluation of Systems Impact's prototype videodisc lessons on fractions. Teachers presented a series of daily lessons on fractions using videotapes and print materials to mimic the instructional design of the Level 1 videodisc.

Criterion-referenced test integrated into every fifth lesson and comprehensive pre-and posttests established the degree of mastery of the fraction concepts. These tests gave evidence as to what programme content was or was not being successfully communicated.

Figure 9.3 illustrates this approach. As you can see, the learning experience, together with any other events or process which might take place between the pretest and the posttest are not taken account of in effect, the interaction of the students with the programme is treated as if it were a black box

↑ →   □   →   ↑

Pretest   Programme   Posttest

Figure 9.3 The pretest-posttest approach

However, this approach does have a number of methodological drawbacks. Flagg describes problems such as drop-out from the test group, possible effects of external

events, such as TV Maths Programmes at home, or extra help from parents, and the effect on the group of constant testing. As Flagg points out "The pretest – post-test objectives-based study has limitations in its utility for formative evaluation because it provides little insight as to why the programme might be working or might not be working.

Criterion referenced measures assess a student's achievement of subject matter or a student's behaviors in relation to a criterion standard of performance, not in relation to the performance of other students on the same test.

For further details, please read the below referred material;

Vinayagum Chiapah & Gary Miron, (1990)	Evaluating Educational Programmes and Projects: Holistic and Practical Considerations, Belguim, Unesco, pp.25-56	9-1

9.3.1 Diagnostic evaluation

Diagnostic evaluation is concerned with students and programme strengths and weaknesses. This decision should be based on scientifically collected data. In general, regular class teacher makes diagnostic evaluation about his students which usually lies on the teacher made test and teacher student interaction. It is better to make diagnostic decision about students on standardized tests rather than on teacher made test. Each diagnostic test may be cross referred with related diagnostic test. By this evaluator is able to determine where in the process breakdown has occurred.

In order to comprehend further the concept of Diagnostic evaluation, please read the below referred material.

388

Ton Kubiszyor & Gary Borich (1996)	Educational Testing and Measurement: Classroom Application & Practice, Texas, Harper Collins College Publishers, pp.18-19 & 394-95	9-2

9.3.2 Illuminative evaluation

Concerns about methodological problems and the recognition of the importance of understanding more about the process, which the learner was actually going through, led to the development of a very different methodological approach, namely illuminative evaluation. Palette and Hamilton (1972) who developed and introduced this approach saw the pretest approach as a paradigm for plants, not people". They wrote:

> Such evaluations are inadequate for elucidating the complex problem areas they confront and as a result provide little effective input to the decision-making process.

Illuminative evaluation is introduced as belonging to a contrasting anthropological research paradigm. Attempted measurement of educational products' is abandoned for intensive study of the programme as a whole its rationale and evolution, its operations, achievements, and difficulties. The innovation is not examined in isolation but in the school context or "learning milieu". They explain:

> Observation, interviews with participants (students, instructions, administrators and others), questionnaires and analysis of documents and background information are all combined to help illuminate problems, issues and significant program features.

Clearly there are limits within programme evaluation as to how much of the programme as a whole can or should be evaluated over extended periods. The illuminative approach was developed very much as a response to the agricultural-botanical" approach, which had previously predominated. The concerned with description and interpretation rather than measurement and predication, however, reflected a substantial shift in evaluation's understanding of what happened within educational Programmes.

To add further knowledge on the topic, please read the reference given below:

Holmberg, B. (1995)	Theory and Practice of Distance Education, 2nd ed., London, Routledge, pp.193-195	9-3

9.3.3 Case studies etc.

In this sub-topic, the most familiar and common method of making observation about others namely considering people at a time i.e. case studies are being discussed. Though this method has advantages but it has certain limitations also. The method of studying behaviour to lay person is biography but when this is done by professionals it is case study.

The case study method is used to examine the behaviour of single individual in great detail. Thus it is useful in clinical setting, as it is unique in its nature so that it cause intensive study of single cases. Thus this method is more appropriate for idiographic approach, which emphasizes the uniqueness of the individual, than for the nomothetic approach, which insists that because science deals with general laws. If the researcher is interested in findings of greater generality, the case study is

limited benefited. Case study can be used in each of the following ways:

1. by prototypical example, to illustrate some form of behaviour,

2. to demonstrate important methods or procedures,

3. to provide a detailed account of a rare or unusually phenomenon, and

4. as a source of hypotheses.

The case studies is valuable classic in psychiatric literature because it is one of a very few detailed accounts of a rare phenomenon, a true multiple personal.

Scholars John, M. & Robert, M. have given good idea to the topic in the below referred material which may please be read.

John, M, Neale & Robert, M. Liebert (1980)	Science and Behaviour: An Introduction to Methods of Research, New York, Prentice Hall, pp.56-62	9-4

9.4 Criteria for Evaluating Distance Education Programmes

In most respects the evaluation of self-instruction (or open/distance learning or programmed instruction as the packages are sometimes called) is very similar to that for direct training course types of programmes. The principal difference is that for most, if not all the time that the learner is following the programme, there is no contact between them and a trainer – or at least usually not face to face. However, the use of self-instruction programmes is not the simplistic issue of sending the package to the learner, who is then expected to work through it

and learn – although many users see it and also see it as an alternative to the use of any other resource whatsoever. Few people can learn from a self-instruction package in isolation.

The packages or programmes are described under a number of names, the commonest being:

- open learning;
- distance learning;
- self-instruction programmes;
- programmed learning or text;
- correspondence courses-the forerunner of the present approaches.

There are some differences in fact between these programmes other than the names, but the basic approach of all is that the learner, at the workplace or at home, works through an instructional package along. The material in the package will usually be self-instructional text, which follows a pattern of information – question – answer – review. This text can be supplemented by videos, interactive videos, computer programs, interactive CDs and/or many other forms of support.

The packages are obtained by the learner either from a central resources center/a resource library or purchased form a commercial organization. The first case often – though unfortunately not always – includes the provision of professional support via the telephone or electronic mail. Otherwise, the learner is left with the package, which hopefully is sufficiently well constructed to avoid problems.

Open learning packages are now obtainable for a very wide range of subjects, but unfortunately some of these do not lend themselves easily to the medium, particularly if the

package is unsupported. Open learning is essentially the transfer of knowledge to practical skill by in-package activities and exercise, followed by workplace implementation. The approach obviously lends itself easily to operations and procedures, less easily to the more general types of skills and, with no live support, not at all to behavioural and human resource skills.

The Effective Use of Open Learning Packages

The recommended stages for a learner using an open learning package will include:

1. Agreement with the learner's line manager that training in the subject is necessary,

2. Agreement with the learner's line manager that the learning will best be approached by means of open learning,

3. Agreement with the line manager that sufficient time to learn from the package is made available during working hours and all necessary facilities will be available,

4. The line manager or learner obtains the relevant open learning package from an appropriate source (let us assume here that this is the central resource center within the organization staffed by training professionals and/or open learning experts).

5. The learner commences working through the open learning package,

6. If problems arise during use of the package, these can be resolved by discussion with the line manager, another local experts, or contact with the central resource,

7. During use of the package, the learner will be performing exercises and activities supporting the text,

8. Following completion of the package, agreement will be reached with the line manager for opportunities to be made available for the learner to implement the learning.

Evaluation of Open Learning

The first aspect of the evaluation of open learning is the decision, before use of any package starts, about whether the selected package, albeit appropriate to satisfy the training need, is of a satisfactory quality (see Figure 9.3). This is of considerable importance in written open learning packages, perhaps more so than in the case of direct training courses.

Evaluating the quality of written open learning materials

Consider whether the content of the written material:

Is in line with the values and culture of the organization employing the learner

Is in line with the approaches, techniques, models, etc. acceptable within the learner's employing organization

Is written to take account, as far as possible, of the different learning styles of potential users

Strikes a good balance between complexity and simplicity, difficulty and ease

Contains relevant information only

Provides a good balance between textual information, exercises, activities, other reading, case studies and, where relevant, support video and computer material

Provides, where necessary, appropriate and relevant computer and video programs.

Figure 9.3 Evaluating the quality of written open learning materials

The subsequent evaluation of open learning will follow the normal processes of evaluation of training and learning and also the cycle of stages described above. A typical approach will be as follows:

1. There can be discussion between the learner, the line manager and trainer about the comparative values of different approaches to learning, including open learning, for the particular learner in this specific situation. A number of issues, additional to the appropriateness aspects, can be involved here – availability of other methods, the learning style of the learner, immediacy of the need, cost, and for the learner not to be away from the workplace (although the time for open learning must be sacrosanct).

2. Following agreement on the use of open learning, the provision by the resource center of the appropriate package is arranged.

    These first two steps, although not apparently concerned with evaluation, in fact set the scene for the start of the evaluation process, with the involvement of the trainer ensuring that the appropriate steps are being taken and open

learning is the most effective, cost- and value-effective way to satisfy the learning need.

3. It is essential that, before the package is commenced, the line manager and the learner should meet for a pre-programme briefing in exactly the same way as recommended for other forms of training.

4. An essential inclusion is an initial test covering the material in the package. If this is not included, and the package is supplied by the resource center of the organization, those professionals should enable the learner to perform an appropriate test before starting work on the package.

5. Another essential part of the package, again provided by the resource center if it is not an integral part of the package, are interim activities and exercises and interim tests of learning. These might be monitored by the center, so supporting the learner by providing an external source of evaluation of both the package and of the learner's learning progress.

6. In the same way that an action plan is completed at the end of a direct training course, so should there be one at the end of the learning package, again to ensure that the learners commit themselves to action as a result of the training.

7. The package should include a final test of learning, but there is much to commend a final validation being administered by the external source. This can give valuable information about both the package and the learner – to the learner, the trainer and the line manager. It correlates with the normal end of programme validation questionnaire but, because

of the different nature of the learning processes, can be quite different in format.

8. When the learner has completed the open learning package and the end of programme validation instrument(s), a debriefing meeting should be held between the learner and the line manager and, if necessary, the trainer. One element to be included in this debriefing is discussion about whether the learner needs any further training, perhaps of a different nature, to reinforce the essential knowledge learning of the open learning package. This might be attendance on a short training course in which the opportunity for practice of the learned skills is given, before they are attempted in the workplace.   It is also the opportunity for the learner and the line manager to discuss the implementation of the action plan and make arrangements for medium – and/or longer-term monitoring of progress.

9. Medium-and longer-term evaluation should take place with the involvement of the learner and the line manager and/or the trainer.

As you will see, the process is little different from other forms of training and development, the principal differences being those carried out on completion of the package.

Medium and Longer-Term Evaluation

Neither training nor learning stop at the end of the programme and with the production of a sophisticated action plan. Training and learning are all about change, and change is the practical demonstration of these in the workplace so that the operation of the task, job or role can be improved.   Ensuring

that these changes take place is the responsibility of the learners and their line managers, a responsibility that must be monitored and reviewed to bring to a close the process of evaluation.

The best-planned and designed training will never be anything more than an expensive, interesting exercise if what has been learned is not put into action in the work environment. Training for training's sake is a futile exercise and , in the world of work, the amassing of knowledge is costly and worthless if that knowledge is not put to practical use.   On the other side of the coin, we still hear of learners returning to work full of enthusiasm to put their learning into practice, only to be told 'You can forget all that; this is how we do it here!' However, if all the partners in the training quintet are playing their parts, particularly the line managers in whose hands the support for implementation lies, there should be no problems other than practical ones.

Realistically the trainer's role ends with the completion of the programme and the departure of the learners with their action plans. The principal responsibility for post-programme implementation lies with the line manager, who selected the training, paid for it and will expect a return on the investment. But, naturally, trainers will retain an interest in the results of their labours long after the event, even if they have no practical part to play in a follow up. However, they should have a more active part as members of the quintet, strengthening the links by more continuous involvement. But the final responsibility must lie with the line manager, the trainers being involved by invitation, at their own request, if necessary.

The final stages in the evaluation process are assessments of the extent to which the training has been

implemented effectively and has had a positive effect on the work of the organization, the learners growing in stature as a result. The immediate post-programme action is putting into practice the items of the action plan (as a minimum objective), preferably with the active and continuing support of the line manager. Subsequent to this, assessments can be made after an interval of, say, three months – the medium-term evaluation – and them/or at a longer interval of 12 months – the longer-term evaluation. Ideally, arrangements for these subsequent evaluations should be made at the post-programme debriefing meeting.

Medium/longer term evaluation methods

There are several ways in which these evaluations can be made:

- line manager observation and assessment of the performed activities;
- trainer observation and assessment of the performed activities;
- follow-up questionnaire sent to both the learners and their line manager;
- structured interview conducted by the line manager or trainer;
- telephone follow-up interview by the trainer;
- critical incident analysis;
- Learning Logs
- repertory grid.

Line Manager or Trainer Observation and Assessment of the Performed Activities

Observation of the learner trying to put the learning into action at work must be the most effective method of evaluating the learning and conforming that it is being used as it was intended. The starting point of this observation, by whoever performs it, will be the original task analysis, which will have detailed the operations and other requirements of the learned task or role. The benefit of having such an analysis in a permanent, written form is that it ensures that nothing is missed and subjective values are kept to a minimum. The observation technique will depend on the nature of the aspect to be observed, whether it is an operational task, a behavioural role, or a mixture of both. Activity and behaviour analysis instruments can be used, being constructed from the task analysis base.

It should be relatively simple for the line manager to make such observations within the routine of daily work, perhaps making some special efforts to observe particular, possible infrequent, elements of the task. The line manager might keep a record, including checklists, of observations made and to be made, so introducing a discipline that ensures that the practice is carried out. Otherwise it is too easy to allow the follow up to fail by default.

Problems can arise, not only if some aspects are carried out infrequently, but also if the task or role is extended and requires further of continuous observation. In such cases it may be that, with the best will in the world, the manager cannot afford the time to carry out the observation or, as happens sometimes, the line manager is not always in a practical position to observe the learner. The training organization might then provide someone to carry out the observations in lieu of the

manager. Obviously this is a more expensive approach in terms of time and money, especially if the task is an extended or complex one. The trainer-observers must be fully aware of the job environment and all aspects of its content. The checklists referred to above are essential parts of the observer's toolkit and, particularly with extended tasks; a suitable schedule must be formed to ensure observation of all elements in the most effective manner possible.

Perhaps the strongest argument against using the trainer, rather than the manager, is that the trainer, will be seen as an observer whereas the manager becomes part of the scenery. This argument is not of course insurmountable, and time spent in setting the scene effectively can allay many of the natural concerns of the people observed. But this takes more time and expense.

One effective approach is activity sampling, in which the observer spreads the observing periods over time – hours, days, even weeks- ensuring that all aspects are seen and assessed. This again may introduce additional expense, certainly additional time, for the observer, and an extended period of observation can produce contaminatory effects. However, in some circumstances it may be the only possible approach.

The Follow-Up Questionnaire

This method is probably the most frequently used of all the follow-up evaluation approaches. It is the simplest and also the least expensive, but it is not necessarily the most effective. There must be a foolproof method of ensuring that responses are made and the questionnaire must be planned to obtain responses that are as comprehensive and as objective as possible.

The follow-up questionnaire should use as its base the learners' action plans, since the principal objective is to determine to what extent the action plans have been implemented and with what effectiveness. The questionnaire can of course serve more than this basic, albeit essential, objective – post-programme consideration of the training course is a common secondary intent – but any others must not complicate the questionnaire to the extent that the major reason for its use is not fulfilled.

The construction of follow-up questionnaires

The objectives will include:

> - Confirmation of the learning achieved during the training programme
> - Action taken to implement the action plan
> - Assessment of the effectiveness of the learning implementation.

The questions posed to achieve these objectives will require the learners to refer back to their action plans, and in so doing be reminded, if this is necessary, of what they contracted to do. These questions will include:

- Which items of the action plan have been implemented?
- What degree of success has been achieved from this?
- Which items have not (yet) been implemented?
- Why haven't they been implemented?
- Did any planned actions fail in implementation?

- What reasons emerged for their failure?

- What are the plans for further action:

  - on unsuccessful or non-implemented plans?

  - beyond this stage?

These are the essential areas for which the questionnaire should be designed, but depending on the situation you may wish to obtain more information at the same time, usually of a reaction nature. Perhaps you have newly instituted a scheme whereby the line managers are more involved in training and evaluation; consequently further questions might be added along these lines. Such questions may be about information about:

- The nature of the debriefing meeting and its outcomes.
- The support promised and received from the manager.
- The support arranged and received from colleagues.
- The extent of the value of post-programme support.

Figure 9.4 suggest a questionnaire in this format.

One of the arguments against the use of the end of programme validation questionnaire or reactionnaire in the final stages of the course itself is that the learners may not be in a position to give a full and reflected response. The medium-term evaluation can be an opportunity to seek more reflected views about the training if it is felt that the immediate ones were contaminated. However, it must be remembered that mixing the purpose of a questionnaire to great extent can have unfortunate results.

If you decide to extend the range of the approach, a questionnaire such as that shown in Figure 9.5 can be used.

MEDIUM-TERM EVALUATION ACTION QUESTIONNAIRE

Course attended ……………………………. Dates …………………………

PART ONE : When you completed the training programme, you contracted to implement an action plan which detailed the following items:

    1.

    2.

    3.   etc.

Would you please answer the following questions.

    1.   Which items of your action plan have you implemented so far?

    2.   What degree of success have you achieved in respect of these items?

    3.   To what factors or reasons do you attribute your success in implementing these items?

    4.   Which items of your action plan have you not yet implemented?

    5.   Why did this occur?

    6.   which items have you not yet attempted to implement?

    7.   Why have you not yet attempted these?

    8.   What plans do you have to:

        -     attempt to rectify your unsuccessful items?

        -     Implement the as yet unattempted items?

    9.   Have you any additional plans? Please comment.

PART TWO: It will help our organization of training and the involvement of different people if you could answer the following questions, the responses to which will be kept confidential.

Did you have a debriefing meeting with your manager on your return to work?

If so, how quickly after the course did this take place?

What was the nature of the debriefing meeting and its outcome?

What was the extent of the support promised by your manager?

What was the extent of the support received from your manager?

What was the extent of any support arranged with colleagues?

What was the extent of any support received from colleagues?

How valuable do you feel was the post-programme support?

Any other comments you wish to make?

Figure 9.5 Medium-term evaluation questionnaire.

QUESTIONNAIRE RELATING TO THE TRAINING PROGRAMME YOU ATTENDED

Course attended……………………………… Dates ……………………..

Now that some time has passed, please consider the learning programme that you attended and complete the following, being completely honest in your assessments and answering the questions.

LEARNING

To what extent do you feel you learned from the programme? (Please eneircle the score number that you feel most closely represents your views.)

Learned a lot 6   5   4   3   2   1   Learned nothing

If you have rated 6,5, or 4, please describe what you learned.

If you have rated 3, 2 or 1, please state as fully as possible the reasons why you gave this rating.

Figure 9.6 Medium-term evaluation learning questionnaire

FOLLOW UP WITH THE LINE MANAGER

In this type of approach the trainer can try to involve the manager in their evaluation, either from an information point of view or through direct involvement. If the line managers are not to be directly involved it can be useful to inform them of the progress of the evaluation by sending the questionnaire through them. (It will almost certainly not be politic to require the completed sheets to be returned to you via them, however, as this might inhibit the responses of the learners.) Doing this you are at least keeping line managers aware of the evaluation

progress and may even encourage them to seek ways to being more involved.

The other principal method of involving the line manager in this first stage post-programme evaluation is to send them a progress questionnaire. This would be sent at the same time as that sent to the learners, and with learners' agreement would include a copy of the action plan. The aim is to help the line managers in their follow up of implementation progress, to involve them in the post-programme evaluation and encourage discussion with the learners. The questionnaire itself is a modification of the one sent to the learner and is shown as Figure 9.7.

Course attended ………………………………. Dates …………………………

PART ONE : When ………………………………………………… completed the training programme, they contracted to implement an action plan which detailed the following items:
1.
2.
3.   etc.

Would you please answer the following questions as completely as you can from your own knowledge and observation.

1.   Which items of the action plan do you know that they have implemented so far?

2.   What degree of success have they achieved in respect of these items?

3.   To what factors or reasons do you attribute your success in implementing these items?

4.   Which items of your action plan have not yet been implemented?

---

5. Which of these items have they tried but failed to implement?

6. Why did this occur?

7. Which items have they not yet attempted to implement?

8. Why have they not been yet attempted?

9. What plans have you discussed with the learner to:

   - attempt to rectify the unsuccessful items?

   - Implement the as yet unattempted items?

10. Have you any other comment?

PART TWO: It will help our organization of training and the involvement of different people if you could answer the following questions:

Did you have a debriefing meeting with your manager on your return to work?

If so, how quickly after the course did this take place?

What was the nature of the debriefing meeting and its outcome?

What was the extent of the support promised?

What has been the extent of the support you have given?

What was the extent of any support arranged with colleagues?

What was the extent of any support received from colleagues?

How valuable do you feel the post-programme interactions were?

Any other comments you wish to make?

Figure 9.7 Medium-term evaluation questionnaire.
(line manager version)

The post-programme evaluation questionnaire/reactionnaire can be more varied even than the ones used at the end of the programme and it is easy to go beyond the bounds of evaluation, particularly when the organization demands answers to certain questions. But three points are all important:

1. What do I want to know that will form part of a realistic evaluation?

    (Normally this will relate directly to the action plan completed by the learner).

2. What form of questionnaire will be most effective?

3. How can I ensure a satisfactory (complete) rate of return?

My own experiences of using questionnaires with both learners and their line managers have been very varied, ranging from a total correlation of the replies (suggestion that they have a close working relationship), to responses that gave the impression that the manager was reporting on a different person. In these latter cases, after some investigation, it was found that the manager was either located away from the learner and rarely saw their work, or that there was little effective interaction- the manager was just not interested in the learner provided the work was completed efficiently. The signals evident in the responses usually give good clues when there is something amiss.

Structured Follow-Up Interviews

This is the other main method of performing a medium-term evaluation, and both interviews and questionnaires have their supporters. The negative aspect of the interview with the learner is that it is usually more expensive than using a

questionnaire. This cost increases considerably if the learners, although belonging to one organization, are located throughout the country or, even more so, internationally. Some of the costs can be avoided if the line manager, rather than a remote trainer, conducts the interview, but the position has to be weighed up carefully as the line manager may be too 'close' to the learner, or there may be other factors that prevent a complete result being obtained. The interview approach can be the same whoever conducts it, and there are advantages in ensuring this consistent approach in an organization through training and education.

The interview approach

The objectives, both primary and secondary, set for the follow-up questionnaire are reflected in those for the interview, and the learners' action plans again form the base for the approach. The important points listed for the use of interviews are very similar to those for questionnaires:

- What do I want to know that will form part of a realistic evaluation?

    (Normally this will relate directly to the action plan completed by the learner).

- What form of questionnaire will be the most effective?

- Is the interview approach the most (cost-) effective one?

Interview structures

There is no set structure for follow-up interviews as this will depend on prevailing circumstances, but it is strongly recommended that a general structure should be followed to ensure consistency as far as possible. The same questions, and wherever possible the same words, should certainly be used for

the follow up of a similar group.   But the interviewer should avoid making the interview so tightly structured that other subjects are not allowed to enter the discussion or the interviewer misses valuable clues by concentrating on the narrow path.

The basic behaviour of the interviewer will be that of posting questions; some comments have been made other contributions of the learner can be recorded on paper, cassette recorder, or even on video, although the latter creates its own problems.   Of the many types of questions, the following will normally be the most useful:

- Open questions
- Testing understanding questions
- Reflecting
- Closed questions (when their use is elevant)

Ones to avoid are:

- Closed questions(too frequent and when this form is not appropriate)
- Learning questions
- Multiple or ambiguous questions
- Rhetorical questions

Apart from advice about the questions to ask, the other major guidance must be Listen more than you talk, but listen effectively, because you are seeking information from the learner.

Interview format

Although, as stated earlier, many groups of interview will differ because of the different circumstances, the following summarizes the format you might follow, and Figure 9.8 suggests a specimen format with the types of questions you might ask.

The format could usefully follow the structure:

1. Describe the purpose of the interview, i.e. follow-up evaluation of the training programme attended.

2. (Referring to the action plan) work through thee types of questions contained in the questionnaire – see part one of Figure 9.8.

3. Seek any other comments relating to aspects of the action plan, particularly about any other learning achieved.

4. Seek general comments about the training programme now that the learner has had time to reflect – see the end of programme reactionnaire, part three of Figure 9.1.

5. Seek comments about the follow-up procedure and its outcomes – see part two of Figure 9.8.

FORMAT OF STRUCTURED FOLLOW-UP EVALUATION INTERVIEW

A) Describe the reasons for, purpose and objectives of the interview that is concerned with the x training programme that the learner had followed some three months earlier.

B) Referring to the action plan ask about:
   1. Which items of the action plan have been implemented so far?
   2. What degree of success has been achieved in respect of these items?
   3. To what factors or reasons is the success in implementing these items attributed?
   4. Which items of the action plan have not yet been implemented?
   5. Which of these items have been tried but couldn't be implemented?
   6. Why did this occur?
   7. Which items have not yet been attempted?
   8. Why have these not yet been attempted?
   9. What plans does the learner have to:
      - attempt to rectify unsuccessful items?
      - implement the as yet unattempted items?
   10. Are they any additional plans? If so, obtain similar comments or full details.

C) Seek any other comments relating to aspects of the action plan, particularly about any other learning achieving.

D) Seek general comments about the training programme now that the learner has had time to reflect. These

questions can form the basis for this section of the interview:

1. Which parts of the event were found to be the most useful?

2. Which part so the event were found to be the least useful?

3. Are there any parts that should have been omitted? If so, l which parts and why?

4. Is there anything that should have been added to the event? What should have been removed to make room for it?

5. Which personal objectives were satisfied?

6. Which personal objectives were not satisfied?

7. Any other comments?

E) Seek comments about the follow-up procedure and its outcomes: the questions in part two of Figure 9.1 can form the basis of this section of the interview. Confidentiality of responses and comments must be stressed and adhered to:

1. Was a debriefing meeting with the manager held on return to work?
2. If so, how quickly after the course did this take place?
3. What was the nature of the debriefing meeting and its outcomes?
4. What was the extent of the support promised by the managers?
5. What was the extent of the support received from the manager?
6. What was the extent of any support arranged with colleagues?

7. What was the extent of any support received from colleagues?
8. How valuable was the post-programme support felt to be?
9. Any other comments?

Figure 9.8 Format of structured follow-up evaluation interview.

This should comprise the interview, and although you should be prepared to listen to any other, wider-ranging comments the learner might make, e.g. about his or her further training needs, these should not be allowed to contaminate the results of the evaluation interview. If it appears that these comments are likely to be substantial, a further appointment may be advisable.

Questionnaire Or Interview?

When circumstances give you complete freedom of choice between interviewing the learners or using an evaluating questionnaire, apart from some saving of time by using the questionnaire, which one should you use? Figure 9.9 summarizes the comparative advantages and limitations of each. The choice should be made carefully, weighing the individual items rather than looking at the number of advantages and limitations for each.

ADVANTAGES AND LIMITATIONS OF MEDIUM-TERM EVALUATION BY QUESTIONNAIRE AND INTERVIEW

QUESTIONNAIRE	INTERVIEW
Advantages	Advantages
Low cost – construction, postage analysis	Interviewer able to ask supplementary and probing clarifying questions
Ideal for wide location spread of learners	
Complete sampling of trained population possible	More in-depth response possible
Speedy and timeous use	Flexible approach according to circumstances
Completely consistent format	Learners accept importance of evaluation
Ease of analysis	Total response rate
Transfer to computer analysis relative easy	
Avoids possible interviewer bias	
Avoid 'time and motion' syndrome	
Limitations	Limitations
Low rate of response possible without strong control mechanism	High cost
	Very high cost when locations of learners have wide spread
Requires careful design	May be seen as intrusive
Inflexible once sent	Interviewer bias possible
Questions must be clear and unambiguous	Interview skills necessary
Questions may need to be too	Analysis more time-consuming and difficult

simple	Restrictive sampling may be necessary because of time and cost – this may not be viewed as a limitation depending on size of sample and attitudes to less than total coverage.
Potentially superficial completion by learners	

Figure 9.9 Advantages and limitations of medium-term evaluation by questionnaire and interview.

Some saving of cost and time can be made by combining the two approaches, although if travel and accommodation are high features of the interview method there will be little real saving. To combine the approaches a questionnaire is sent to all participants and, when the results are analyzed, if there are aspects that still require clarification, interview visits are made as appropriate. Consequently not all learners need be visited. A variation of this would be to send questionnaires to all learners and also interview a sample – this approach may, however, raise arguments about the value of sampling as opposed to full coverage, and will obviously depend on the size of the available sample or the relevant full group.

Telephone Follow-Up Interviews

This is an extension of the face to face interview approach and is an attempt to reduce costs yet still maintain the advantages of the interview. The time and cost are still obviously greater than using the questionnaire follow up, but less so than the face to face interview – travel with its accompanying lost time and accommodation costs are replaced by the cost of the telephone call. As a result, where the face to face interview approach might be restricted in numbers

approach, the use of the telephone allows wider coverage, although still not as wide perhaps, as the questionnaire. The interview can suffer to some degree, depending on the skills of the interviewer, by the absence of face to face interaction and possible reduction of rapport, and the interviewee may not give the same depth of attention as they would face to face.

The telephone interview will follow the same pattern as the structured, face to face interview with a planned pattern of appropriate questions, the responses to which can be clarified or followed up in greater depth.

Arrangements for the telephonic interview may need to be more strictly controlled than for the face-to-face event:

- A telephone appointment must be made beforehand to ensure availability of the interviewee and to give them time to prepare.

- The interviewee must guarantee as far as possible that there will be no interruptions while the interview is taking place – the same sort of arrangement as for the face to face event.

- The interviewee just be alone so that there are no inhibitions about what might be said.

- The interviewer must ensure that the questions are posed clearly and that the listener has heard and understood them.

- Costs must be understood so that this does not become a factor in the pace of the interview.

- The interviewer must be aware that some people are unable to be as natural when using the phone as when in face-to-face situation.

If the permission of the interviewee is obtained, the telephone conversation can be recorded so that the interviewer can refer back to points of the interview without having to return to the interviewee.

Although the expense is increased considerably, and I have not yet seen a medium-term evaluation interview conducted in this way, the use of long-distance telephone/ television conference facilities can also be considered. Or, using modern IT methods, the interview might be conducted over local network computer facilities or through the Internet.

Critical Incident Analysis

Critical incident analysis or review can introduce a substantial aspect of self-reporting to the medium-term evaluation process, although the information cab be gathered by the interview method, or even group discussion. The most appropriate method will depend on the customs of the organization and the degree of learner co-operation. The normal and most cost-effective method is the use of diaries, followed by an analysis of the critical incidents that these documents show.

The method used requires the learners to maintain a diary in which are written down (soon after they occur) critical incidents, particularly those relating to the learning area being evaluated, and the learner then reflects on these and makes simple judgments about them – when they happened, how they happened, why they happened, and what learning can be extracted from them.

The critical incidents can then be analyzed by:

- an extraction by the learner of relevant incidents and consideration of these;

- a meeting with the line manager or a trainer who assists in the extraction, discussion and interpretation of relevant incidents;

- a group discussion during which the critical incidents are compared, discussed and anaysed.

The types of incidents, how they were dealt with an analysis of the resultant learning, although not taking the form of a complete evaluation, are valuable in this respect through the learner's involvement.

It is impossible to give any real guidance on how long a diary should be maintained for; this will depend on the complexity of the learning, the occurrence and frequency of the incidents, coverage of a range of similar but not exactly the same incidents and so on. The format of the diary is not critical – often this can be left to the learner to produce in a format that suits them, since it is effectively a self-reporting instrument. Guidance can be given to the learner about effective approaches and a suggested format is shown in Figure 9.10.

The 'diary' need not be included in the day to day appointments and to do desk diary, and there are advantages in its being a separate document kept in front of the learner all the time. It can usefully take the form of separate sheet of paper, collected in a ring binder.

Learning Logs

Learning Logs described as instruments designed to help the learners remember, recall, share and reinforce their learning during the training programme. Their use as interim validation

instruments was also considered.   Similarly they can become part of a person's continuing professional development after the formal programme and as such can be valuable post-programme evaluation tools.

A CRITICAL INCIDENT DIARY

DATE …………………….. DIARY SHEET NUMBER …………………………..

Include in this diary what you see as critical incidents concerned with your work and your relationships with your colleagues, particularly those relating to the learning you have achieved from the training programme …………………………. , although you need not restrict yourself to this area. Include incidents for both a satisfactory and unsatisfactory nature.

1.   What happened; how did it happen; when did it happen; who was involved; and why did it happen?

2.   What was the outcome of the incident? Was it satisfactory our unsatisfactory?

3.   Who or what was responsible for this outcome?

4.   If they outcome was satisfactory, what have you learned from the processes that made it so?

5.   If it was unsatisfactory, what made it so and what learning can you take from this.

6.   Was the incident relevant to the training you followed? If so, did the training help you to cope with the incident? To what extent?

7.   Did the incident expose any further training needs you might have?

Figure 9.10   A critical incident diary

At the end of a training programme during which Learning Logs have been completed, used for review and accepted by the learners as useful instruments, they should be encouraged to continue the use of the logs after the programme as a record of part of their continuous learning and development. Incidents from which they have learned something should be entered in their continuing log with comments that effectively form an action plan. These entries and plans can be considered at an evaluation review as helpful indicators of the implementation and continuation of their learning in very much the same way as the critical incident diary.

Repertory Grid

The repertory grid has a number of uses, including that of evaluation. It is, however, a technique that is complex and time-consuming to use, and its application in evaluation (apart from perhaps in research) occurs only infrequently. In order to obtain the maximum benefit from its use, the practitioner should preferably be trained and experienced in the technique. Mention of its is included here for the sake of completeness.

A repertory grid compares effective and ineffective behaviours, through which behaviour analysis, based on an acceptable model of behaviour, can be used more effectively. The technique is derived from the personal construct work.

Longer-Term Evaluation

The effects of training and development programmes and their consequent immediate learning and medium-term implementation do not necessarily remain over a longer period. Time and situations allow the individuals to forget the techniques and methods learned, or allow them to slip back to the pre-training state of 'unconscious incompetence'. This last-named state is part of a useful method of expressing the

movement and/or change of an individual over a period of time, usually as a result of training.

THE COMPETENCE STEPLADDER

UNCONSCIOUS   _____
COMPETENCE

CONSCIOUS   _____
COMPETENCE

CONSCIOUS   _____
INCOMPETENCE

UNCONSCIOUS   _____
INCOMPETENCE
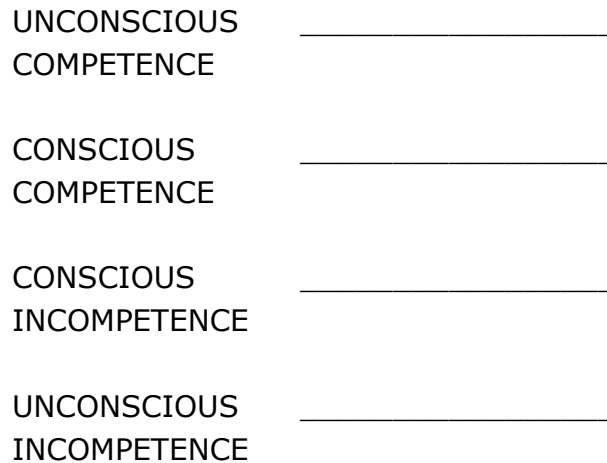
Learning is the process of change and can be demonstrated by the competence steps.

People performing a task or role may be so without complete competence, but they are unaware of these deficiencies until by a variety of mechanisms they maybe made aware of them and so pass up the steps to the area of conscious incompetence. As a result of taking some learning action they become capable and competent in the process, but have to perform it consciously and deliberately. Full implementation, practice and performance at work raise the level to the top step of unconscious competence, where learning has been achieved and the task is performed effectively without too much conscious thought. All too easily, however, unconscious competence can slip back to unconscious incompetence!.

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Learning programmes set out to achieve this change, at least to the borderline between conscious and unconscious competence, and longer term evaluation has as one of its objectives the checking of maintained competence.

Longer –Term Evaluation Format

Longer-term evaluation is performed later than medium term evaluation, usually between nine months and a year following the end of the training programme. The approaches used for the medium term stage apply equally at this later stage, but concentrate on the long-term implementation of the learning, and in particular the items included on the action plan. There would seem to be little value in seeking further information about the training itself at this stage as this might have been obtained at the medium term evaluation and, 12 months after the event, the learners' memories will be hazy with intervening work and possible further training.

The evaluation can be carried out by either the line manager or, perhaps if the medium term evaluation was performed by the trainer, by either a face to face visit or by telephone interview, again by the trainer. If everything seems to be well and the learning achieved is still being implemented (if appropriate), the evaluation process is over. If, however, unforeseen or undesirable changes have taken place, an investigation (perhaps in the form of a training need analysis or performance analysis) will need to be carried out. The line manager can take a wider view in this respect and will usually be in a more effective position to carry out this analysis.

The longer-term evaluation completes the practical evaluation process, but essential in the enquiry is the question of the value effectiveness of the training to the organization – is it question of the values effectives of the training of the

organization – is it worth it? But without the various stages of the evaluation process discussed so far, assessment of worth will not be possible.

Scholar Rumble, G. has given good idea to the topic in the below referred material which may please be read.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.206-208	9-5

9.4.1 Relevance to Needs and Expectations

Evaluation is formulated by people, and each person approaches an evaluation with his or her own beliefs and expectations. The ability of a client and evaluator to agree upon a strategy for an evaluation depends, in part, on the concerns and attitudes they bring with them when they meet discuss an evaluation. Here two questions are particularly important; what might motivate a client to seek the assistance of an evaluator? How will these factors affect the way the client approaches the collaboration? Five different approaches to evaluation will be described and their implications for the process of focusing an evaluation will be discussed/.

Client Needs and Expectations.

Why do program directors or sponsors consult evaluators? Since administrators have contact with the program on a regular basis, it would seem that they should be able to make accurate judgments about its success without relying on an external consultant. While most experienced administrators can estimate the effectiveness of their program fairly accurately, they realize that such judgments are subjective and can be improved through more systematic information-gathering. A desire for

accurate measurement of program accomplishments prompts many program directors to consult specialists.

Moreover, as programs grown larger administrators find themselves further removed from "the action," relying more on communication from intermediate staff. This adds an additional filter to the information and reduces its objectivity. By systematically gathering data it becomes possible to make more accurate judgments about the program's accomplishments. Some of this can be done by program staff using existing records and documents. However, an outside expert (such as an evaluator) can often improve the process and assist in the development of more meaningful measurements.

Even in the absence of legal requirements, program advisory groups and administrators may desire accurate assessment of their program. They may want such information for a host of reason: to support new funding initiatives, to improve program operations, or to enhance public relations. By hiring an evaluator who can gather relevant information in an unbiased manner, advisory boards and program staff can gain a degree of understanding about what is taking place in their program that could not usually be obtained through existing channels. For these reason, and others, many administrators call upon evaluators to provide information to illuminate program-related issues and concerns.

These portrayals tell us something about the attitudes and expectations a client may bring to the first meeting with an evaluator. They proved some basis for anticipating what different clients are likely to want and how they are likely to interact with an evaluator.

One noteworthy distinction is between clients who are responding only to requirements and those who have a personal interest in the evaluation. As noted above, some program administrators are motivated almost entirely be legal mandates, they contact an evaluator because the funding agency requires it, but they have little personal stake or interest in the information that will be provided. They may care only that the funding source is satisfied. For example, a client may desire nothing more from an evaluator than a "clean bill of health" at minimum cost or a program may routinely collect all required information and need an evaluator only to attest to its accuracy. In such circumstances it may be possible for a creative evaluator to show the client how the process of evaluation can offer additional benefits, but not always. Instead, you may find little enthusiasm for or commitment to evaluations.

In contrast, many clients seek out an evaluator because they have genuine concerns about the program and want assistance in providing information for program improvement. Even where evaluation is required, mandates may be flexible enough to allow concerned program staff to commission an evaluation that is meaningful to them as well as to the funding agency. In these circumstances, the evaluator is likely to find both interest and enthusiasm for the evaluation, which will make the focusing process more constructive.

Another important difference among clients is how well developed their questions and concerns are. Most clients who are not simply responding to narrow legal requirements will fit into one of three groups: (1) They may have clearly stated goals and objectives, and desire assistance to determine if these objectives are being met;(2) they may have questions about the program and want outside help in findings answer; or (3) they

may only be able to articulate general concerns and need someone who can help them clarify and focus their thinking.

These three types of clients are easy to identify. The language of goals and objectives is fairly common among program administrators, and anyone who is really concerned about the attainment of program goals is likely to be quite direct about it. For example, a client may state quite specifically "70% of our patients are supposed to be symptom-free for six months following treatment, and we want to find out if that it true." Similarly, those who have specific questions in mind will offer them for your consideration: "what we really want to know is whether we should switch from peer tutoring to computer-assisted instruction?" The third group represents the greatest challenge, for they often have difficulty stating their concerns in specific terms. They are more likely to speak about general issues. "Things are not going well among the professional staff, and think it's affecting the clients."

These are examples of the three kinds of questions that might be posed by a client. Of course, you do not necessarily have to propose an evaluation that is identical in style and scope to the format the client has presented. Part of your role may be to draw out larger concerns and help the client clarify the issues that are most important. In any event, it will help to be aware of the three general types of inquires you are likely to receive.

Finally, it is useful to realize that clients may have specific ideas about what evaluation means and how an evaluation is supposed to be conducted. For example, many clients will have preconceived notions about what you are supposed to measure. In education, most program administrators think of evaluation in terms of test scores. In fact, if you were to ask a hundred

school programme directors at random to explain how they would evaluate their programme, the vast majority would suggest that the primary indicator of success should be students' growth in achievement based on the differences between pretest and posttest scores. In other fields, there are other traditional indices that are used frequently measure success. In the criminal justice system it may be recidivism rates. In employment training programs it may be 60-day or 90-daty retention rates. In almost every social program area experienced administrators will have some preconceived idea of what an evaluation is supposed to measure. Whether appropriate or not, ideas about these traditional indices act as a force to limit the discussion between evaluator and client.

Unfortunately, many program administrators also have preconceived ideas that evaluation is an intrusive activity. Clients who are acting on the basis of legal mandates are particularly likely to think of evaluation as something that is done to them and not something that has any value for them. Such experiences have been widely shared, and many administrators approach evaluation with some trepidation. As a result, part of your job in your initial meeting may be an educational one. You may need to illustrate ways in which evaluations can have more meaningful results for local program staff and participant.

As you prepare for your initial meeting, you should realize that the client has contacted you for a reason, and he or she will come into the meeting with certain needs or questions and with certain attitudes toward evaluation. All these client variables will affect the exchange that takes place. How you act in this initial meeting will also depend upon your own style and your own beliefs about evaluation?

To have further knowledge on the topic, please read the reference given below:

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.207-208	9-6

9.4.2 Quality of Programme/Processes

There are many ways in which one can evaluate the quality of distance education. One way is to look at the quality materials and other way is to obtain feedback from the user of the programme. To improve any distance education programme, it is essential to evaluate the distance education programme at macro and micro level. The quality of instructional programme even can be evaluated before launching the programme. This will lead organization to improve the programme and process. Quality of the programme is ultimately reflected in the quality of the outputs that is recognition of graduate students by other institutions. Among the criteria of quality judgment, one can assess the level of acceptance of degrees, recognition of the credit transfer, recognition of awards by emphasis and professional association and by the general public at large.

To comprehend the topic in detail the point of view of 'Quality of Programme/Processes' given in the below referred material is very useful which may be read.

Greville Rumble, (1986)	The Planning and Management of Distance Education, London, Groom Helm, pp.208-210	9-7

9.4.3 Learner's Achievement

The term evaluation can note different things in different contexts. In the field of education, it has been used in two contexts; (a) the assessment of students with the intention of judging how far they have acquired the behavioral changes set forth in the educational objectives for them, this type of evaluation can be referred to as 'evaluation in education', and (b) the judgment of the effectiveness of the complete educational system, this can be referred to as 'evaluation of education'. This unit is concerned with the former type of evaluation, i.e. the assessment of students, performance for the purpose of providing feedback to the students and awarding marks. Another important context in which the term evaluation has been used in distance education is the 'course evaluation' i.e. how courses function, how effective they are and how well are they received by the students?

Formative Evaluation of Students

In the conventional system of education, normally, assessment of students' performance is done with the intention of both 'formative' and 'summative' evaluation. The formative evaluation calls for a periodic assessment of student's progress, both to give students a feedback so that they can judge for themselves how they succeed and to give a basis for the teachers to know the success of their teaching efforts. The summative evaluation requires the assessment of student's total performance at the end of the course to provide the basis for awarding marks and to guide the decision pertaining to the issue of degrees/ diplomas/certificates, as the case may be. In the field of distance education, while the purposes of both types of evaluation remain almost same as in conventional education; however, formative evaluation assumes a more significant role. The results of the periodic/continuous assessment serves, on the one hand, the important function of providing timely

feedback to the distance students to correct themselves, judge for themselves the value of the efforts they have put in and to monitor their studies accordingly; on the other hand they have been used to determine the eligibility of the distance students to sit in the final examinations, besides serving as feedback to course writers and distance educators. It is with this background, an attempt was made to study the practices of continuous assessment adopted by the existing correspondence institutes in India.

Data pertaining to the type and nature of continuous assessment used, if any, present in Figure 9.11 reveals that 78.57 percent correspondence institutes use continuous assessment in their systems and 21.42 percent do not have such a provision. Thus, of the total number of institutions 42.85 percent use the performance of the students on written assignments sent for submission by the students as a device for continuous assessment. Whereas in the case of 21.42 percent institutions separate periodic/ intermediary written examinations are taken with intention of continuous assessment. It is quite interesting to note that 14.28 percent institutions report that they take oral periodic/ intermediary exams to serve as continuous assessment data. How these oral examinations are managed could not be studied in this study?

Figure 9.11:   Type of Continuous Assessment

		Yes		No	
		f	*%*	*f*	*%*
MQ 69	Do you use any type of continuous assessment? If yes, which?	11	78.57	3	21.42
i.	Written assignments for submission	6	42.85		

		f	%
ii.	Written periodic intermediary exams.	3	21.42
iii.	Oral periodic/ intermediary exams	2	14.28

Figure 9.12:   Participation in Continuous Assessment

		f	%
MQ 70	Is the continuous assessment compulsory or voluntary?		
i.	Compulsory	7	50.00
ii.	Voluntary	4	28.57
iii.	Not applicable	3	21.42

Figure 9.13:   Frequency of Assessment

		f	%
MQ 71	What is the frequency of periodic/ intermediary assessment?		
i.	Monthly		
ii.	Bi-monthly		
iii.	Quarterly	2	14.28
iv.	Half yearly	2	14.28
v.	After the completion of a course unit	7	50.00
vi.	Not applicable	3	21.42

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With regards to the nature of continuous assessment i.e. whether it is compulsory or voluntary for the students, it was found that in 50 percent institutions participation in continuous assessment was compulsory (refer Figure 9.12) and it is voluntary in the case of 28.57 percent correspondence institutes.

As regards the frequency of continuous assessment it was found that in 50 percent institutions assessment is done after the completion of a course unit (refer Figure 9.13). where as in 14.28 percent institutions it is done quarterly and in a similar number of institutions assessment is done half yearly.

With respect to the role of continuous assessment it was found that 38.88 percent institutions motioned monitoring of learner performance as the main function of continuous assessment in the case of 33.33 percent institutions the role performed by continuous assessment was that of determining eligibility for sitting in the final (end of the course) examination. Only in the case of 11.11 percent (exactly 2) institutions the marks achieved during continuous assessment were given weightage for the final examinations. If these results are examined in the light of the findings pertaining to the purposes served by assignments and examination function of assignments then a similarity is found. Thus, it can be safely concluded that continuous assessment is normally done through the assignment appended normally at the end of each course unit.

Figure 9.14:   Role of Continuous Assessment

		Frequency of mentioning	%
MQ 70	What is the role of continuous assessment?		
i.	Monitoring learner progress	7	38.88
ii.	Ascertaining eligibility to sit in the final examination	6	33.33
iii.	Giving weightage for final examination marks	2	11.11
iv.	No response	3	16.66

Summative Evaluation of Students

In all the correspondence institutes in general the courses as a rule, end with a final examination. As regards the frequency and the nature of these end of the course examination, it was found that 78.57 percent institutions gave only one final examination annually (refer Figure 9.14) and the remaining 21.42 percent institutions had a system of giving semester wise examination every six months. In all the institutions the examination was required to be written by the students. However, in the case of 21.42 percent institutions an element of oral examination was also present. Mostly a viva-voce examination is given in the case of post-graduate students who are required to write a dissertation.

Figure 9.14:   Frequency and Nature of Final Examination

		Frequency	%
MQ 72	Are the final examinations:		
i.	Annual	11	78.57
ii.	Semester wise	3	21.42
iii.	Written	14	100.00
iv.	Both written and oral	3	21.42

With regards the practices adopted for conducting the final examination it was found that in the case of 71.42 percent institutions the distance students were required to sit in the same examination alongwith regular university students. Only in the case of 28.57 percent institutions separate final examination was arranged for the distance learners by the institutions with the help of the affiliating university.

In those cases where separate final examinations for distance learners are organized by the correspondence institutions a reasonable question asked was; whether the question papers for those examinations are set internally or externally? In all the 28.57 percent institutions the papers for the final examination were set by external experts under the rules and provisions of the affiliating university. This ensured the academic comparability of the products of distance education with that of the conventional university system.

Another aspect of interest in distance study is the freedom and autonomy provided to the students. Liberal distance educators like Deling (1975), Daniel and Marquis (1979) and Moore (1983) advocate freedom and autonomy of individual student to allow him to decide what to do and how to

do it. That is he should be allowed to begin a course whenever he choose, pace his studies in ways suitable to him ad finish it at his convenience. This implies that he should be allowed to take the examinations as and when he is ready for them or desires to take them. Whether the correspondence institutions in Pakistan provides students the autonomy and freedom to decide when to take their final examination. In response to a question asked in this regard it was found that 50 percent institution reported that they gave the freedom to their students to decide when to take their final examination. Whereas the rest 50 percent institutions gave no such freedom.

When enquired about the nature of freedom given to the students to decide when to sit in the final examinations, it was found that institutions allowed the students more than one attempt to sit in the final examinations conducted alongwith the regular university examinations. The student had the freedom to chose when he wants to exercise the attempt. The number of attempts allowed to the students to sit in the final examinations were studied. The specific data in table 9.8 reveals that the range of attempts allowed to sit in final examination was from 2 to unlimited attempts. Almost 85 percent institutions allowed more than three attempts. It is interesting to note that almost every fifth institution allowed unlimited attempts. Allowing a number of attempts to a distance student is, no doubt, a desirable thing and a healthy practice, but it is certainly not the autonomy and freedom to decide the papers in which and when to sit in the final examination, as advocated by liberalists in distance education because the examination is held at scheduled time at fixed intervals and the student may not be ready for it. He then has to wait for a long year to take the attempt.

Some Reflections and Suggestions

First of all, the 21.42 percent institutions, which do not have any system of continuous assessment of students' progress, must understand the importance of formative evaluation for the benefit of distance students. In the absence of what is learnt, the distance student may be sailing in a wrong direction. It is better not to learn than to learn wrong things. Hence in the absence of feedback about the corrections of learning, a distance student is like a sailor in the open sea without a compass. Knowledge of positive results acts as a reinforcement to motivate the student to do better. Similarly the correct knowledge of the mistakes committed may guide the mature students to rectify them.

Since most of the correspondence institutes append assignments to course reading materials at the end of each unit and use these assignments both as a source of assessment and feedback, this practice should be adopted by other institutes also. Researcher has show that 42.85 percent institutions use assignments to assess learner performance mainly to serve examination function. 14.28 percent institutions use assignments to support distance learning through instructional comments and suggestions. Whereas 35.71 percent institutes use assignments to serve both the above purposes. Thus, it is clear that assignments can serve the dual purpose. In fact, in distance education, it is an ideal situation that the student knows the correctness of his progress and is simultaneously feedback by the teacher/ tutor by the instructional comments and suggestions, not only pointing out the mistakes but also giving constructive suggestions to remove them. In this way, remaining at a distance from his teacher, the distance learner knows exactly what he has failed to grasp and learn what he should do to learn it. Hence, it is strongly recommended that assignments should not only be designed in such a way to yield

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valid and reliable measures to assess learner's progress but also be commented, of course, after marking, in such a way that they act as guidelines to rectify mistakes, improve and facilitate learning. This will ensure formative evaluation of the learners and simultaneously provide constructive feedback both to the learners and course developers, as to how well the course is being received by the students.

With respect to the summative evaluation of distance students, it is noted that in most cases they are subjected to the rigid examination scheduled for the regular university students. No doubt, from the point of view of university administration this is economic and easy to manage. Another advantage, it ensures the academic credibility of the distance education because the students qualify the same examinations designed for the regular (on campus) students. However, when seen from the point of view of distance students, the rigidity of taking final examinations on fixed schedules of time may be expecting too much from them.

In asking the distance students to sit in the final examination alongwith the regular university students at the end of each academic session, the assumption is that the distance students can also complete the similar course work in the time scheduled for the regular students. This is a wrong assumption and needs to be corrected in the light of the findings pertaining to individual differences in the 'Academic Learning Time' taken to learn a particular material. In the context of correspondence institutes in Pakistan, normally the university courses are designed keeping in view the entry behaviors of the regular students. These courses are expected to be completed within the stipulated time of one academic session which is normally of 9 to 10 months duration. Thus, the work

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expectation i.e. the time a regular student has to give to complete the course is almost fixed.

Now the question is, can the distance student also complete this work alongwith regular students in the same time duration? In order to answer this question one will have to understand the entry behaviors and the work constraints of the distance students. As is clear form the findings of this study, there are two types of distance students in Pakistan; (a) those who have been denied entry into the regular university system because of their inferior entry behaviors than those who could get a university seat (universities admit students on the basis of merit or on the basis of performance on entrance tests); and (b) those who were out of touch with their studies and had entered jobs because of a variety of reasons best known to them. Thus, these students neither have the requisite entry behaviors nor enough time to devote to their studies. In the distance education terminology the former group has been called the 'full time' and later the 'part time' students. Besides the above noted constraints of entry behaviors and the time taken by the job, other most taxing constraints and imposed by the absence of immediate feedback in the case of distance students, besides constraints like working in isolation, lack of proper library facilities, absence of tutorial help, family responsibilities etc. are just a few to mention that come in the way of smooth supplication of distance study. Hence subjecting distance students to examination conditions laid for regular students, such as passing all the courses at a time required to earn a degree is unjustified.

Perhaps for these reasons 28.57 percent correspondence institutes arrange separate final examinations for their students. But this isn't a solution for two reasons (a) the academic comparability of the degrees thus earned with the degrees of

regular students may be questioned; and (b) the conduction of separate examinations involve administrative problems and additional economic burden on the university. What is the way out then? Infect, the solution lies in our respect for the freedom and autonomy of distance students "If a system has, as its chief priority, respect for the freedom and autonomy of the individual student, it will allow him to begin a course whenever he chooses and to finish it at his convenience. The student paces himself and there is no external constraint".

Delling (1975) another strong advocator of student's freedom and autonomy in distance education, observes in the context of external constraints that:

> What gives the educational politicians, planners and educationists the right to the absolute decisions to how long an educational process may last? … Why should the learners in distance study not learn according to their own fashion but according to the fashion forced upon them?

Thus we have to look for a flexible model of conducting examinations within the framework of the present system of examining both the on-campus and distance students through final examination. Further, to ensure the implementation, the model shouldn't disturb the present administrative mechanism and involve additional expenditure and should at the same time also ensure the academic comparability of the degrees earned by distance students with those earned by the on-campus students. One way out is to give the distance students the freedom to decide the number of course papers in which they want to sit in the particular year's final examination alongwith on-campus students, instead of compelling them to take the examination in all course papers prescribed for that year for the

targeted degree. Thus, if the on-campus student passes all course papers and gets the degree in the stipulated time, the distance student may take his own time to complete all course papers. He may, depending upon his convenience and the 'Academic Learning Time' taken to learn, finish one course paper each year/ semester and take four years to complete the course which, for example required the passing in four papers.

This is almost like the present practice of allowing several attempts. The only difference, however, is that the student takes the examination only in those papers which he has thoroughly worked upon and not all the papers prescribed for on-campus students in that academic session. Presently if the student fails in even one paper, then in most cases, he has to reappear in the next year's examination. This is too taxing for the distance students. But in the suggested system, if the student passes in the paper, he took the examination, he is deemed to have cleared that portion of the prescribed course. The day he passes the required number of papers he clears the course and should be awarded the degree. The marks/grades /credits earned by the student in each paper be summated and shown as they are shown in the mark sheets of on-campus students.

The adoption of the proposed system of conducting final examinations of distance students should not pose any implementation problem, as everything goes according to the existing practices except that a record of the papers passed by each distance student shall have to be maintained till he gets the degree. The additional costs involved in this shall be very nominal as compared to the benefits. The biggest benefit would be that we will be giving distance students the most wanted freedom to pace and programme their studies according to their

life space. This may consequently result in higher success rate of distance students.

In order to get more information on the topic, please read the below referred material.

| Greville Rumble, (1986) | The Planning and Management of Distance Education, London, Groom Helm, pp.210-213 | 9-8 |

9.5   Activities

1.   List here the advantages of formative evaluation

_____

_____

_____

2.   Print the limitation of summative evaluation on the space given below:

_____

_____

_____

3.   Discuss with your colleagues how quality of written open learning materials specify a distance education program.

4.   Construct follow up question.   Validate these on small scale.

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9.6   Self-Assessment Questions

1.   Elaborate the nature of evaluation.

2.   The purpose of evaluation has implications on the learning organization. Discuss.

3.   Discuss the "Stages for open learning packages" as given in the unit.

4.   Discuss the advantages of longer term evaluation.

5.   Develop a follow up questionnaire for evaluation for specific program.

6.   How structured follow up interviews can be designed, and launched.

7.   Discuss different types of continuous assessment

8.   Give some suggestions for the improvement of evaluation system of AIOU along with their justification.

9.7   Bibliography

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